
2025
TORMIN®
Explosion-proof Light/
Accessories
Catalogue 2025

ZHEJIANG TORMIN ELECTRICAL CO.,LTD.

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General Catalogue 23.04.2025

Company Profile

Zhejiang Tormin Electrical Co., Ltd (stock code: 839558), established in 2003, is a high— tech civilian enterprise that specializes in R & D, manufacturing and selling of industrial lamps. Tormin products are widely used in the fields of petroleum, chemical industry, electric power, mining, metallurgy, railway, fire protection, etc.

Tormin industrial lights are made to the highest world standard in the industry, gets the European ATEX explosion— proof certification, IECEx international explosion— proof certification; CE, ROHS and other international certification, etc. international quality standard certification. Tormin passes ISO9001 quality control system, ISO14001 environment management system and OHSAS18001 Occupation Health Safety Management System. Tormin is one of the China Illuminating Engineering Society outstanding members, the National Light Industry explosion— proof lighting standard drafting units; has the honor to get the "National High— tech Enterprise", "National Torch Plan", "Wenzhou Famous Brand", "Wenzhou city famous trademark", "Zhejiang Science and Technology SMEs ", " patent model enterprise in Wenzhou City ", " patent protection of key enterprises "and" enterprise technology research and development center in Wenzhou City "; product has passed the national Coal Mine Safety certification, the State quality supervision and Inspection Center and lamps national explosion— proof electrical products for Quality Supervision and Inspection Center and other authoritative national certification bodies.

Tormin has a strong R & D and serious and pragmatic team. Adhere to the "dedicated, innovative and stable" business philosophy, through continuous innovation, with more than 20 years of market experience, always user-oriented, and constantly meet the needs of users as the core, through continuous improvement, products in the explosive gas, dust, corrosion, In harsh environments such as vibration, high temperature, and high humidity, they can work safely and reliably for a long time, and they have made many innovations in the use, maintenance, and intelligence of their products, making them more efficient and user-friendly. Tormin products not only meet the basic lighting needs, but also attach more importance to light and environment, and the perfect integration of light and biology, providing safer and more reliable energy-saving and environmentally friendly products for the era of smart lighting.

In accordance with the purpose of the industry to serve the country, the determination of being a hundred years of brand enterprises and the aim of winning the win-win situation of customers, employees, and enterprises, Tormin create an excellent platform for the continuous joining elites and build the first-class brand of industrial lighting in China.

Certificates

We are convinced that our leading role in future will also contribute to your success.





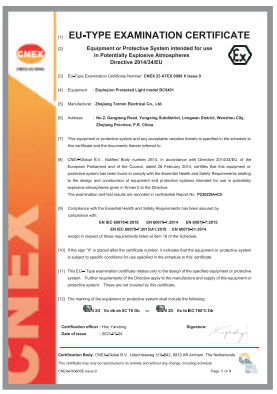
















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TORMIN Product Image Selection Catalog

Fixed Explosion Proof Lights



Model: BC5401 Series
Power: 2×10W,2×20W



Model: BC5402A Series
Power: 20~80W



Model: BC5402B Series
Power: 20~80W



Model: BC9101 Series
Power: 25~80W



Model: BC9102S Series
Power: 60~300W



Model: BC9102R Series
Power: 60W~150W



Model: BC9200 Series
Power: 6W,12W,20W



Model: BC9302 Series
Power: 30~80W



Model: BC9302 Series
Power: 30~80W



Model: BC9303 Series
Power: 25~60W



Model: BC9304S Series
Power: 80~150W



Model: BC9306 Series
Power: 30~80W



Model: BC9306S Series
Power: 30~80W



Model: BC9307 Series
Power: 100~240W



Model: BC9307S Series
Power: 100~240W



Model: BC9308P Series
Power: 30~80W



Model: BC9308S Series
Power: 30~80W



Model: BC9309 Series
Power: 240~480W



Model: BC9314 Series
Power: 5W



Model: BC9502 Series
Power: 10~20W



Model: BC9700 Series
Power: 50~200W

Coal Mine Lights



Model:
DGS10/127L(A)
DGS24/127L(A)
DGS35/127L(A)
DGS48/127L(A)
Power: 10W~48W



Model:
DGS20/127L(C)
DGS30/127L(C)
DGS45/127L(C)
Power: 20W~45W



Model:
DGC20/127L(A)
DGC24/127L(A)
DGC30/127L(A)
DGC41/127L(A)
DGC45/127L(A)
Power: 20~45W

Explosion Proof Emergency Lights



Model: BC4210
Emergency Power:
1.5W



Model: BC5210
Emergency Power:
2W



Model: TM-ZFZD-E6W
-BC5200



Model: BC5401
Emergency Power:
1×10W, 1×20W



Model: BC5402B
Emergency Power:
15W, 25W



Model: BC9101A/B
Emergency Power:
15W, 25W

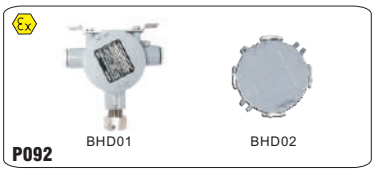


Model: BC9306AP/BP
Emergency Power:
15W,25W



Model: BC9306AS/BS
Emergency Power:
15W,25W

Explosion Proof Accessories



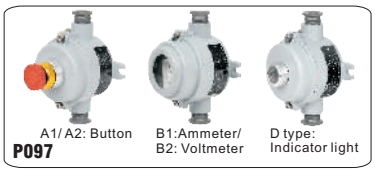
Model: BHD01/02
Explosion proof Junction Box



Model: BXP01
Explosion proof Emergency Box



Model: BXP02
Explosion proof Emergency Box



Model: BZA5200
Explosion-proof Master Controller



Model: BZM
Explosion-proof Lighting Switch

Mobile Explosion Proof Lights



Model: BW3210
Power: 30W



Model: BW4100B



Model: BW6210
Power: 3W



Model: BW6310A/B
Power: 1W,3W



Model: BW6610A
Power: 3×3W



Model: BW6610B
Power: 13W



Model: BW6640
Power: 6W



Model: BW6650
Power: 15W



Model: BW7101A/B
Power: 3×3W



Model: BW7320
Power: 3W



Model: BW7300
Power: 1W, 3W



Model: BW7500
Power: 3W,5W

Ordering Reference

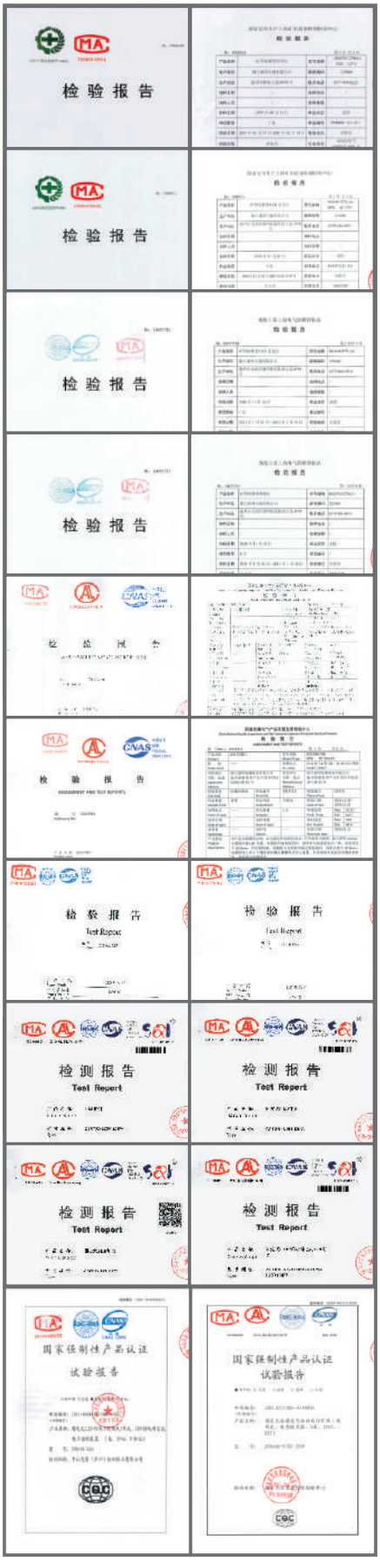
BC-9306 P-L 20 L-80°-3000K-P01

- Selection of accessories
- Correlated color temperature
- Lamp beam angle
- L：Low Voltage
- Rated Wattage
- L:LED Lamp
  J:High Pressure Mercury Lamp
- P：Pole；S：Bracket
- Serial Number
- BC: Fixed Explosion Proof Lights　ZY: Fixed Professional Lights
  BW: Mobile Explosion Proof Lights　ZW: Mobile Professional Lights

Product Certificates







Company Qualifications

We are convinced that our leading role in future will also lead to your success.



























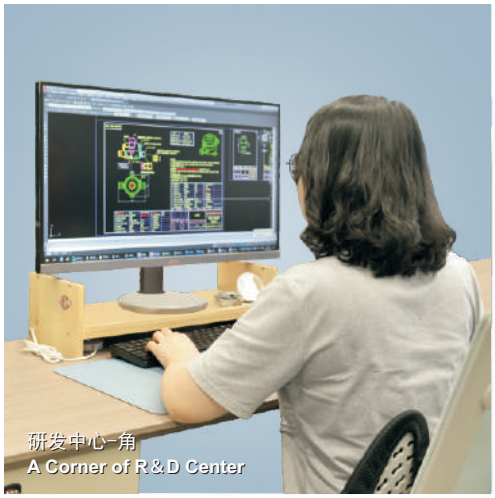






R&D Test Equipment

Each employee in **TORMIN** always sticks to the rigorous working attitude. They regard the product quality as their life and do not accept one piece of unqualified product, Standing in their customers' shoes,they do not allow even 0.1% unqualified products, which, though a very small percentage, will ruin the goal of realizing 100% customer satisfaction. The quality awareness and responsibility is deeply planted in heart, which guarantees the reliable quality of product in TONGMING.


研发中心一角
A Corner of R&D Center


数控车床
CNC lathe

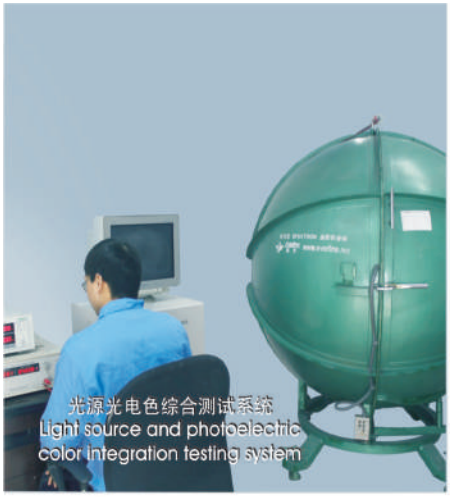

加工中心Processing Center


水压试验机
hydrostatic testing machine


微机控制电子万能材料试验机
Microcomputer controlled electronic universal material testing machine


雷击浪涌发生器
Lightning Surge Generato

R&D Test Equipment


光源光电色综合测试系统
Light source and photoelectric color integration testing system


分布光度计 配光曲线测试系统
Light distribution test system

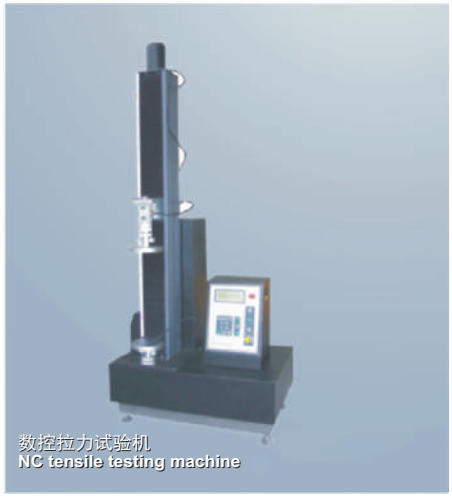



高低温湿热测试箱
High/how temperature humidity test chamber


盐雾实验箱/Salt spray test chamber


防护试验装置
Shield-test facility


粉尘试验箱
Dustproof test box


数控拉力试验机
NC tensile testing machine


落锤式冲击试验机
Landing impact testing machine

Production Workshop













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Production Workshop













TORMIN BC5401 LED Explosion Proof Light



Ex marking: Ex db eb IIC T6 Gb
Ex tb IIIC T80℃ Db, IP66



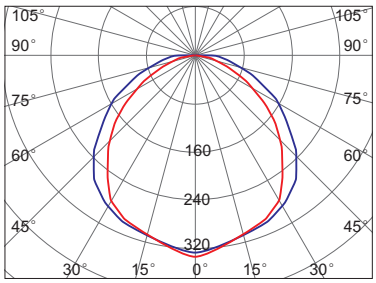
Application

- It can be widely used in petrochemical plants, oil platforms, oil pump housing, transit stations and other flammable and explosive places as fixed lighting.
- Gas explosive environment: Group IIA, IIB, IIC.
- Zone1, Zone2; Zone21, Zone22

Characteristics

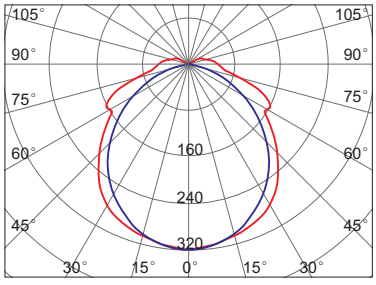
- It is made using a special aluminum housing, suitable for long-term highly corrosive environment of offshore platforms, chlor-alkali, hydrogen sulfide, etc.
- Derrick mounting fixture adopt high anti-corrosive aluminum and locking angle equipment, can be safely used in drilling platforms and high vibration environment.
- The anti corrosion, abrasion proof, power coated cover which is dust proof, water proof, make the lamp an excellent high pressure environment
- Bracket, reflector, guard, and all exposed fasteners adopt 304 stainless steel (customizable 316), can effectively guarantee the strength and strong anti-corrosion performance of lamp
- Terminals are provided at both ends, can be directly wired in parallel, eliminating the junction box and installation costs.
- A variety of installation as optional: ceiling, oil derrick, the side walls, curved rods, boom, etc.

Light distribution curve



2×20W(T8 led tube) — 0° — 90°

Distance high： 1. 5



2×10W (T8 led tube) — 0° — 90°

Distance high： 1. 5

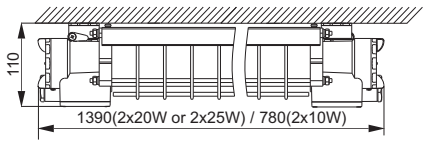
Main Specification

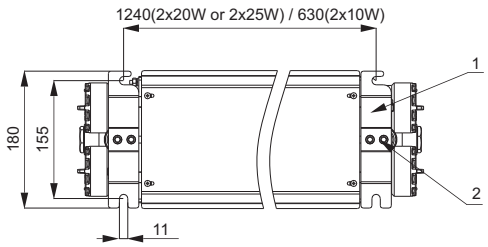
Item	Technical Parameters		
Rated wattage (W)	2×25W(T8)	2×20W(T8)	2×10W (T8)
Input voltage (V)	90~264VAC		
Rated frequency	50Hz / 60Hz		
Light source	LED		
Light output (lm)	5100	4800	2200
CRI (Ra)	80		
Life time (h)	50,000		
CCT	5000K		
Cable entry thread	M20×1.5, M25×1.5, NPT3/4", NPT1/2", G3/4"		
Terminals	Multi core: ≤ 2.5mm²		
	Single core: ≤ 4mm²		
Dimension (mm)	1390×180×110	1390×180×110	780×180×110
Net weight (kg)	10.7	10.7	6.6

BC5401
LED Explosion Proof Light

Drawing of dimension (Dimensions in mm)

Ceiling mounting





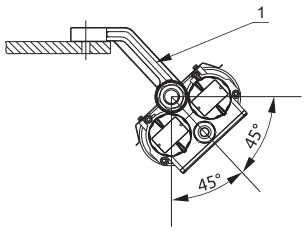
Lamps Ordering Information

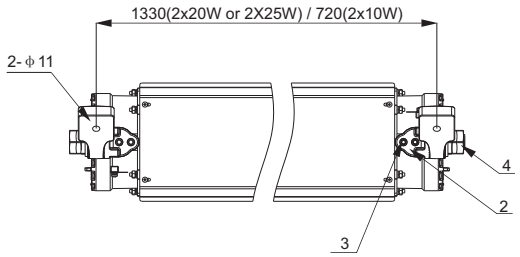
Order number	Mounting type	Lamp power	Equivalent to Fluorescent
BC5401-L2×10A	Ceiling	2×10W	2×20W
BC5401-L2×20A		2×20W	2×40W
BC5401-L2×25A		2×25W	2×50W

Fitting Ordering Information (Standard)

Order number	No.	Specifications Model	Quantity
P01	1	Ceiling Bracket	2
	2	M8 Inner six angle bolt	4

Derrick mounting





Lamps Ordering Information

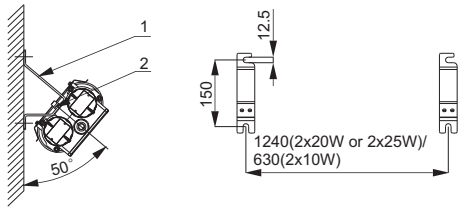
Order number	Mounting type	Lamp power	Equivalent to Fluorescent
BC5401-L2×10A	Derrick type	2×10W	2×20W
BC5401-L2×20A		2×20W	2×40W
BC5401-L2×25A		2×25W	2×50W

Fitting Ordering Information(Optional)

Order number	No.	Specifications Model	Quantity
P02	1	Derrick bracket	2
	2	Base	2
	3	M8 Inner six angle bolt	4
	4	M24 screw	2

BC5401
LED Explosion Proof Light

Side wall mounting



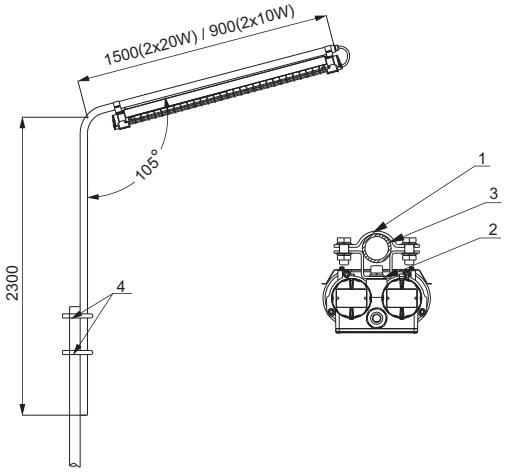
Lamps Ordering Information

Order number	Mounting type	Lamp power	Equivalent to Fluorescent
BC5401-L2×10A	Side wall	2×10W	2×20W
BC5401-L2×20A		2×20W	2×40W
BC5401-L2×25A		2×25W	2×50W

Fitting Ordering Information (Optional)

Order number	No.	Specifications Model	Quantity
P03	1	Sidewall bracke	2
	2	M10 Inner six angle bolt	4

Pole mounting



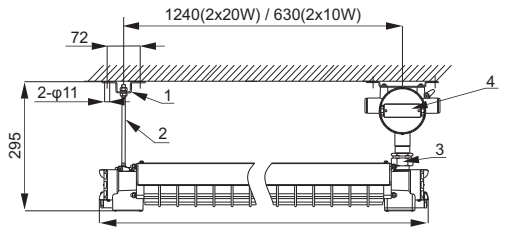
Lamps Ordering Information

Order number	Mounting type	Lamp power	Equivalent to Fluorescent
BC5401-L2×10A	Pole	2×10W	2×20W
BC5401-L2×20A		2×20W	2×40W

Fitting Ordering Information (Optional)

Order number	No.	Specifications Model	Quantity
P04	1	Upper hoop	2
	2	Under hoop	2
	3	DN32 Poles	1
	4	U tube clip	2

Ceiling mounting 2



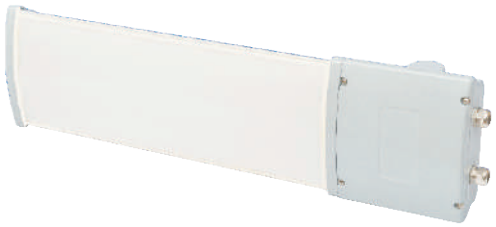
Lamps Ordering Information

Order number	Mounting type	Lamp power	Equivalent to Fluorescent
BC5401-L2×10B	Ceiling	2×10W	2×20W
BC5401-L2×20B		2×20W	2×40W
BC5401-L2×25B		2×25W	2×50W

Fitting Ordering Information (Optional)

Order number	No.	Specifications Model	Quantity
P05	1	Pole mounting bracket	1
	2	19cm Screw(M8)	1
P02	3	Connector G3/4" male- male	1
BHD01	4	Explosion proof junction box	1

BC5402A Series LED Explosion-proof Light



Ex marking: Ex eb mb op is IIC T6/T5/T4 Gb
Ex tb op is IIIC T80°C/T95°C/T130°C Db

Application

Suitable for oil production platform, oil refining platform, living platform, hazardous chemicals ships, shore machines and other hazardous areas. Suitable for dangerous gas area Zone 1 and Zone 2.

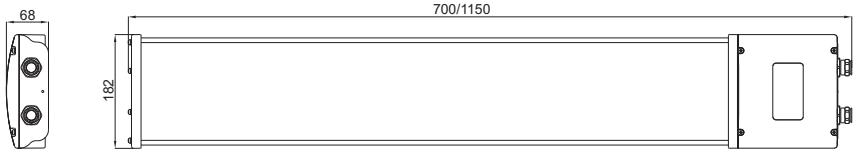
Characteristics

- Seawater resistant, anodized aluminum housing.
- Flexible light exit cover, soft and comfortable light.
- The whole lighting effect is about 110 lm/W.
- Ship-level anti-vibration test.
- Outdoor light diffusion material translucent cover, strong weather resistance.
- Independent junction box design, convenient wiring, can be used in parallel with multiple lamps.
- Exposed fasteners are all made of 304 stainless steel (Ocean platform requires custom 316 stainless steel).

Main Specification

	Technical Parameters			
Item	BC5402A-L30	BC5402A-L40	BC5402A-L60	BC5402A-L80
Rated wattage (W)	30W	40W	60W	80W
Input voltage range (V)	108~264VAC,50/60Hz			186~264VAC
Light output (lm)	3300lm	4400lm	6300lm	8400lm
CCT	5000K			
CRI (Ra)	70			
IP class	IP66			
Ambient temperature	-40~+40°C/+55°C			
Number of cable inlets	1~2			
Screw Thread of cable inlets	M20*1.5			
Dimension (mm)	700×182×68	700×182×68	1150×182×68	1150×182×68
Net Weight (kg)	3.2	3.4	4.5	4.7

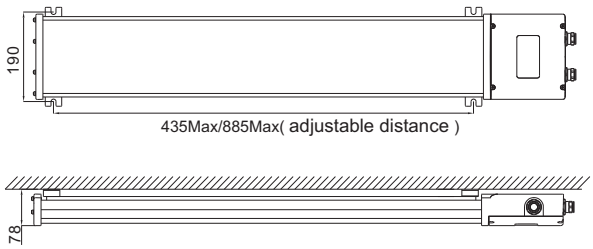
Drawing of dimension (Dimensions in mm)



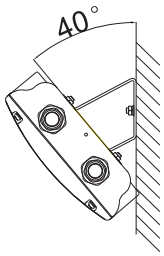
BC5402A Series LED Explosion-proof Light

Drawing of dimension (Dimensions in mm)

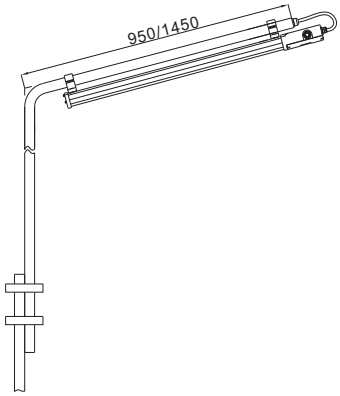
1. Bracket mounting(Standard)



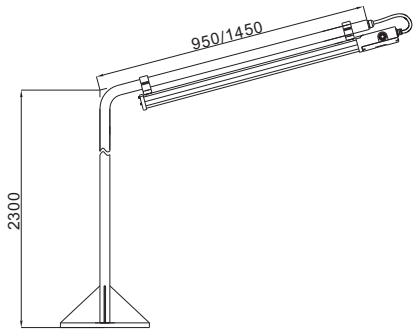
2. Side wall mounting (40 degree)

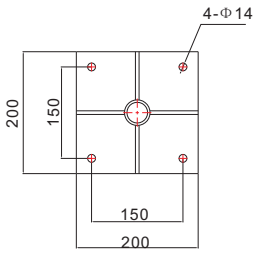


3. Guardrail installation



4. Flange mounting



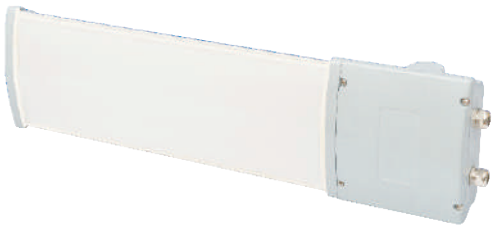


Ordering reference

Item No.	Rated wattage(W)	Input voltage(V)	CCT	CRI	Mounting type	Number of cable inlets
BC5402A-L	30/ 40/ 60/ 80	120V/240V	3000K-30 4000K-40 5000K-50	R7(Ra70) R8(Ra80)	S1 Bracket mounted S2 Side wall mounted S3 Guardrail installation S4 Fence mounted	E1(one cable inlet) E2(two cable inlets)

Example: Specification of Lamp is Power 40W, Color temperature 5000K, Bracket mounting, One cable inlet.
Order number as BC5402A-L40W120/240V50R7S1E1

BC5402B Series LED Explosion-proof Light



Ex marking: Ex nR IIC T6 Gc
Ex tc IIIC T80℃ Dc

Application

- Suitable for oil production platform, oil refining platform, living platform, hazardous chemicals ships, shore machines and other hazardous areas.
- Suitable for gas explosion area Zone 2

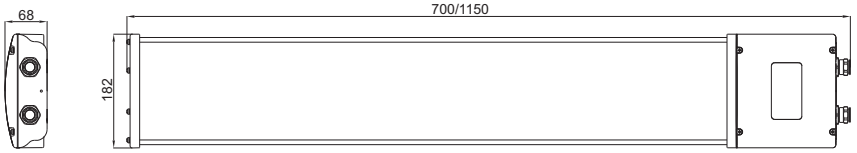
Characteristics

- Seawater resistant, anodized aluminum housing.
- Flexible light exit cover, soft and comfortable light.
- The whole lighting effect is over 110 lm/W.
- Ship-level anti-vibration test.
- Outdoor light diffusion material translucent cover, strong weather resistance.
- Independent junction box design, convenient wiring, can be used in parallel with multiple lamps.
- Exposed fasteners are all made of 304 stainless steel (Ocean platform requires custom 316 stainless steel).

Main Specification

	Technical Parameters			
Item	BC5402B-L20	BC5402B-L40	BC5402B-L60	BC5402B-L80
Rated wattage (W)	20W	40W	60W	80W
Input voltage (V)	90~264VAC,50/60Hz			186~264VAC
Light output (lm)	2200lm	4400lm	6300lm	8400lm
CCT	5000K (3000K/4000K Optional)			
CRI (Ra)	70			
IP class	IP66			
Ambient Temperature	-40℃~+55℃			
Number of cable inlets	1~2			
Screw Thread of cable inlets	M20*1.5			
Dimension (mm)	700×182×68	700×182×68	1150×182×68	1150×182×68
Net Weight (kg)	3.2	3.4	4.5	4.7

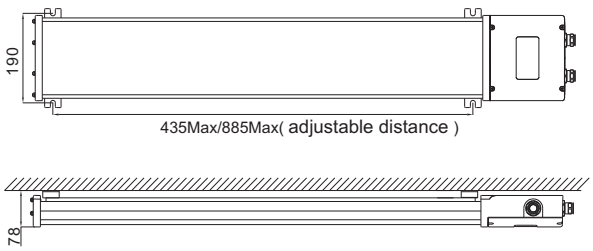
Drawing of dimension (Dimensions in mm)



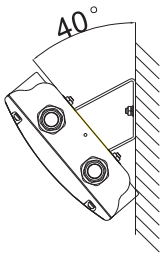
BC5402B Series LED Explosion-proof Light

Drawing of dimension (Dimensions in mm)

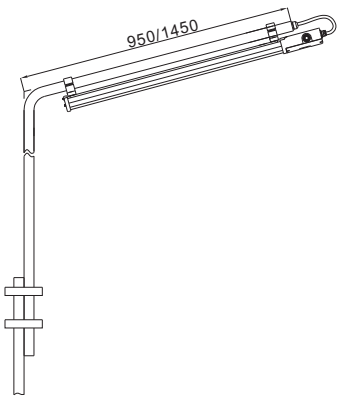
1. Bracket mounting(Standard)



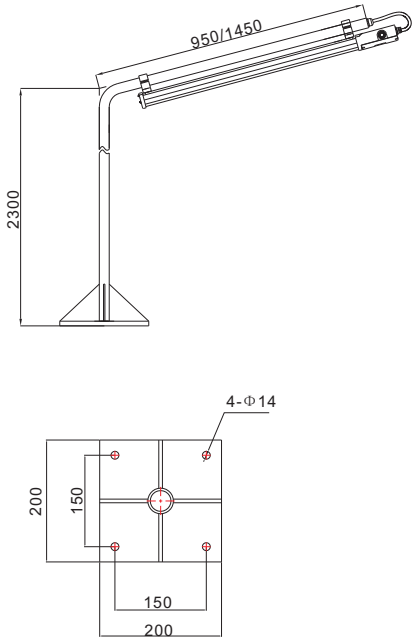
2. Side wall mounting (40 degree)



3. Guardrail installation



4. Flange mounting



Ordering reference

Model number	Rated wattage(W)	Input voltage(V)	CCT	CRI	Mounting type	Number of cable inlets
BC5402B-L	20/ 40/ 60/ 80	100V/240V or 200V/240V	3000K-30 4000K-40 5000K-50	R7(Ra70) R8(Ra80)	S1 Bracket mounted S2 Side wall mounted S3 Guardrail installation S4 Flange mounting	E1(one cable inlet) E2(two cable inlets)

Example: Specification of Lamp is Power 40W, Color temperature 5000K, Bracket mounting, One cable inlet.
Order number as BC5402B-L40W100/240V50R7S1E1

TORMIN BC9101 LED Explosion Proof Light



Ex marking: Ex db IIB T6 Gb
Ex tb IIIC T80℃ Db IP66



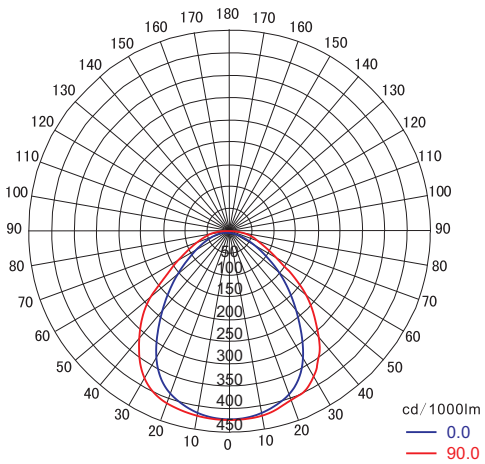
Application

- Ideal to be used in the environment of flammable gas, steam and dust environment, such as Petrochemical Plant, Chemical Plant, Pharmaceutical Factory, etc.
- Class1,zone 1&zone 2, zone 21&zone 22

Characteristics

- With its reflector which have different angles design, it efficiently utilize the light. Have a good performance of illuminance uniformity, glare free, can avoid eyestrain to the worker.
- A full range of high conductivity material accelerate convection cooling structure, effective guarantee long-term use in high temperature environments.
- It adopts CREE LED as light source, no dark spot, can save 60% or more on energy than Metal Halide Lamp.
- Taiwan Meanwell driver or driver with same quality, power factor above 0.98, high reliability and long time service life.
- The adjustable locking device on the bracket can tightly fix the lamp toany desired angle, making the lamp resist to harsh vibration.
- It is made using aluminum housing, all exposed fasteners adopt 304 stainless steel. Using high-tech anti-corrosion surface treatment technology, suitable for hazardous working areas.
- Intelligent control functions can be realized.

Light distribution curve



Main Specification

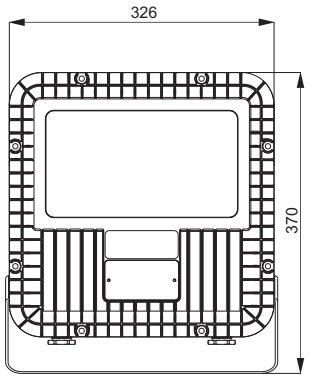
Item	Technical Parameters
Input voltage (V)	90~305VAC
	18~43VAC/ 18~55VDC (low) (optional)
Rated frequency	50Hz / 60Hz
Light source	LED
Life time (h)	100,000
CRI (Ra)	75
CCT	5000K ±250K
Cable entry	G3/4"
Dimension (mm)	326×370×88
Net weight (kg)	9

TORMIN BC9101 LED Explosion Proof Light

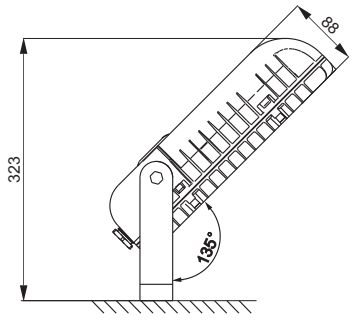
Ordering Reference

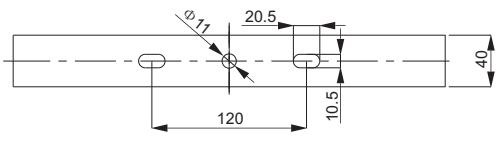
Ordering reference	Input voltage (V)	Rated wattage (W)	Light output (lm)	Mounting height (m)	Equivalent to MH
BC9101- L25	90~305VAC	25W	2800	3~6m	70W
BC9101- L40		40W	4200		100W
BC9101- L60		60W	5900	4~8m	150W
BC9101- L80		80W	7200		175W
BC9101- L25L	18~43VAC/ 18~55VDC	25W	2800	3~6m	70W
BC9101- L40L		40W	4200		100W

Drawing of dimension (Dimensions in mm)



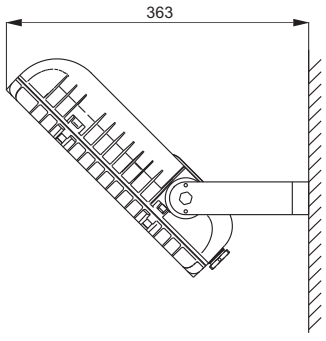
Seat mounting





Installation dimension

Side wall mounting



TORMIN BC9102S series LED Explosion Proof Light (Bracket)



EX marking: Ex db eb mb IIC T4/T5/T6 Gb
Ex tb IIIC T130℃ /T95℃ /T80℃ Db



Application

This product is widely used as work lighting in dangerous places such as petroleum exploration, oil refining, chemical industry, and power plants;
Applicable to places with high humidity and corrosion protection;
Suitable for explosive gas or dust environment zone 1, zone 2, or zone 21, zone 22;
Suitable for IIA, IIB, IIC explosive gas environment;
Suitable for temperature group T1~T6 group;
Applicable ambient temperature is -40℃ ~ +40℃/ +55℃.

Characteristics

■ The lamp adopts modular design, and the module can be quickly replaced without welding on site;

■ The lamp housing is made of copper-free aluminum, anodized or sprayed with high-grade anti-corrosive plastic powder. The mounting bracket and standard parts are made of SUS304 stainless steel, which can be used in high corrosive environments for a long time;

■ Adopt a unique heat dissipation structure, semi-closed and transparent heat dissipation structure to ensure efficient heat conduction, radiation and convection, so as to ensure the service life of the LED;

■ The illumination is uniform within the illumination range of the lamp, and the illumination angle is 80X100 degrees, which fully utilizes the light;

■ The protection level reaches IP66, which can effectively resist heavy rain;

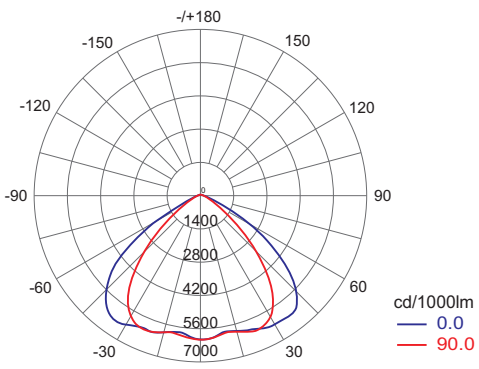
■ Can be connected in parallel, eliminating the junction box and installation costs;

■ The light source adopts international brands, the whole light efficiency is greater than 125lm/W, and the power consumption is only 40% of the metal halide lamp;

■ All key components of the power supply adopt world-renowned brands, which are efficient and stable;

■ The bracket and standard parts could be customized by 316 stainless steel, which can be used in anti-corrosion environments such as offshore platforms for a long time.

Light distribution curve



Main Specification

Item	Technical parameter
Rated voltage	120~240VAC (30W~60W/100W/120W/ 150W/180W/240W/300W)
Rated frequency	50Hz / 60Hz
CRI(Ra)	70(80 optional)
CCT	5000K (3000K/ 4000K optional)
Screw thread	M20×1. 5, NPT1/2

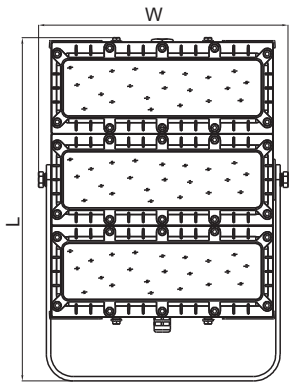
TORMIN BC9102S series LED Explosion Proof Light (Bracket)

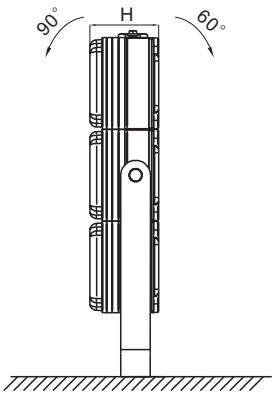
Ordering reference

Model number	Rated wattage(W)	Light output (lm)	Net weight (Kg)	Space height ratio	Mounting Height(m)	Dimension(mm)	Replace to Metal Halide Lamp
BC9102S-L60	60	7600	5	1.4	5~8	212(L)X338(W)X93(H) (30~80W)	150W
BC9102S-L100	100	12675	8.3		8~12	337(L)X338(W)X93(H) (100~120W)	250W
BC9102S-L120	120	14803			8~12		250W~400W
BC9102S-L150	150	18675	12.4		10~15	464(L)X338(W)X93(H) (150~180W)	400W
BC9102S-L180	180	22409			10~15		400W
BC9102S-L240	240	28035	15.8		15~20	587(L)X338(W)X93(H)	600W
BC9102S-L300	300	38025	19.5		15~20	711(L)X338(W)X93(H)	600W~1000W

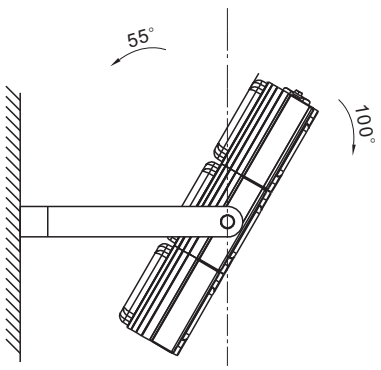
Drawing of dimension (Dimensions in mm)

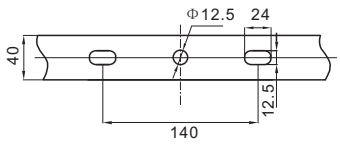
Bracket mounted





Side wall mounted





Installation size

TORMIN BC9102R series LED Explosion Proof Light (Street light)



EX marking: Ex db eb mb IIC T4/T5/T6 Gb
Ex tb IIIC T130℃ /T95℃ /T80℃ Db



Application

This product is widely used for road lighting in dangerous places such as petroleum exploration, oil refining, chemical industry, and power plants;
Applicable to places with high humidity and corrosion protection;
Suitable for explosive gas or dust environment zone 1, zone 2, or zone 21, zone 22;
Suitable for IIA, IIB, IIC explosive gas environment;
Suitable for temperature group T1~T6 group.
Applicable ambient temperature is -40℃ ~ +40℃/ +55℃.

Characteristics

■ The lamp adopts modular design, and the module can be quickly replaced without welding on site;

■ The lamp housing is made of copper-free aluminum, anodized or sprayed with high-grade anticorrosive plastic powder. The mounting bracket and standard parts are made of SUS304 stainless steel, which can be used in high corrosive environments for a long time;

■ Adopt a unique heat dissipation structure, semi-closed and transparent heat dissipation structure to ensure efficient heat conduction, radiation and convection, so as to ensure the service life of the LED;

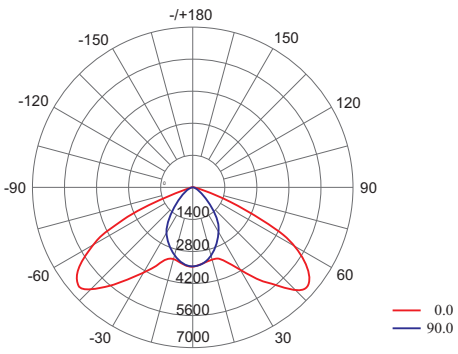
■ The protection level reaches IP66, which can effectively resist heavy rain;

■ The illumination is uniform within the illumination range of the lamp, and the illumination angle is up to 60X120 degrees, which fully effectively utilizes the light;

■ The light source adopts international brands, the whole light efficiency is greater than 125lm/W, and the power consumption is only 40% of the metal halide lamp;

■ All key components of the power supply adopt world-renowned brands, which are efficient and stable.

Light distribution curve



Main Specification

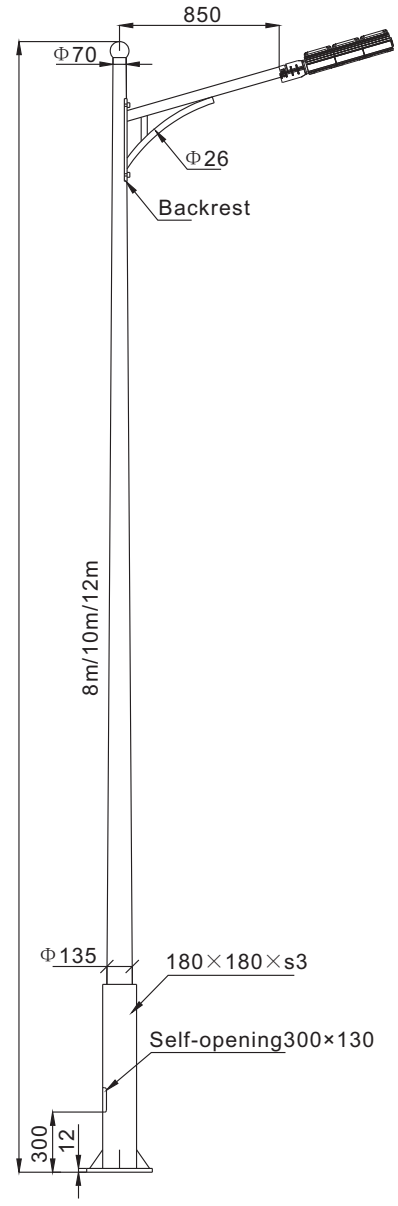
Item	Technical parameter
Rated voltage	120~240VAC (60W/100W/120W/150W)
Rated frequency	50Hz / 60Hz
CRI(Ra)	70 (80 Optional)
CCT	5000K (3000K/4000K Optional)
Outer diameter of street light pole range	Φ55～ Φ60(Φ40～ Φ55 Optional)

TORMIN BC9102R series LED Explosion Proof Light (Street light)

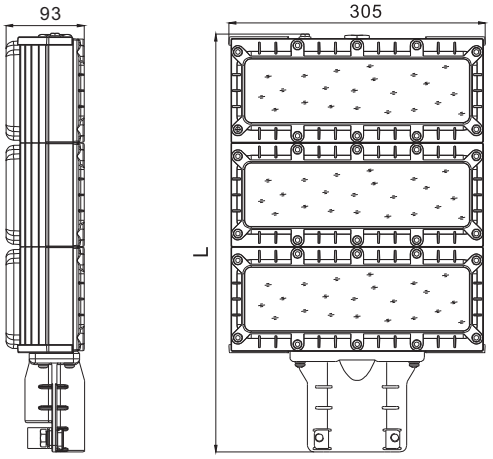
Ordering reference

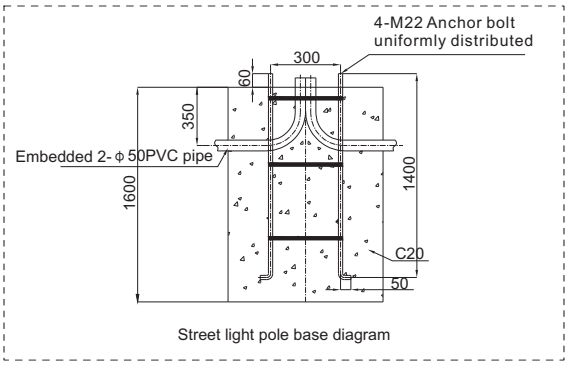
Model number	Rated wattage(W)	Light output (lm)	Net weight (Kg)	Space height ratio	Mounting Height(m)	Dimension(mm)	Replace to Metal Halide Lamp
BC9102R-L60	60	7600	5	1.4	6~8m	248(L)X305(W)X93(H)	150W
BC9102R-L100	100	12675	8.3		6~10m	272(L)X305(W)X93(H)	250W
BC9102R-L120	120	14803					250W~400W
BC9102R-L150	150	18675	11.7		8~12m	497(L)X305(W)X93(H)	400W

Drawing of dimension (Dimensions in mm)

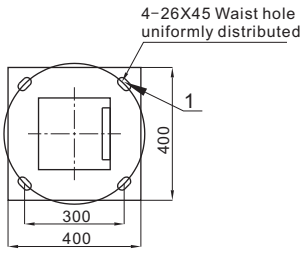


One-arm installation (optional lighting pole)

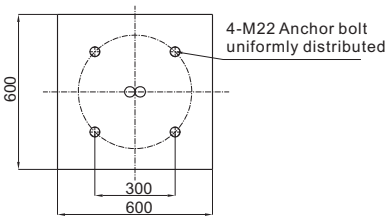




Street light pole base diagram



Schematic diagram of bottom flange



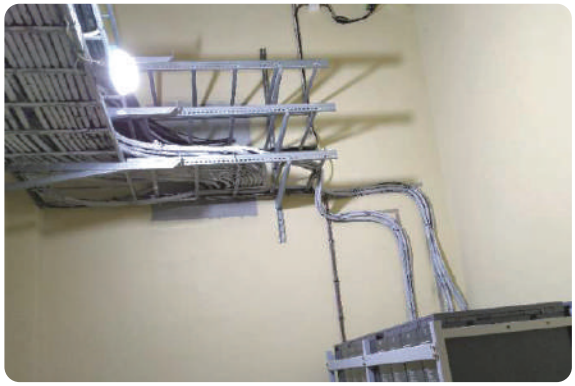
Street light pole base diagram

TORMIN BC9200 Series Maintenance Free Energy-saving Explosion-proof Lamp



Ex marking: Ex db eb IIC T6 Gb,
Ex tb IIC T80℃ Db

Reference Standard:
IEC 60079-0:2017, IEC 60079-1:2014,
IEC 60079-31:2022, IEC 60079-7:2017



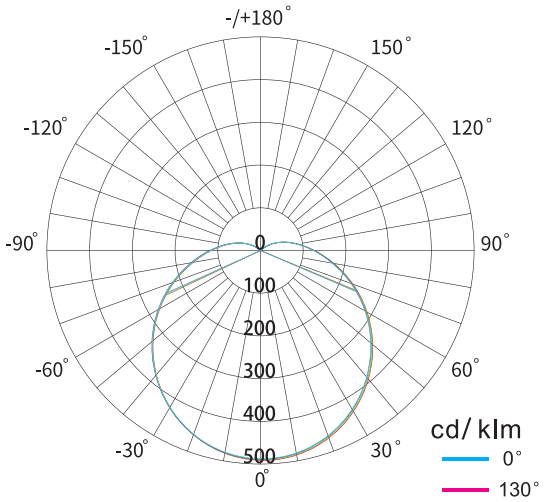
Application

- This product is widely used in small control rooms, operation rooms, mezzanines, hallways, door lintels, grooves, sampling ports, material ports, tank bottoms and other narrow spaces;
- Applicable to places with high humid corrosion protection levels;
- Applicable to explosive gas environment Zone 1 and Zone 2, and explosive dust environment Zone 21 and Zone 22;
- Applicable to IIA, IIB, IIC explosive gas environments and explosive dust environments;
- Applicable to temperature groups T1~T6.

Characteristics

- The lamp is small in size and light in weight; it is particularly suitable for lighting in small spaces in various hazardous gas environments;
- Flexible light output, no glare and blue light hazards, especially suitable for long-term lighting in small spaces where people work;
- The lamp has an independent wiring cavity, and no wiring box is required during installation, saving time and cost;
- American Lumileds light source, energy saving is more than 60% compared with metal halide lamps;
- The protection level of the whole lamp is IP66, which can be used in various indoor and outdoor sand, dust, rain, fog, and sea wave environments for a long time.

Light Distribution Curve



Average beam angle (50°): 130°

Main Specification

Item	Technical Parameters
Input voltage	90~264VAC
	18~43VAC/ 18~55VDC (Low voltage optional)
Rated wattage	6W~20W
Rated frequency	50Hz / 60Hz
Light source	LED
Life time	50,000hrs
CRI (Ra)	70
CCT	5000K (3000K/ 4000K optional)
Leading-in cable diameter	Φ6mm~ Φ8mm
Dimensions	Φ150×140mm
Net weight	1.3kg
Cable entry size	M20, NPT1/2", G1/2"

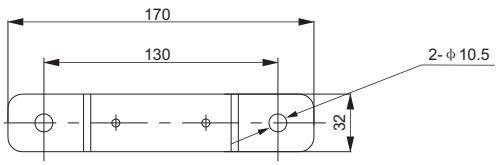
BC9200 Series Maintenance Free Energy-saving Explosion-proof Lamp

Ordering Reference

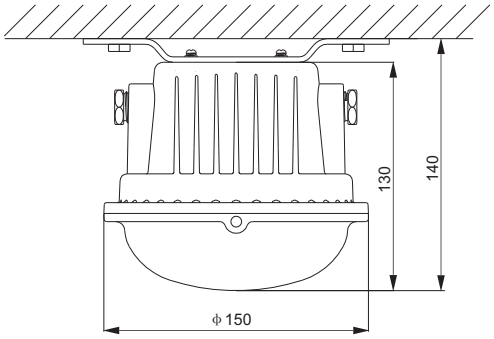
Model number	Rated wattage (W)	Light output (lm)	Mounting height (m)	Equivalent to Energy saving lamp
Input voltage: 90~264VAC				
BC9200-L6	6W	>720	2~4m	18W
BC9200-L12	12W	>1340		22W
BC9200-L15	15W	>1800		28W
BC9200-L20	20W	>2400		42W
Input voltage: 18~43VAC/ 18~55VDC				
BC9200-L6D	6W	>720	2~4m	18W
BC9200-L12D	12W	>1340		22W
BC9200-L15D	15W	>1800		28W
BC9200-L20D	20W	>2400		42W

Conventional example: The Light order number is BC9200-L6-5000K, product model as BC9200, rated power as 6W, color temperature as 5000K;
Low voltage example: The Light order number is BC9200-L6D-5000K, product model as BC9200, rated power as 6W, voltage as low voltage D, color temperature as 5000K.

Drawing of dimension (Dimensions in mm)



Installation dimension



TORMIN

BC9302P Series
LED Explosion Proof FloodLight



Beam angle:80°

Ex marking: Ex db op is IIC T5/T6 Gb
Ex tb op is IIIC T95℃/T80℃ Db

Characteristics

- Large light surface flexible light output, no glare, no blue light hazard, especially suitable for long-term lighting in a working environment.
- The translucent cover is made of non-transparent tempered glass, which is extremely resistant to weathering and acid and alkali.
- The shell is made of aluminum alloy, the standard part is made of 304 stainless steel, and the surface is made of high-tech anti-corrosion treatment technology, which is suitable for various harsh industrial environments.
- The luminaire has two access ports, which can be used in parallel as a connection, saving the cost of installing the junction box in the middle.
- The lamp opening and closing connection design enable single person installation and maintenance, saving labor costs.
- American Lumileds light source, the overall lighting efficiency is as high as 100lm / W, compared with the metal halide lamp energy saving more than 60%.
- The whole lamp protection grade is IP66, which can be applied to various indoor and outdoor sand dust or rain fog and sea wave environment for a long time.

Application

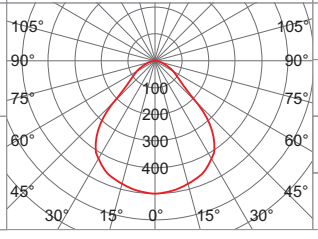
Equipment platform, equipment layer area, main and auxiliary workshop, channel, pipeline, joint station, transfer station, pump valve shed, tank, material sample, plank road, warehouse room, warehouse and other places.
Hazardous Gas Zone 1 and Zone 2
Dangerous dust Zone 21 and Zone 22



Main Specification

Rated voltage (V)	100~240VAC/120~270VAC
	20-38VAC/ 20~48VDC
Rated frequency	50Hz / 60Hz
Light source	LED
Life time(h)	50,000h
CCT	5000K(3000K/4000K optional)
Screw thread	G3/4, M20, M25, NPT3/4", NPT1/2
Leading-in cable diameter	ϕ9mm~ ϕ14mm
Dimension (mm)	ϕ240×220
Net weight (kg)	5

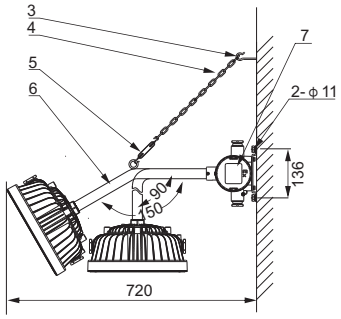
Ordering reference

Ordering reference	Picture	Rated wattage (W)	Light output (lm)	Space height ratio	Mounting height(m)	Light distribution curve (1000cd/lm)	Replace to Metal halide lamp
BC9302P-L30-80°		30W	>3300	1.25	2~5m		70W
BC9302P-L40-80°		40W	>4400				100W
BC9302P-L50-80°		50W	>5500		4~6m		100W
BC9302P-L60-80°		60W	>6600				150W

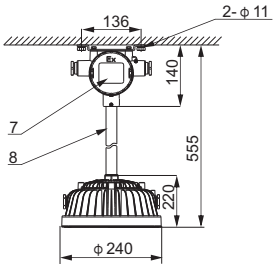
*The lamp can be matched with a milk white sphere lens: 200°

Drawing of dimension (Dimensions in mm)

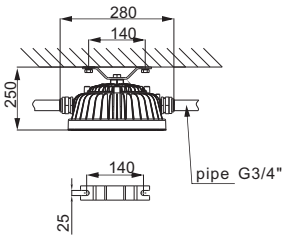
Side wall mounting 150°/90°

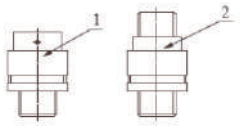


Pole mounting



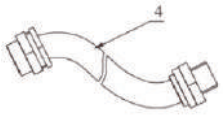
Ceiling mounting





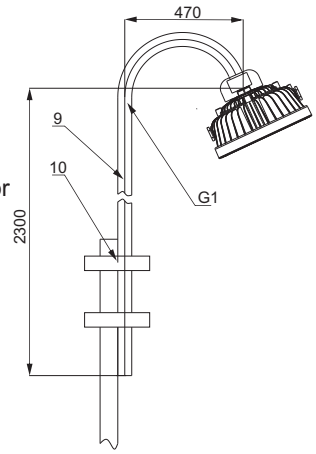
Explosion proof connector
G3/4" Female- Male

Explosion proof connector
G3/4" Male- Male

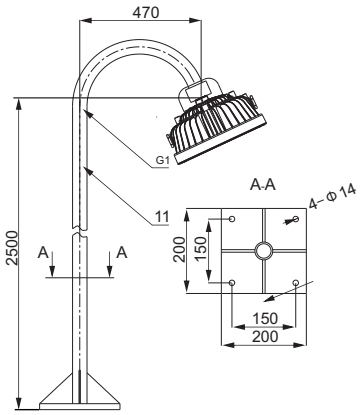


Connecting pipe
G3/4" Female- Male

Fence Mounting



Flanged Mounting



Number	Model specifications	Quantity	Note	Number	Model specifications	Quantity	Note
1	Explosion proof connector	Reference mounting image	G3/4" Female- Male	7	Explosion proof junction box	1	
2	Explosion proof connector	Reference mounting image	G3/4" Male- Male	8	G3/4" pole	1	The length in accordance with the request of the customer
3	Expansion screw hook	1		9	Fence type lighting pole	1	
4	Chain	1	G3/4"	10	U-bolts	2	
5	C-C screw buckle	1	G3/4" Female- Male	11	Flange type lighting pole	1	
6	G3/4" bend pipe	1	90 degrees and 150 degrees are optional	12			

TORMIN

BC9302S Series
LED Explosion Proof FloodLight



Beam angle:80°

Ex marking: Ex db op is IIC T5/T6 Gb
Ex tb op is IIIC T95℃/T80℃ Db

Characteristics

- Large light surface flexible light output, no glare, no blue light hazard, especially suitable for long-term lighting in a working environment.
- The translucent cover is made of non-transparent tempered glass, which is extremely resistant to weathering and acid and alkali.
- The shell is made of aluminum alloy, the standard part is made of 304 stainless steel, and the surface is made of high-tech anti-corrosion treatment technology, which is suitable for various harsh industrial environments.
- The luminaire has two access ports, which can be used in parallel as a connection, saving the cost of installing the junction box in the middle.
- The lamp opening and closing connection design enable single person installation and maintenance, saving labor costs.
- American Lumileds light source, the overall lighting efficiency is as high as 100lm / W, compared with the metal halide lamp energy saving more than 60%.
- The whole lamp protection grade is IP66, which can be applied to various indoor and outdoor sand dust or rain fog and sea wave environment for a long time.

Application

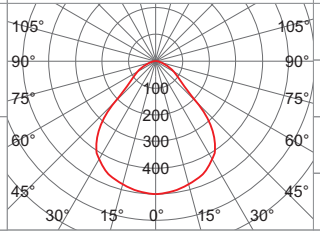
Equipment platform, equipment layer area, main and auxiliary workshop, channel, pipeline, joint station, transfer station, pump valve shed, tank, material sample, plank road, warehouse room, warehouse and other places.
Hazardous Gas Zone 1 and Zone 2
Dangerous dust Zone 21 and Zone 22



Main Specification

Rated voltage (V)	100~240VAC/120~270VAC
	20-38VAC/ 20~48VDC
Rated frequency	50Hz / 60Hz
Light source	LED
Life time(h)	50,000h
CCT	5000K(3000K/4000K optional)
Screw thread	G3/4, M20, M25, NPT3/4", NPT1/2
Leading-in cable diameter	ϕ 9mm~ ϕ 14mm
Dimension (mm)	ϕ 240×220
Net weight (kg)	5

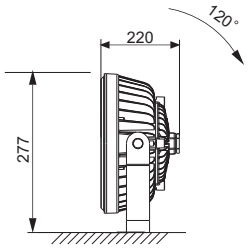
Ordering reference

Ordering reference	Picture	Rated wattage (W)	Light output (lm)	Space height ratio	Mounting height(m)	Light distribution curve (1000cd/lm)	Replace to Metal halide lamp
BC9302S-L30-80°		30W	>3300	1.25	2~5m		70W
BC9302S-L40-80°		40W	>4400				100W
BC9302S-L50-80°		50W	>5500		4~6m		100W
BC9302S-L60-80°		60W	>6600				150W

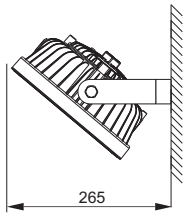
*The lamp can be matched with a milk white sphere lens: 200°

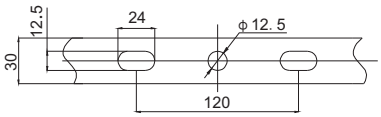
Drawing of dimension (Dimensions in mm)

Seat mounting



Side Wall mounting





Installation size

TORMIN

BC9302P Series
LED Explosion Proof FloodLight



Beam angle:200°

Ex marking: Ex db op is IIC T5/T6 Gb
Ex tb op is IIIC T95℃/T80℃ Db

Characteristics

- Large light surface flexible light output, no glare, no blue light hazard, especially suitable for long-term lighting in a working environment.
- The translucent cover is made of non-transparent tempered glass, which is extremely resistant to weathering and acid and alkali.
- The shell is made of aluminum alloy, the standard part is made of 304 stainless steel, and the surface is made of high-tech anti-corrosion treatment technology, which is suitable for various harsh industrial environments.
- The luminaire has two access ports, which can be used in parallel as a connection, saving the cost of installing the junction box in the middle.
- The lamp opening and closing connection design enable single person installation and maintenance, saving labor costs.
- American Lumileds light source, the overall lighting efficiency is as high as 100lm / W, compared with the metal halide lamp energy saving more than 60%.
- The whole lamp protection grade is IP66, which can be applied to various indoor and outdoor sand dust or rain fog and sea wave environment for a long time.

Application

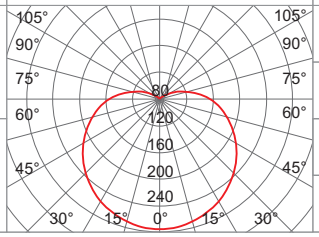
Equipment platform, equipment layer area, main and auxiliary workshop, channel, pipeline, joint station, transfer station, pump valve shed, tank, material sample, plank road, warehouse room, warehouse and other places.
Hazardous Gas Zone 1 and Zone 2
Dangerous dust Zone 21 and Zone 22



Main Specification

Rated voltage (V)	100~240VAC/120~270VAC(30~60W)
	20~38VAC/20~48VDC(30~60W)
Rated frequency	50Hz / 60Hz
Light source	LED
Life time(h)	50,000h
CCT	5000K(3000K/4000K optional)
Screw thread	G3/4, M20, M25, NPT3/4", NPT1/2
Leading-in cable diameter	ϕ9mm~ϕ14mm
Dimension (mm)	ϕ240×220
Net weight (kg)	5

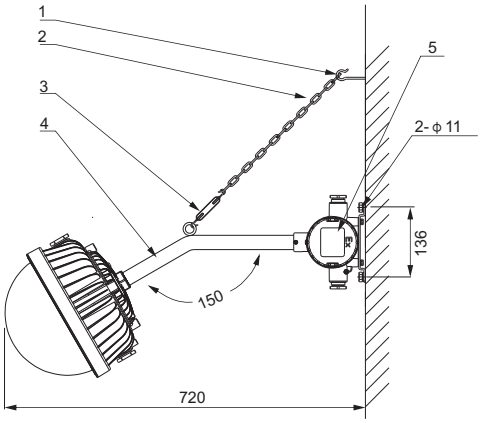
Ordering reference

Ordering reference	Picture	Rated wattage (W)	Light output (lm)	Space height ratio	Mounting height(m)	Light distribution curve (1000cd/lm)	Replace to Metal halide lamp
BC9302P-L30-200°		30W	2700	1.75	2~5m		70W
BC9302P-L40-200°		40W	3600				100W
BC9302P-L50-200°		50W	4500		3~6m		100W
BC9302P-L60-200°		60W	5600				150W

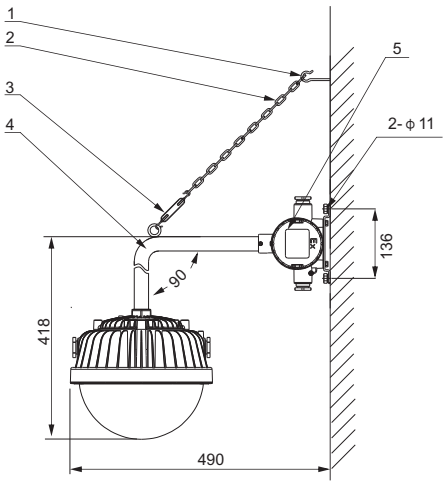
*The lamp can be matched with a flat lens: 80°

Drawing of dimension (Dimensions in mm)

Wall mounting 150°



Wall mounting 90°



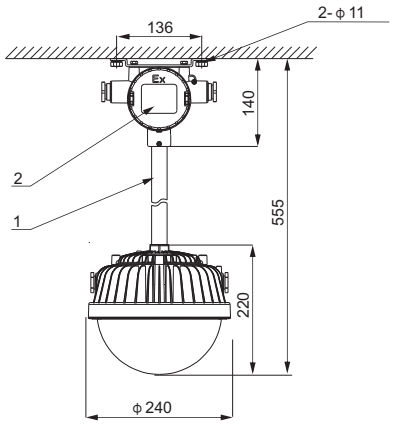
Accessories list (optional)

Ordering reference	Item No.	Specification	Qty
P04	1	Expansion screw hook	1
	2	Chain	1
	3	C-C Spiral buckle	1
	4	90° pole with G3/4"	1
BHD01	5	Explosion proof junction box	1

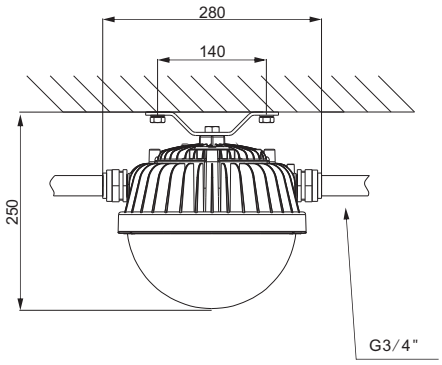
Accessories list (optional)

Ordering reference	Item No.	Specification	Qty
P03	1	Expansion screw hook	1
	2	Chain	1
	3	C-C Spiral buckle	1
	4	150° pole with G3/4"	1
BHD01	5	Explosion proof junction box	1

Pole mounting

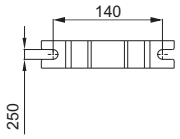


Ceiling mounting

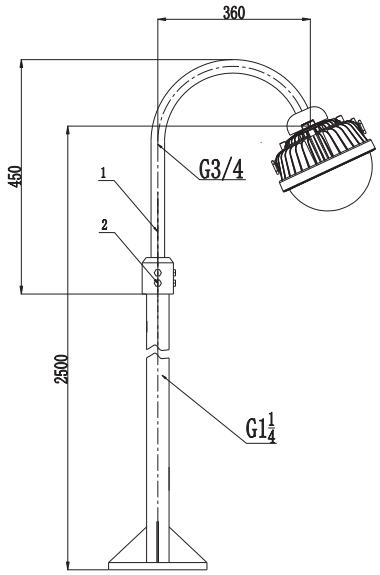


Accessories list (optional)

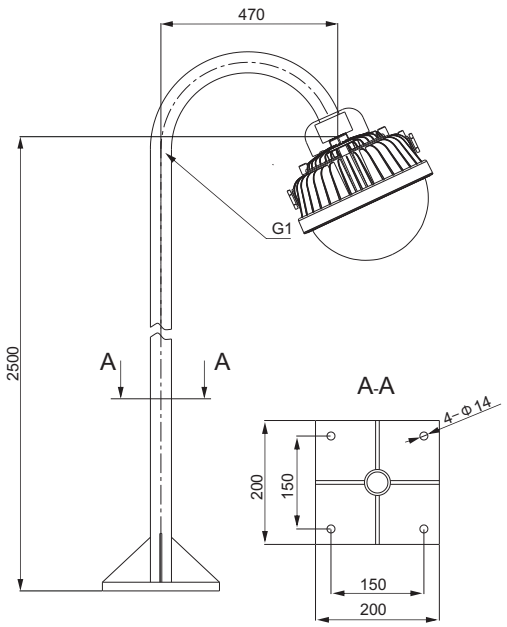
Ordering reference	Item No.	Specification	Qty
P01	1	30cm Pole (G3/4")	1
BHD01	2	Explosion proof junction box	1



Flange mounting



Guardrail mounting



Accessories list (optional)

Ordering reference	Item No.	Specification	Qty
P05	1	Guardrail light pole	1
	2	Locking screw	4

Accessories list (optional)

Ordering reference	Item No.	Specification	Qty
P06	1	Flange light pole	1

TORMIN

BC9302S Series
LED Explosion Proof FloodLight



Beam angle:200°

Ex marking: Ex db op is IIC T5/T6 Gb
Ex tb op is IIIC T95℃/T80℃ Db

Characteristics

- Large light surface flexible light output, no glare, no blue light hazard, especially suitable for long-term lighting in a working environment.
- The translucent cover is made of non-transparent tempered glass, which is extremely resistant to weathering and acid and alkali.
- The shell is made of aluminum alloy, the standard part is made of 304 stainless steel, and the surface is made of high-tech anti-corrosion treatment technology, which is suitable for various harsh industrial environments.
- The luminaire has two access ports, which can be used in parallel as a connection, saving the cost of installing the junction box in the middle.
- The lamp opening and closing connection design enable single person installation and maintenance, saving labor costs.
- American Lumileds light source, the overall lighting efficiency is as high as 100lm / W, compared with the metal halide lamp energy saving more than 60%.
- The whole lamp protection grade is IP66, which can be applied to various indoor and outdoor sand dust or rain fog and sea wave environment for a long time.

Application

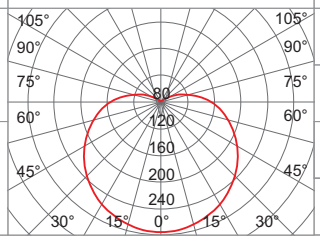
Equipment platform, equipment layer area, main and auxiliary workshop, channel, pipeline, joint station, transfer station, pump valve shed, tank, material sample, plank road, warehouse room, warehouse and other places.
Hazardous Gas Zone 1 and Zone 2
Dangerous dust Zone 21 and Zone 22



Main Specification

Rated voltage (V)	100~240VAC/120~270VAC(30~60W)
	20~38VAC/20~48VDC(30~60W)
Rated frequency	50Hz / 60Hz
Light source	LED
Life time(h)	50,000h
CCT	5000K(3000K/4000K optional)
Screw thread	G3/4, M20, M25, NPT3/4", NPT1/2
Leading-in cable diameter	ϕ9mm~ϕ14mm
Dimension (mm)	ϕ240×220
Net weight (kg)	5

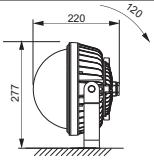
Ordering reference

Ordering reference	Picture	Rated wattage (W)	Light output (lm)	Space height ratio	Mounting height(m)	Light distribution curve (1000cd/lm)	Replace to Metal halide lamp
BC9302S-L30-200°		30W	2700	1.75	2~5m		70W
BC9302S-L40-200°		40W	3600				100W
BC9302S-L50-200°		50W	4500		3~6m		**100W**
BC9302S-L60-200°		60W	5600				150W

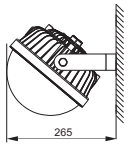
*The lamp can be matched with a flat lens: 80°

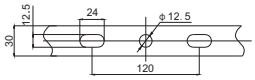
Drawing of dimension (Dimensions in mm)

Seat mounting



Side wall mounting





Installation size

TORMIN BC9303 Series LED Explosion-proof Floodlight



Ex marking: Ex db IIB T6 Gb
Ex tb IIIC T80℃ Db



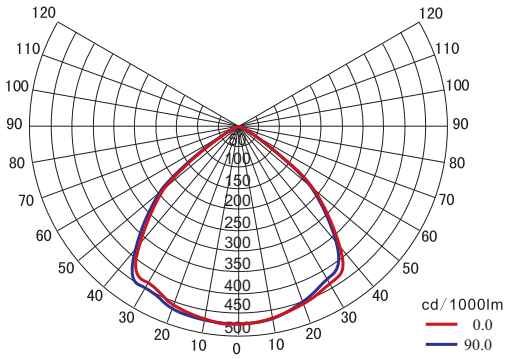
Application

- Ideal to be used in the oilfield, chemical industry, steel industry, power,port, Petroleum etc.Harsh environment, moist area.
- class I,zone1&zone2,zone21&zone22

Characteristics

- The Light distribution and its mounting types are especially designed for the platform.
- It adopts American CREE LED as light source, can save 60% or more on energy than the metal halide lamp.
- The housing is designed to dissipate heat, which increase the efficiency and the lifespan of the LED, so that to ensure the 100,000 hours led lifespan.
- Supplied with the world top ranking LED driver, ensure the lamp of high performance, more efficient.
- The anti corrosion, abrasion proof, power coated cover which is dust proof, water proof , make the lamp an excellent option for all kinds of high stress environment.
- 18~43VAC or 18~55VDC is optional for 25W and 40W as customer's requirement.

Light Distribution Curve



Main Specification

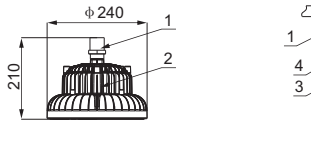
Item	Technical Parameters
Input voltage (V)	90~264VAC
	18~43VAC/ 18~55VDC (25~40W)
Rated frequency	50Hz / 60Hz
Light source	LED
Life time (h)	100,000
CRI (Ra)	75
CCT	5000K ±250K
Cable entry	G3/4, M20, M25, NPT3/4", NPT1/2
Dimension (mm)	Φ240×180
Net weight (kg)	4

TORMIN BC9303 Series LED Explosion-proof Floodlight

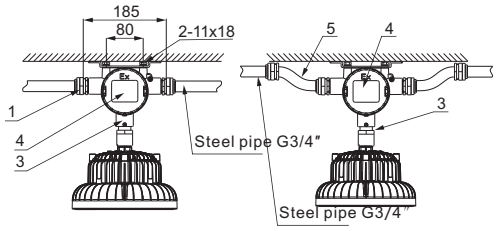
Ordering Reference

Ordering reference	Input voltage (V)	Rated wattage (W)	Light output (lm)	Mounting height (m)	Equivalent to MH
BC9303- L25H	90~264VAC	25W	2400	3~6m	50~70W
BC9303- L40H		40W	4300		100W
BC9303- L60H		60W	5800	4~8m	150W
BC9303- L25L	18~43VAC/ 18~55VDC	25W	2400	3~6m	50-70W
BC9303- L40L		40W	4300		100W

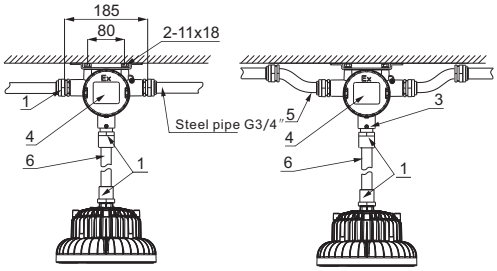
Drawing of dimension (Dimensions in mm)



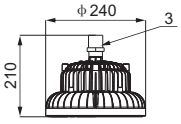
Standard
(G3/4 pole mounting type)



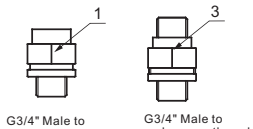
Ceiling mounting (optional)

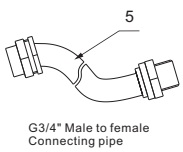


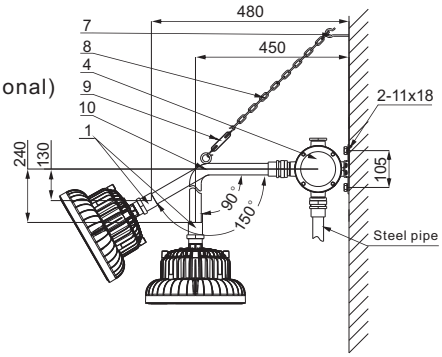
Pole mounting (optional)



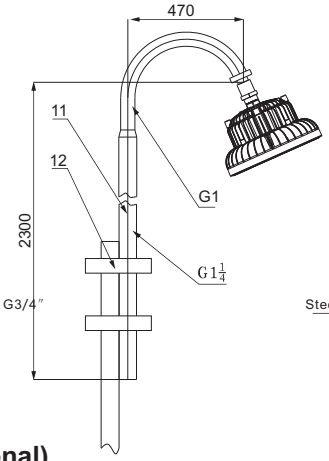
Ceiling mounting (optional)

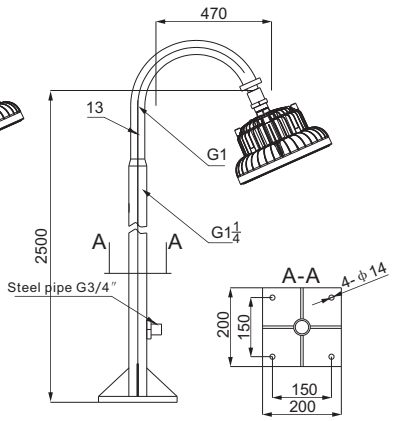






Side wall mounting 90°/ 150°(optional)





Flanged mounting(optional)

Flanged mounting(optional)

Number	Name	Quantity	Remark	Number	Name	Quantity	Remark
1	Explosion proof connector	Reference mounting image	G3/4"female to male	8	Chain	1	
2	BC9303	1	female to male	9	Turn buckle	1	
3	Explosion proof connector	Reference mounting image	G3/4"female to male	10	G3/4" bend pipe	1	90 degrees and 150 degrees are optional
4	Explosion proof junction box	1	G3/4"	11	Light pole	1	
5	Connecting pipe	Reference mounting image	G3/4"female to male	12	U-bolts	2	
6	G3/4"pole	1	The length in accordance with the request of the customer	13	flanged type pole	1	
7	Screw hook	1		14			

TORMIN BC9304S series LED Explosion-proof Lamp (Bracket)



Ex marking: Ex db eb IIC T6 or T5 or T4 Gb
Ex tb IIIC T80℃ or T95℃ or T130℃ Db

Application

This product is widely used for work lighting in dangerous places such as petroleum exploration, oil refining, chemical industry, and electric power;

Applicable to places with high humidity and corrosion protection;

Applicable to explosive gas or dust environment in Zone 1, Zone 2 or Zone 21, Zone 22;

Suitable for IIA, IIB, IIC explosive gas environment;

Suitable for temperature group T1~T6/ T5 group;

Applicable ambient temperature is -40℃~40℃/55℃.



Characteristics

■ The radiator adopts fin structure design, which can be suitable for high temperature and high humidity working environment for a long time;

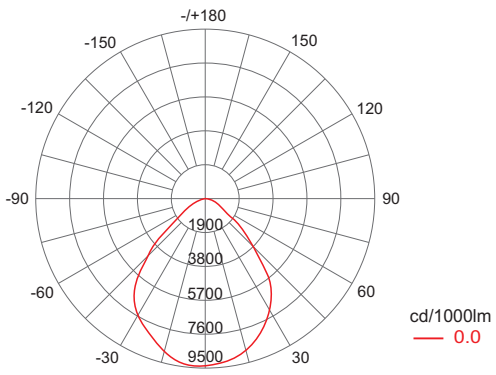
■ A variety of installation methods and the same shape can effectively solve the problem of aesthetic appearance in the same area;

■ The lamp adopts international brand light source, no color spots, dark areas, ghosting, etc., the whole light efficiency is as high as 120lm/W, which is more than 60% energy-saving compared with the metal halide lamp;

■ The power supply adopts first-line brands such as Meanwell and Inventronics, and its reliability and life span rank first in the industry;

■ The protection level reaches IP66, which can effectively resist heavy rain;

Light distribution curve



Main Specification

Item	Technical Parameters
Input voltage	90~305VAC
Rated frequency	50Hz / 60Hz
Rated wattage	80~150W
Light source	LED
Life time	100,000hrs
CRI (Ra)	70 (80 optional)
CCT	5000K (3000K/ 4000K optional)
Leading-in cable diameter	Φ8mm~Φ12mm (G3/4", M25, NPT3/4")
	Φ6mm~Φ10mm (G1/2, M20, NPT1/2") (attached with reducer union)
Net weight	7.9Kg
Size	328X302X249mm

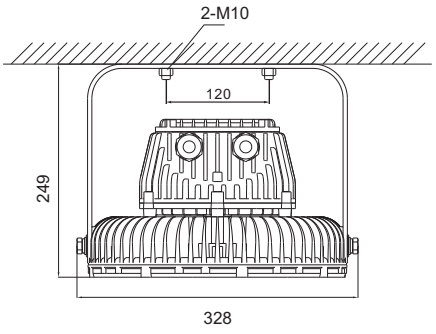
BC9304S series
LED Explosion-proof Lamp (Bracket)

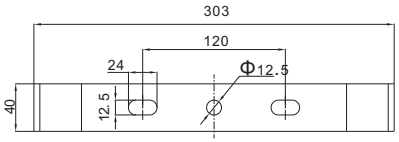
Ordering reference

Model number	Rated wattage (W)	Light output (lm)	Space height ratio	Mounting height(m)	Replace to Metal halide lamp
BC9304P-L80	80	8873	1.4	8~12m	175W
BC9304P-L100	100	12675			250W
BC9304P-L120	120	14803		10~15m	>250W
BC9304P-L150	150	18675		10~15m	400W

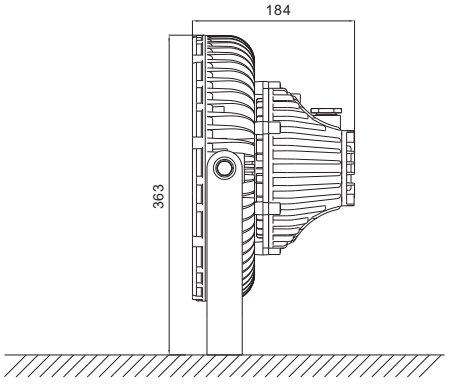
Drawing of dimension (Dimensions in mm)

Ceiling mounted

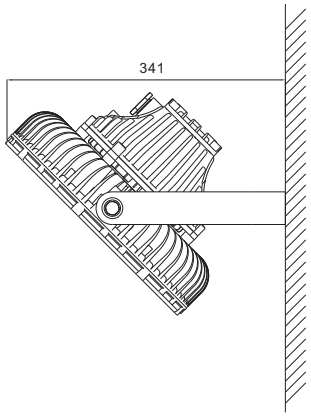




Seat mounted



Side wall mounted



TORMIN BC9306P LED Explosion Proof Light(Pole)

IECEx
ATEX
CE
RoHS
LM79
LM84
IP 66
Ta 40/55
Ta -50



Ex marking: Ex db eb IIC T6/T5/T4 Gb
Ex tb IIIC T80℃/T95℃/T130℃ Db,IP66

Characteristics

- It is made using a special aluminum housing, all exposed fasteners adopt 304 stainless steel. Using high-tech anti-corrosion surface treatment technology, suitable for long-term highly corrosive environment of offshore oil platforms, oil drilling platform, chlor-alkali, vulcanization cyanide, etc.
- A full range of high conductivity material accelerate convection cooling structure, effective guarantee long-term use in high temperature environments.
- Variety of light distribution, variety of installation types, an effective solution to beautify workshop and device platform.
- The shell is made of high-tech surface coating technology, corrosion resistant, waterproof and dust proof, suitable for harsh environments.
- Optoelectronic integrated technology, no dark spot, no ghosting,, energy-saving is 60% more than Metal Halide Lamp.
- Taiwan Meanwell power supply or same quality power supply, power factor above 0.98, high reliability and long time service life.
- Independent wiring chamber, safe and easy installation and maintenance.
- Quick replay light source without welding.
- Intelligent control functions can be realized.(Dimming: 1-10VDC, PWM, Carrier, DALI, etc.)

Application

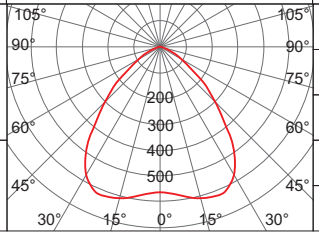
- Ideal to be used in the oilfield, chemical industry, offshore drilling platform, steel industry, petroleum etc.
- Gas explosive environment: Group IIA,IIB,IIC.
- Zone 1,zone 2;zone 21,zone 22.



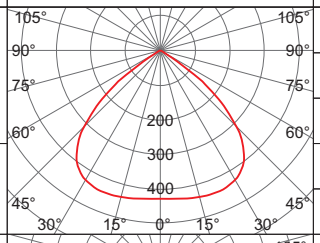
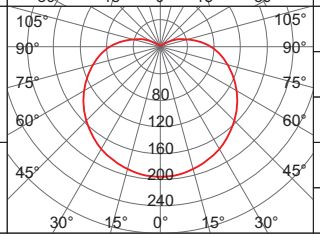
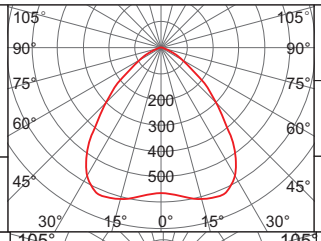
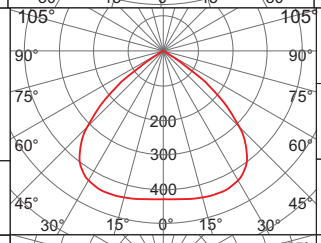
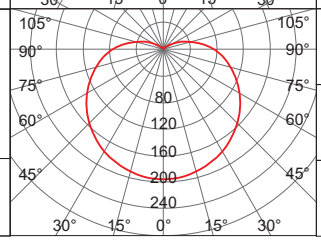
Main Specification

Item	Technical Parameters
Input voltage (V)	90~264VAC
	18~43VAC/ 18~55VDC
Rated frequency	50Hz / 60Hz
Light source	LED
CRI (Ra)	70 (80 optional)
Life time (h)	50,000
CCT	5000K(3000K/4000K optional)
Cable entry	M20×1.5, M25×1.5, G3/4", NPT1/2", NPT3/4"
Dimension (mm)	Φ230×270
Net weight (kg)	4.2

Ordering reference

Ordering reference	Picture	Rated Wattage (W)	Light output (lm)	Space height ratio	Mounting height (m)	Light distribution Curve(1000cd/lm)	Equivalent to MH
BC9306P-L30-80°		30W	3500	1.4	3~6m		70W
BC9306P-L40-80°		40W	4500				100W
BC9306P-L50-80°		50W	5600				＞100W
BC9306P-L60-80°		60W	6900		4~8m		150W
BC9306P-L80-80°		80W	8700				175W

BC9306P
LED Explosion Proof Light(Pole)

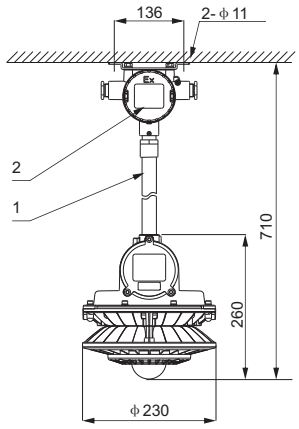
Ordering reference	Picture	Rated Wattage (W)	Light output (lm)	Space height ratio	Mounting height (m)	Light distribution Curve(1000cd/lm)	Equivalent to MH
BC9306P-L30-100°		30W	3500	1.4	2~6m		70W
BC9306P-L40-100°		40W	4600				100W
BC9306P-L50-100°		50W	5600				＞100W
BC9306P-L60-100°		60W	7000		2~8m		150W
BC9306P-L80-100°		80W	8800				175W
BC9306P-L30-200°		30W	2800	1.75	2~5m		70W
BC9306P-L40-200°		40W	3700				100W
BC9306P-L50-200°		50W	4500				＞100W
BC9306P-L60-200°		60W	5400		3~6m		150W
BC9306P-L80-200°		80W	6800				175W
Input voltage: 18~43VAC/ 18~55VDC							
BC9306P-L25L-80°		25W	2900	1.4	3~6m		70W
BC9306P-L40L-80°		40W	4600				100W
BC9306P-L60L-80°		60W	6900		4~8m		150W
BC9306P-L25L-100°		25W	2900	1.4	2~6m		70W
BC9306P-L40L-100°		40W	4600				100W
BC9306P-L60L-100°		60W	7000		2~8m		150W
BC9306P-L25L-200°		25W	2400	1.75	2~5m		70W
BC9306P-L40L-200°		40W	3700				100W
BC9306P-L60L-200°		60W	5400		3~6m		150W

Note 1:Lens can be customized 60°×80°,90°×110°

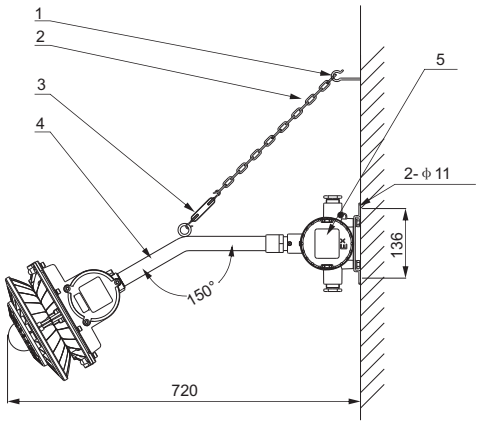
BC9306P
LED Explosion Proof Light(Pole)

Drawing of dimension (Dimensions in mm)

Pole mounting



Wall mounting 150deg



Accessories order information(Pole mounting)

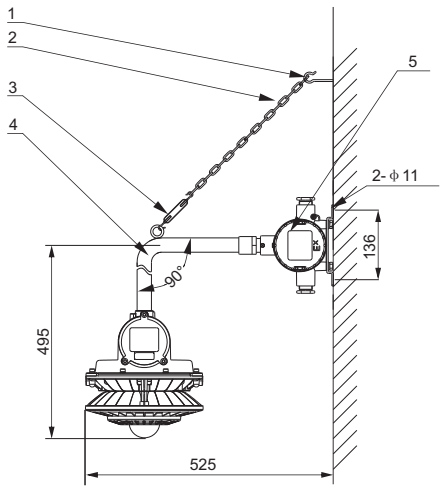
Ordering reference	Item no.	Specification	quantity
P01	1	G3/4" pole 30cm	1
BHD01	2	Explosion proof junction box	1

Accessories order information(Wall mounting 150deg)

Ordering reference	Item no.	Specification	quantity
P03	1	Expansion screw hook	1
	2	Chain	1
	3	C-C turn buckle	1
	4	G3/4" bend pipe 150°	1
BHD01	5	Explosion proof junction box	1

BC9306P
LED Explosion Proof Light(Pole)

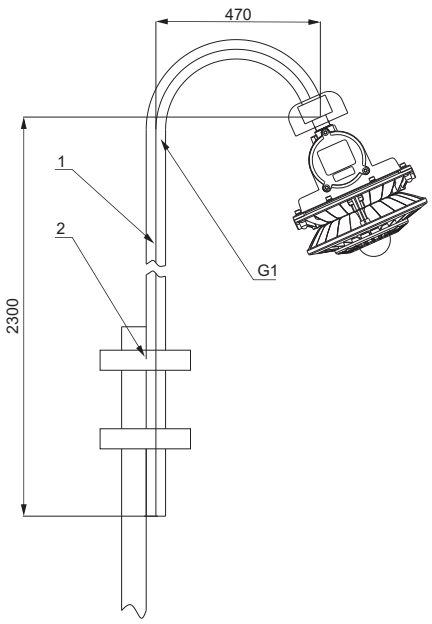
Wall mounting 90deg



Accessories order information(Wall mounting 90deg)

Ordering reference	Item no.	Specification	quantity
P04	1	Expansion screw hook	1
	2	Chain	1
	3	C-C turn buckle	1
	4	G3/4" bend pipe 90°	1
BHD01	5	Explosion proof junction box	1

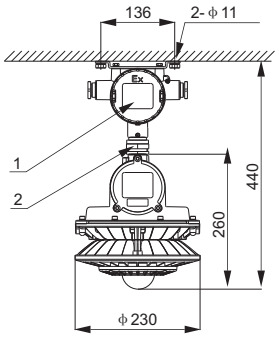
Guardrail mounting



Accessories order information(Guardrail mounting)

Ordering reference	Item no.	Specification	quantity
P05	1	fence pole	1
	2	U type bolts	2

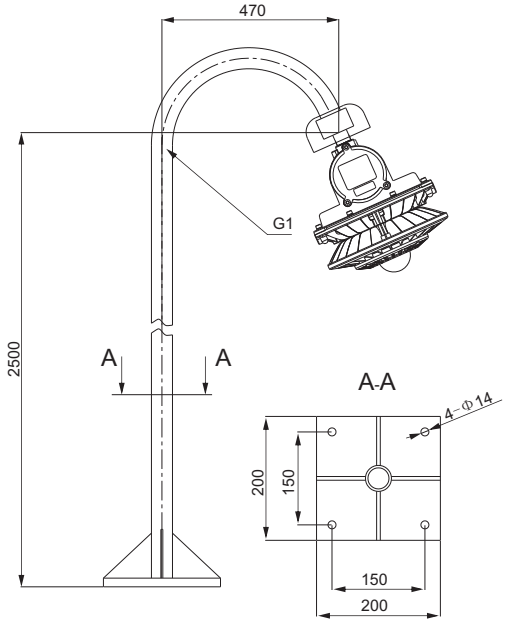
Ceiling mounting



Accessories order information(ceiling mounting)

Ordering reference	Item no.	Specification	quantity
BHD01	1	Explosion proof junction box	1
P02	2	Adapter G3/4"(female - male)	1

Flange mounting



Accessories order information(Flange mounting)

Ordering reference	Item no.	Specification	quantity
P06	1	Flange pole	1

TORMIN BC9306S LED Explosion Proof Light (Bracket)



Ex marking: Ex db eb IIC T6/T5/T4 Gb
Ex tb IIIC T80℃/T95℃/T130℃ Db,IP66

Characteristics

- It is made using a special aluminum housing, all exposed fasteners and bracket adopt 304 stainless steel. Using high-tech anti-corrosion surface treatment technology, suitable for long-term highly corrosive environment of offshore oil platforms, oil drilling platform, chlor-alkali, vulcanization cyanide, etc.
- A full range of high conductivity material accelerate convection cooling structure, effective guarantee long-term use in high temperature environments.
- Variety of light distribution, variety of installation types, an effective solution to beautify workshop and device platform.
- The shell is made of high-tech surface coating technology, corrosion resistant, waterproof and dust proof, suitable for harsh environments.
- Optoelectronic integrated technology, no dark spot, no ghosting, the average light efficiency of whole lamp can reach to 120 lm/W, energy-saving is 60% more than Metal Halide Lamp.
- Taiwan Meanwell power supply or same quality power supply, power factor above 0.98, high reliability and long time service life.
- Independent wiring chamber, safe and easy installation and maintenance.
- Quick replay light source without welding.
- Intelligent control functions can be realized.(Dimming: 1-10VDC, PWM, Carrier, DALI, etc.)

Application

- Ideal to be used in the oilfield, chemical industry, offshore drilling platform, steel industry, petroleum etc.
- Gas explosive environment: Group IIA, IIB, IIC.
- Zone 1, zone 2; zone 21, zone 22.

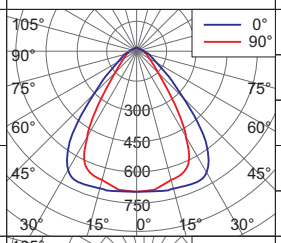
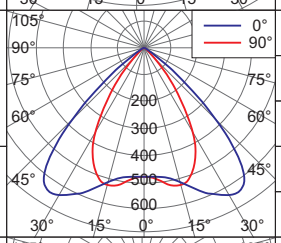
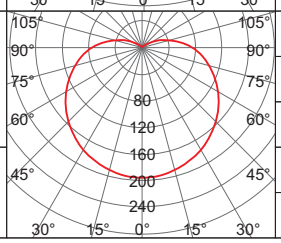
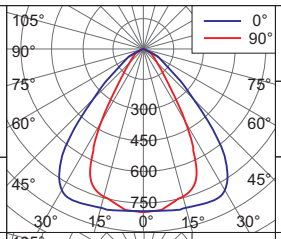
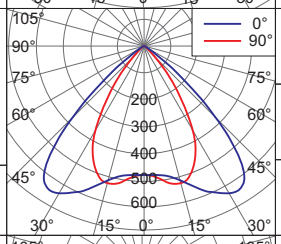
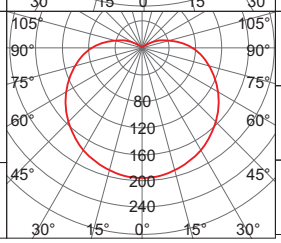


Main Specification

Item	Technical Parameters
Input voltage (V)	90~264VAC
	18~43VAC/ 18~55VDC
Rated frequency	50Hz / 60Hz
Light source	LED
CRI (Ra)	70 (80 optional)
Life time (h)	50,000
CCT	5000K(3000K/4000K optional)
Cable entry	M20×1.5, NPT1/2"
Terminals	Multi core: ≤2.5mm^2
	Single core: ≤4mm^2
Dimension (mm)	245×260×270
Net weight (kg)	4.9

BC9306S
LED Explosion Proof Light (Bracket)

Ordering reference

Ordering reference	Picture	Rated Wattage (W)	Light output (lm)	Space height ratio	Mounting height (m)	Light distribution curve(1000cd/lm)	Equivalent to MH
BC9306S-L30-60°×80°		30W	3500	1.25	3~6m		70W
BC9306S-L40-60°×80°		40W	4600				100W
BC9306S-L50-60°×80°		50W	5600				100~150W
BC9306S-L60-60°×80°		60W	6900		5~8m		150W
BC9306S-L80-60°×80°		80W	8800				175W
BC9306S-L30-90°×110°		30W	3400	1.75	3~6m		70W
BC9306S-L40-90°×110°		40W	4400				100W
BC9306S-L50-90°×110°		50W	5600				100~150W
BC9306S-L60-90°×110°		60W	6700		5~8m		150W
BC9306S-L80-90°×110°		80W	8400				175W
BC9306S-L30-200°		30W	2800	1.75	3~6m		70W
BC9306S-L40-200°		40W	3700				100W
BC9306S-L50-200°		50W	4500				100~150W
BC9306S-L60-200°		60W	5400		4~8m		150W
BC9306S-L80-200°		80W	6800				175W
Input voltage: 18~43VAC/ 18~55VDC							
BC9306S-L25L-60°×80°		25W	2900	1.25	3~6m		70W
BC9306S-L40L-60°×80°		40W	4600				100W
BC9306S-L60L-60°×80°		60W	6900		5~8m		150W
BC9306S-L25L-90°×110°		25W	2700	1.75	3~6m		70W
BC9306S-L40L-90°×110°		40W	4400				100W
BC9306S-L60L-90°×110°		60W	6700		5~8m		150W
BC9306S-L25L-200°		25W	2400	1.75	3~6m		70W
BC9306S-L40L-200°		40W	3700				100W
BC9306S-L60L-200°		60W	5400		4~8m		150W

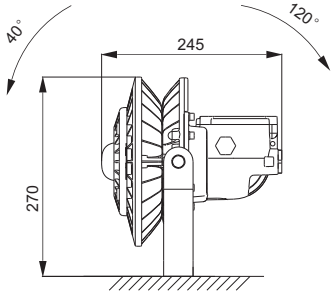
Note 1:Lens can be customized 40°,60°,80°,100°

BC9306S
LED Explosion Proof Light (Bracket)

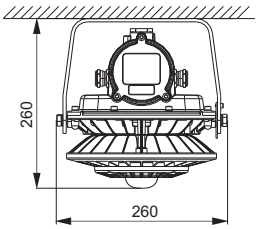
TORMIN

Drawing of dimension (Dimensions in mm)

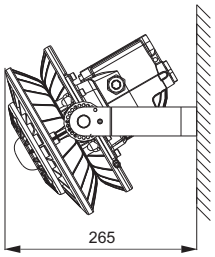
Seat mounting

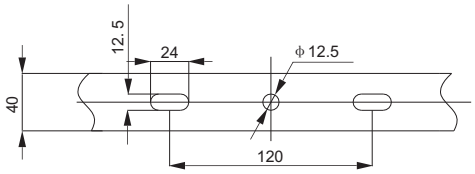


Ceiling mounting

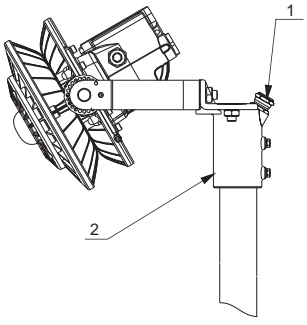


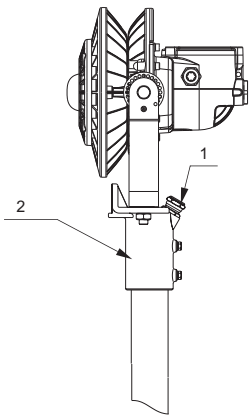
Side wall mounting





Pole mounting





Accessories ordering information(optional)

Ordering reference	Item no	Specification	quantity	note
P07	1	Water proof plug M20	1	ϕ8~ϕ12mm cable
	2	Vertical Mounting pole	1	ϕ40~ϕ50mm pole

TORMIN BC9306S LED Explosion Proof Light (Bracket -Spotlight)



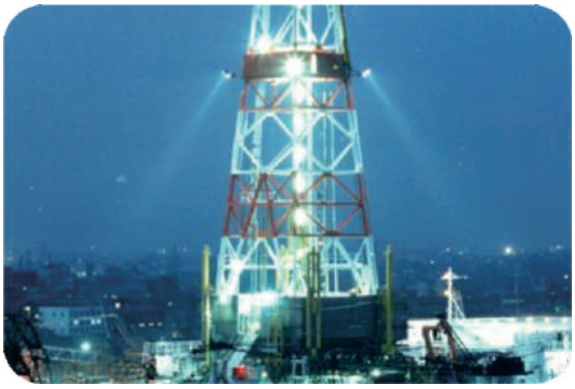
Ex marking: Ex db eb IIC T6/T5/T4 Gb
Ex tb IIIC T80℃/T95℃/T130℃ Db,IP66

Characteristics

- It is made using a special aluminum housing, all exposed fasteners and bracket adopt 304 stainless steel. Using high-tech anti-corrosion surface treatment technology, suitable for long-term highly corrosive environment of offshore oil platforms, oil drilling platform, chlor-alkali, vulcanization cyanide, etc.
- A full range of high conductivity material accelerate convection cooling structure, effective guarantee long-term use in high temperature environments.
- Variety of light distribution, variety of installation types, an effective solution to beautify workshop and device platform.
- The shell is made of high-tech surface coating technology, corrosion resistant, waterproof and dust proof, suitable for harsh environments.
- Optoelectronic integrated technology,no dark spot, no ghosting, the average light efficiency of whole lamp can reach to 120 lm/W, energy-saving is 60% more than Metal Halide Lamp.
- Taiwan Meanwell power supply or same quality power supply, power factor above 0.98, high reliability and long time service life.
- Independent wiring chamber, safe and easy installation and maintenance.
- Quick replay light source without welding.
- Intelligent control functions can be realized.(Dimming: 1-10VDC, PWM, Carrier, DALI, etc.)

Application

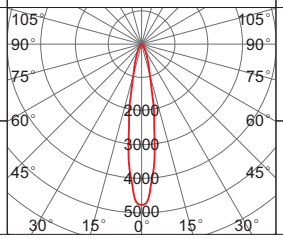
- Ideal to be used in the oilfield, chemical industry, offshore drilling platform, steel industry, petroleum etc.
- Gas explosive environment: Group IIA,IIB,IIC.
- Zone 1,zone 2;zone 21,zone 22.



Main Specification

Item	Technical Parameters
Input voltage (V)	90~264VAC
Rated frequency	50Hz / 60Hz
CRI (Ra)	70 (80 optional)
Life time (h)	50,000
CCT	5000K(3000K/4000K optional)
Cable entry	M20×1.5, NPT1/2"
Terminals	Multi core: ≤2.5mm ^{2}
	Single core: ≤4mm ^{2}
Dimension (mm)	291×260×270
Net weight (kg)	5.4

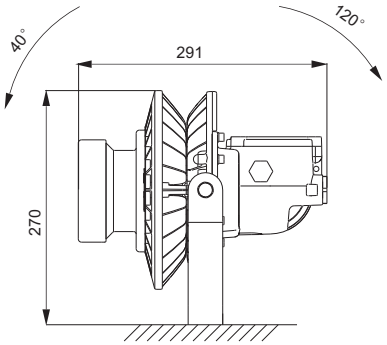
Ordering Reference

Ordering reference	Picture	Rated Wattage (W)	Light output (lm)	Light distribution curve(1000cd/lm)	Equivalent to MH
BC9306S-L60-18°		60W	5900		150W
BC9306S-L80-18°		80W	7500		175W

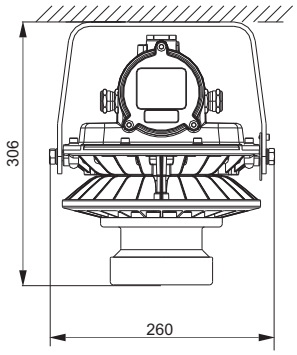
BC9306S LED Explosion Proof Light (Bracket -Spotlight)

Drawing of dimension (Dimensions in mm)

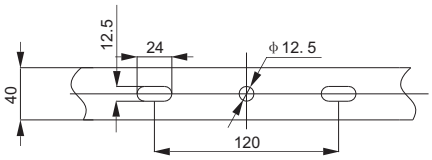
Seat mounting

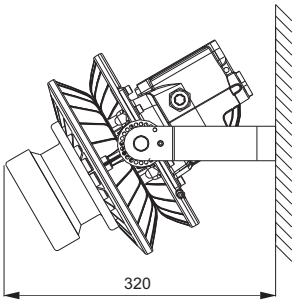


Ceiling mounting

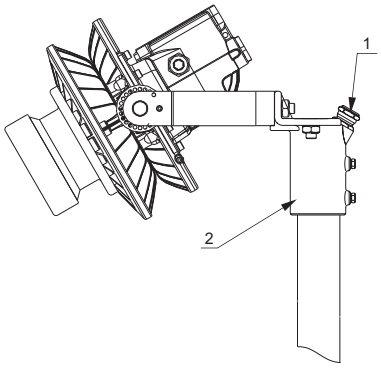


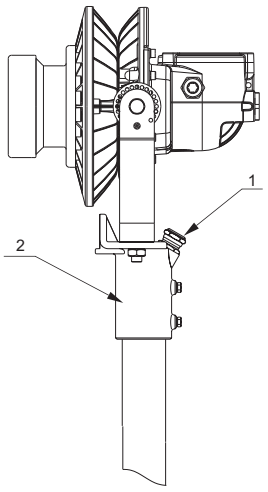
Side wall mounting





Pole mounting





Accessories ordering information(optional)

Ordering reference	Item no	Specification	quantity	note
P07	1	Water proof plug M20	1	ϕ8~ϕ12mm cable
	2	Vertical Mounting pole	1	ϕ40~ϕ50mm pole

TORMIN BC9307P LED Explosion Proof Light(Pole)



Ex marking: Ex db eb IIC T4/T3 Gb
Ex tb IIIC T130℃/T195℃ Db,IP66

Application

- Ideal to be used in the oilfield, chemical industry, offshore drilling platform, steel industry, petroleum etc.
- Gas explosive environment: Group IIA,IIB,IIC.
- Zone 1,zone 2; zone 21,zone 22.



Characteristics

- It is made using a special aluminum housing, all exposed fasteners adopt 304 stainless steel. Using high-tech anti-corrosion surface treatment technology, suitable for long-term highly corrosive environment of offshore oil platforms, oil drilling platform, chlor-alkali, vulcanization cyanide, etc.
- A full range of high conductivity material accelerate convection cooling structure, effective guarantee long-term use in high temperature environments.
- Variety of light distribution, variety of installation types, an effective solution to beautify workshop and device platform.
- The shell is made of high-tech surface coating technology, corrosion resistant, waterproof and dust proof, suitable for harsh environments.
- Optoelectronic integrated technology, no dark spot, no ghosting, the average light efficiency of whole lamp can reach to 120 lm/W, energy-saving is 60% more than Metal Halide Lamp.
- Taiwan Meanwell driver or driver with same quality, power factor above 0.98, high reliability and long time service life.
- Independent wiring chamber, safe and easy installation and maintenance.
- Quick replay light source without welding.
- Intelligent control functions can be realized.(Dimming: 1-10VDC, PWM, Carrier, DALI, etc.)

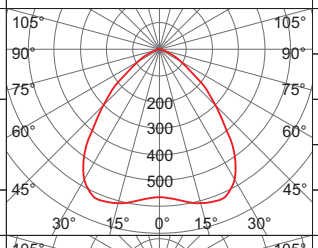
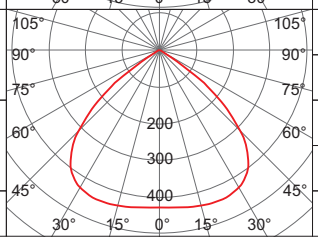
Main Specification

Item	Technical Parameters
Input voltage (V)	90~264VAC
Rated frequency	50Hz / 60Hz
CRI (Ra)	70 (80 optional)
Life time (h)	50,000
CCT	5000K(3000K/4000K optional)
Cable entry	M20×1.5, M25×1.5, G3/4", NPT1/2", NPT3/4"
Terminals	Multi core: ≤2.5mm ^{2}
	Single core: ≤4mm ^{2}
Dimension (mm)	Φ300×290
Net weight (kg)	6.4

TORMIN

BC9307P
LED Explosion Proof Light(Pole)

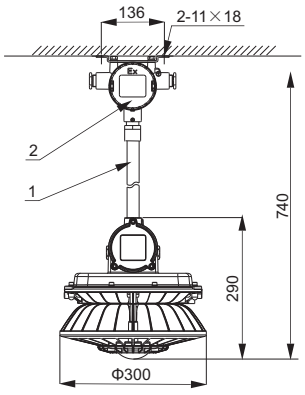
Ordering reference

Ordering reference	Picture	Rated Wattage (W)	Light output (lm)	Space height ratio	Mounting height (m)	Light distribution curve(1000cd/lm)	Equivalent to MH
BC9307P-L100-80°		100W	11500	1. 35	8~12m		250W
BC9307P-L120-80°		120W	13200				＞250W
BC9307P-L150-80°		150W	16800		10~15m		400W
BC9307P-L200-80°		200W	23700				＞400W
BC9307P-L240-80°		240W	27200		15~25m		600W~800W
BC9307P-L100-100°		100W	11600	1. 4	8~12m		250W
BC9307P-L120-100°		120W	13400				＞250W
BC9307P-L150-100°		150W	17000		10~15m		400W
BC9307P-L200-100°		200W	23900				＞400W
BC9307P-L240-100°		240W	27400		15~20m		600W~800W

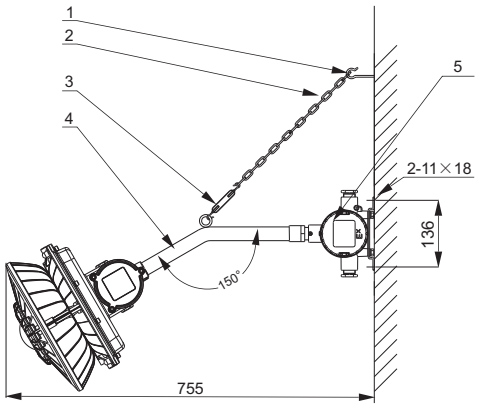
Note 1:Lens can be customized 60°×80°,90°×100°,200°

Drawing of dimension (Dimensions in mm)

Pole mounting



Wall mounting 150deg



Accessories order information(Pole mounting)

Ordering reference	Item no.	Specification	quantity
P01	1	G3/4" pole 30cm	1
BHD01	2	Explosion proof junction box	1

Accessories order information(Wall mounting 150deg)

Ordering reference	Item no.	Specification	quantity
P03	1	Expansion screw hook	1
	2	Chain	1
	3	C-C turn buckle	1
	4	G3/4" bend pipe 150°	1
BHD01	5	Explosion proof junction box	1

TORMIN BC9307S LED Explosion Proof Light(Bracket)

IECEx
ATEX
CE
LM79
LM84
IP 66
Ta 40/55
Ta -50



Ex marking: Ex db eb IIC T4/T3 Gb
Ex tb IIIC T130℃/T195℃ Db,IP66

Characteristics

- It is made using a special aluminum housing, all exposed fasteners and bracket adopt 304 stainless steel. Using high-tech anti-corrosion surface treatment technology, suitable for long-term highly corrosive environment of offshore oil platforms, oil drilling platform, chlor-alkali, vulcanization cyanide, etc.
- A full range of high conductivity material accelerate convection cooling structure, effective guarantee long-term use in high temperature environments.
- Variety of light distribution, variety of installation types, an effective solution to beautify workshop and device platform.
- The shell is made of high-tech surface coating technology, corrosion resistant, waterproof and dust proof, suitable for harsh environments.
- Optoelectronic integrated technology, no dark spot, no ghosting, the average light efficiency of whole lamp can reach to 120 lm/W, energy-saving is 60% more than Metal Halide Lamp.
- Taiwan Meanwell driver or driver with same quality, power factor above 0.98, high reliability and long time service life.
- Independent wiring chamber, safe and easy installation and maintenance.
- Quick replay light source without welding.
- Intelligent control functions can be realized.(Dimming: 1-10VDC, PWM, Carrier, DALI, etc.)

Application

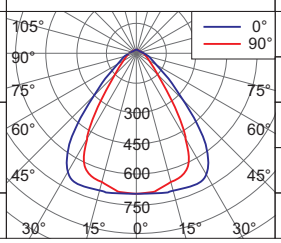
- Ideal to be used in the oilfield, chemical industry, offshore drilling platform, steel industry, petroleum etc.
- Gas explosive environment: Group IIA, IIB, IIC.
- Zone 1, zone 2; zone 21, zone 22.



Main Specification

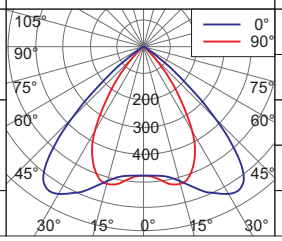
Item	Technical Parameters
Input voltage (V)	90~264VAC
Rated frequency	50Hz / 60Hz
CRI (Ra)	70 (80 optional)
Life time (h)	50,000
CCT	5000K(3000K/4000K optional)
Cable entry	M20×1.5, G3/4", NPT1/2"
Terminals	Multi core: ≤4mm ^{2}
	Single core: ≤6mm ^{2}
Dimension (mm)	295×330×350
Net weight (kg)	7.5

Ordering Reference

Ordering reference	Picture	Rated Wattage (W)	Light output (lm)	Space height ratio	Mounting height (m)	Light distribution Curve(1000cd/lm)	Equivalent to MH
BC9307S□-L100-60°×80°		100W	11800	1.25	8~12m		250W
BC9307S□-L120-60°×80°		120W	13600				>250W
BC9307S□-L150-60°×80°		150W	17300		10~15m		400W
BC9307S□-L200-60°×80°		200W	23300				>400W
BC9307S□-L240-60°×80°		240W	26700		15~20m		600W~800W

BC9307S
LED Explosion Proof Light(Bracket)

Ordering Reference

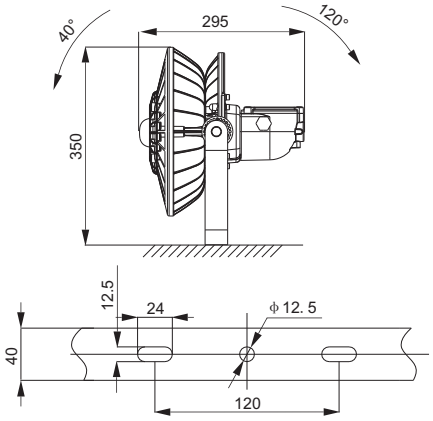
Ordering reference	Picture	Rated Wattage (W)	Light output (lm)	Space height ratio	Mounting height (m)	Light distribution curve(1000cd/lm)	Equivalent to MH
BC9307S□-L100-90°×110°		100W	11000	1.75	8~12m		250W
BC9307S□-L120-90°×110°		120W	12600				＞250W
BC9307S□-L150-90°×110°		150W	16000		10~15m		400W
BC9307S□-L200-90°×110°		200W	22000				＞400W
BC9307S□-L240-90°×110°		240W	25300		15~20m		600W~800W

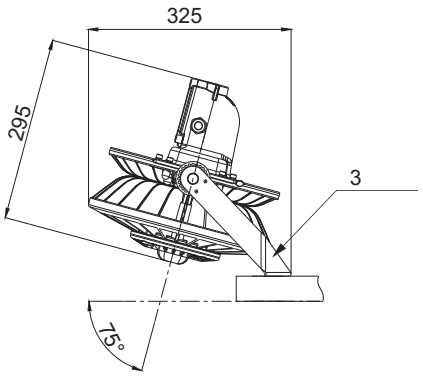
Note 1:Lens can be customized 40°,60°,80°,100°

Note 2: order number "□"according to the actual installation needs fill in 1 or 2, S1 straight stent, S2 angle bracket.

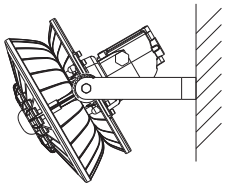
Drawing of dimension (Dimensions in mm)

Seat mounting

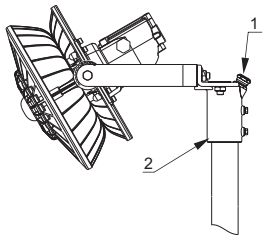


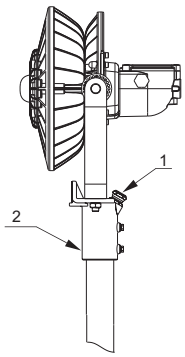


Side wall mounting



Pole mounting





Accessories ordering information(optional)

Ordering reference	Item no	Specification	quantity
P23	3	Inclined bracket	1

Accessories ordering information(optional)

Ordering reference	Item no	Specification	quantity	note
P07	1	Water proof plug M20	1	Φ8~Φ12mm cable
	2	Vertical Mounting pole	1	Φ40~Φ50mm pole

TORMIN BC9307S LED Explosion Proof Light (Bracket -Spotlight)



Ex marking: Ex db eb IIC T4/T3 Gb
Ex tb IIIC T130℃/T195℃ Db,IP66

Characteristics

- It is made using a special aluminum housing, all exposed fasteners and bracket adopt 304 stainless steel. Using high-tech anti-corrosion surface treatment technology, suitable for long-term highly corrosive environment of offshore oil platforms, oil drilling platform, chlor-alkali, vulcanization cyanide, etc.
- A full range of high conductivity material accelerate convection cooling structure, effective guarantee long-term use in high temperature environments.
- Variety of light distribution, variety of installation types, an effective solution to beautify workshop and device platform.
- The shell is made of high-tech surface coating technology, corrosion resistant, waterproof and dust proof, suitable for harsh environments.
- Optoelectronic integrated technology, no dark spot, no ghosting, the average light efficiency of whole lamp can reach to 120 lm/W, energy-saving is 60% more than Metal Halide Lamp.
- Taiwan Meanwell driver or driver with same quality, power factor above 0.98, high reliability and long time service life.
- Independent wiring chamber, safe and easy installation and maintenance.
- Quick replay light source without welding.
- Intelligent control functions can be realized.(Dimming: 1-10VDC, PWM, Carrier, DALI, etc.)

Application

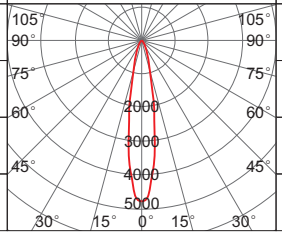
- Ideal to be used in the oilfield, chemical industry, offshore drilling platform, steel industry, petroleum etc.
- Gas explosive environment:Group IIA,IIB,IIC.
- Zone 1,zone 2;zone 21,zone 22.



Main Specification

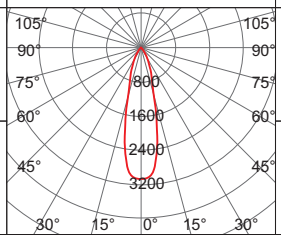
Item	Technical Parameters
Input voltage (V)	90~264VAC
Rated frequency	50Hz / 60Hz
CRI (Ra)	70 (80 optional)
Life time (h)	50,000
CCT	5000K(3000K/4000K optional)
Cable entry	M20×1.5, NPT1/2"
Terminals	Multi core: ≤4mm ^{2}
	Single core: ≤6mm ^{2}
Dimension (mm)	341×330×350
Net weight (kg)	8.1

Ordering Reference

Ordering reference	Picture	Rated Wattage (W)	Light output (lm)	Light distribution curve(1000cd/lm)	Equivalent to MH
BC9307S□-L100-18°		100W	10000		250W
BC9307S□-L120-18°		120W	11500		＞250W
BC9307S□-L150-18°		150W	14600		400W
BC9307S□-L180-18°		180W	15500		＞400W

BC9307S LED Explosion Proof Light (Bracket -Spotlight)

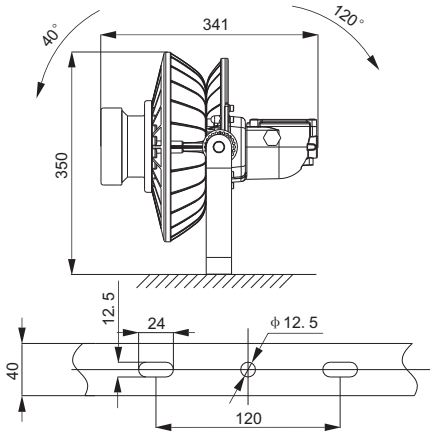
Ordering Reference

Ordering reference	Picture	Rated Wattage (W)	Light output (lm)	Light distribution curve(1000cd/lm)	Equivalent to MH
BC9307S□-L200-25°		200W	20300		>400W
BC9307S□-L240-25°		240W	23500		400W~600W

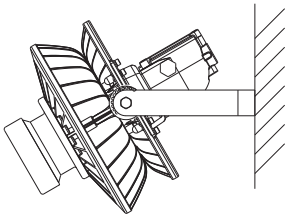
Note : order number "□" according to the actual installation needs fill in 1 or 2, S1 straight stent, S2 angle bracket.

Drawing of dimension (Dimensions in mm)

Seat mounting

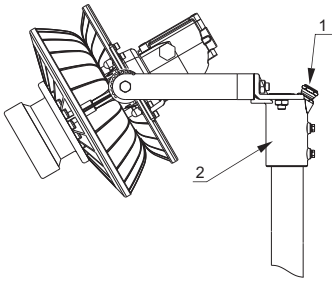


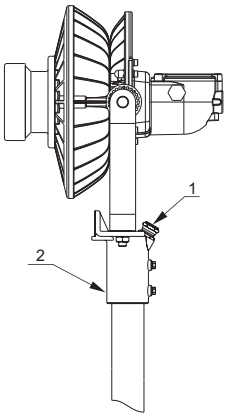
Side wall mounting

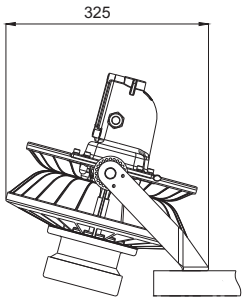


BC9307S1

Pole mounting







BC9307S2

Accessories ordering information(optional)

Ordering reference	Item no	Specification	quantity	note
P07	1	Water proof plug M20	1	φ8~φ12mm cable
	2	Vertical Mounting pole	1	φ40~φ50mm pole

TORMIN BC9308P LED Explosion Proof Light(Pole)

Ex

CE

LM79
LM84

IP 66

Ta 55

Ta -40



Ex marking: Ex db IIC T4/ T5/ T6 Gb
Ex tb IIIC T130℃/ T95℃/ T80℃

Characteristics

- It is made using a special aluminum housing, All exposed fasteners adopt 304 stainless steel. Using high-tech anti-corrosion surface treatment technology, suitable for long-term highly corrosive environment of offshore oil platforms, oil drilling platform, chlor-alkali, vulcanization cyanide, etc.
- A full range of high conductivity material accelerate convection cooling structure, effective guarantee long-term use in high temperature environments.
- Variety of Light distribution and installation types under one lamp design, an effective solution to beautify workshop and device platform.
- Optoelectronic integrated technology, no dark spot, no ghosting, energy-saving is 60% more than Metal Halide Lamp.
- AC-DC wide voltage and constant power driver, can be long-term used in voltage instability places.
- Quick replay light source without welding.
  Windward area is only 30% of the traditional lamp, suitable for high-altitude winds area.

Application

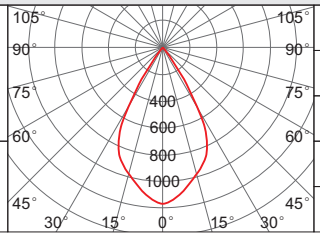
- Suitable for oil drilling, refining platform, chemical petrol factory, pharmaceutical factory, polishing factory, etc.
- Gas explosive environment: Group IIA,IIB, IIC.
- Zone 1, zone 2;zone 21, zone 22.



Main Specification

Item	Technical Parameters
Input voltage (V)	90~264VAC(30~60W) or 185~264VAC (80W)
	18~43VAC/ 18~55VDC (30~60W)
Rated frequency	50Hz / 60Hz
Light source	LED
Life time (h)	50,000
CRI (Ra)	70 (80 optional)
CCT	5000K(3000K/4000K optional)
Cable entry	M20×1.5, M25×1.5, G3/4", NPT1/2", NPT3/4"
Dimension (mm)	Φ230×170
Net weight (kg)	3

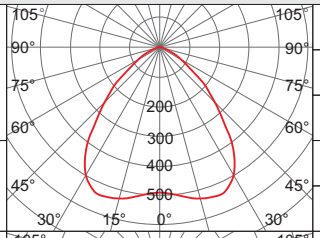
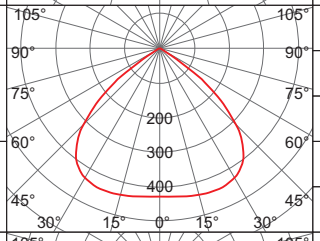
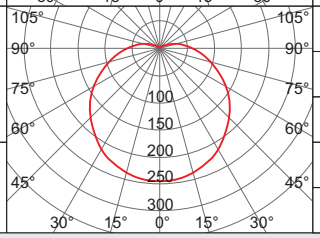
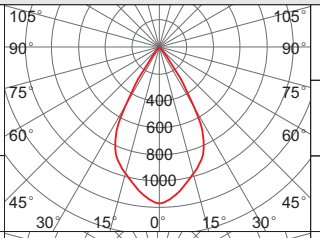
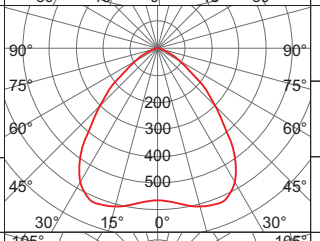
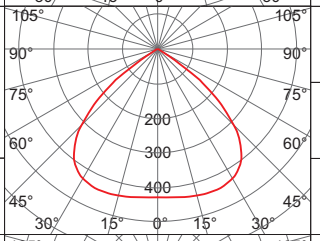
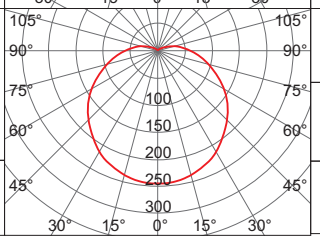
Ordering reference

Ordering reference	Picture	Rated Wattage (W)	Light output (lm)	Space height ratio	Mounting height (m)	Light distribution curve(1000cd/lm)	Equivalent to MH
Input voltage: 90~264VAC							
BC9308P-L30-60°		30W	3400	0.9	3~6m		70W
BC9308P-L40-60°		40W	4400				100W
BC9308P-L50-60°		50W	5400				100W
BC9308P-L60-60°		60W	6700		6~8m		150W
BC9308P-L80-60°		80W	8400				175W

Note 1:Lens can be customized 60°×80°,90°×110°

TORMIN

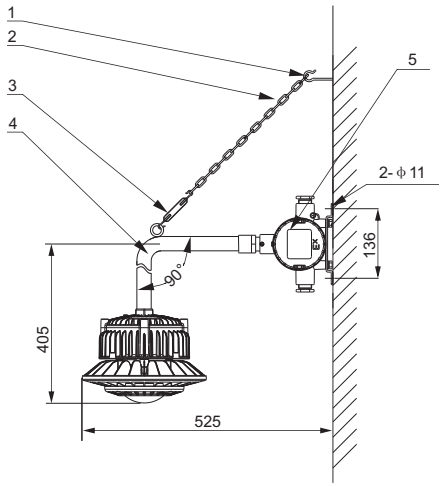
BC9308P
LED Explosion Proof Light(Pole)

Ordering reference	Picture	Rated Wattage (W)	Light output (lm)	Space height ratio	Mounting height (m)	Light distribution curve(1000cd/lm)	Equivalent to MH
Input voltage: 90~264VAC							
BC9308P-L30-80°		30W	3500	1.35	3~6m		70W
BC9308P-L40-80°		40W	4500				100W
BC9308P-L50-80°		50W	5600				100W
BC9308P-L60-80°		60W	6900		5~8m		150W
BC9308P-L80-80°		80W	8700				175W
BC9308P-L30-100°		30W	3500	1.4	3~6m		70W
BC9308P-L40-100°		40W	4600				100W
BC9308P-L50-100°		50W	5600				100W
BC9308P-L60-100°		60W	7000		4~8m		150W
BC9308P-L80-100°		80W	8800				175W
BC9308P-L30-200°		30W	2800	1.75	2~5m		70W
BC9308P-L40-200°		40W	3700				100W
BC9308P-L50-200°		50W	4500				100W
BC9308P-L60-200°		60W	5400		3~6m		150W
BC9308P-L80-200°		80W	6800				175W
Input voltage: 18~43VAC/ 18~55VDC							
BC9308P-L25D-60°		25W	2800	0.9	3~6m		70W
BC9308P-L40D-60°		40W	4400				100W
BC9308P-L60D-60°		60W	6700		6~8m		150W
BC9308P-L25D-80°		25W	2900	1.4	3~6m		70W
BC9308P-L40D-80°		40W	4600				100W
BC9308P-L60D-80°		60W	6900		5~8m		150W
BC9308P-L25D-100°		25W	2900	1.4	3~6m		70W
BC9308P-L40D-100°		40W	4600				100W
BC9308P-L60D-100°		60W	7000		4~8m		150W
BC9308P-L25D-200°		25W	2400	1.75	2~5m		70W
BC9308P-L40D-200°		40W	3700				100W
BC9308P-L60D-200°		60W	5400		3~6m		150W

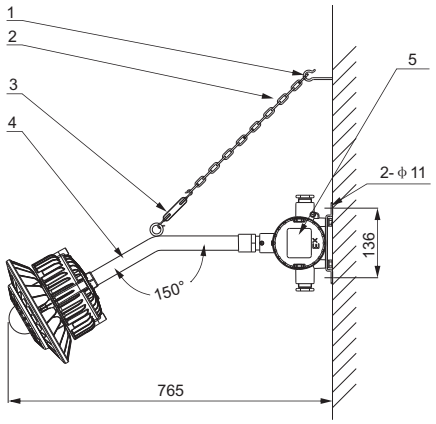
BC9308P
LED Explosion Proof Light(Pole)

Drawing of dimension (Dimensions in mm)

Wall mounting 90°



Wall mounting 150°



Accessories order information(Wall mounting 90deg)

Ordering reference	Item no.	Specification	quantity
P04	1	Expansion screw hook	1
	2	Chain	1
	3	C-C turn buckle	1
	4	G3/4" bend pipe 90°	1
BHD01	5	Explosion proof junction box	1

Accessories order information(Wall mounting 150deg)

Ordering reference	Item no.	Specification	quantity
P03	1	Expansion screw hook	1
	2	Chain	1
	3	C-C turn buckle	1
	4	G3/4" bend pipe 150°	1
BHD01	5	Explosion proof junction box	1

TORMIN BC9308S LED Explosion Proof Light(Bracket)

Ex
CE
RoHS
LM79
LM84
IP 66
Ta 55
Ta -40



Ex marking: Ex db IIC T4/ T5/ T6 Gb
Ex tb IIIC T130℃/ T95℃/ T80℃

Characteristics

- It is made using a special aluminum housing, all exposed fasteners adopt 304 stainless steel. Using high-tech anti-corrosion surface treatment technology, suitable for long-term highly corrosive environment of offshore oil platforms, oil drilling platform, chlor-alkali, vulcanization cyanide, etc.
- A full range of high conductivity material accelerate convection cooling structure, effective guarantee long-term use in high temperature environments.
- Variety of Light distribution and installation types under one lamp design, an effective solution to beautify workshop and device platform.
- Optoelectronic integrated technology, no dark spot, no ghosting, energy-saving is 60% more than Metal Halide Lamp.
- AC-DC wide voltage and constant power driver, can be long-term used in voltage instability places.
- Quick replay light source without welding.
- Windward area is only 30% of the traditional lamp, suitable for high-altitude winds area.

Application

- Suitable for oil drilling, refining platform, chemical petrol factory, pharmaceutical factory, polishing factory, etc.
- Gas explosive environment: Group IIA,IIB,IIC.
- Zone 1,zone 2;zone 21,zone 22.



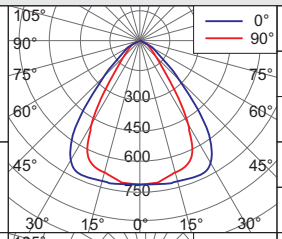
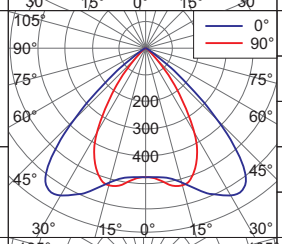
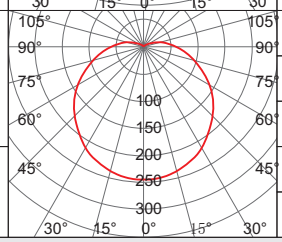
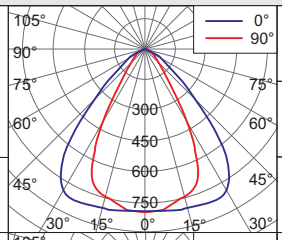
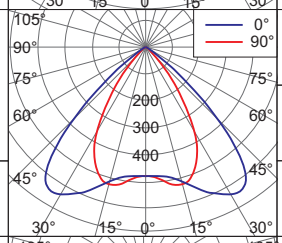
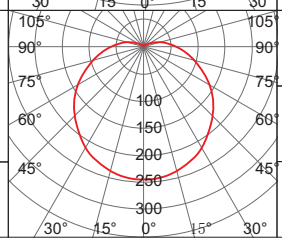
Main Specification

Item	Technical Parameters
Input voltage (V)	90~264VAC(30~60W) or 185~264VAC (80W)
	18~43VAC/ 18~55VDC (30~60W)
Rated frequency	50Hz / 60Hz
Light source	LED
Life time (h)	50,000
CRI (Ra)	70 (80 optional)
CCT	5000K(3000K/4000K optional)
Cable entry	M20×1.5, M25×1.5, G3/4", NPT1/2", NPT3/4"
Dimension (mm)	180×230×270
Net weight (kg)	3.7

BC9308S
LED Explosion Proof Light(Bracket)

TORMIN

Ordering Reference

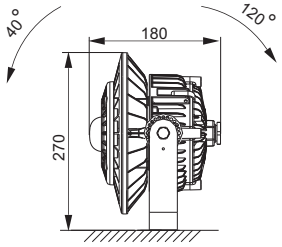
Ordering reference	Picture	Rated Wattage (W)	Light output (lm)	Space height ratio	Mounting height (m)	Light distribution curve(1000cd/lm)	Equivalent to MH
Input voltage: 90~264VAC(30~60W) or 185~264VAC (80W)							
BC9308S-L30-60°×80°		30W	3500	1.25	3~6m		70W
BC9308S-L40-60°×80°		40W	4600				100W
BC9308S-L50-60°×80°		50W	5600				100W
BC9308S-L60-60°×80°		60W	6900		5~8m		150W
BC9308S-L80-60°×80°		80W	8800				175W
BC9308S-L30-90°×110°		30W	3300	1.75	3~6m		70W
BC9308S-L40-90°×110°		40W	4400				100W
BC9308S-L50-90°×110°		50W	5600				100W
BC9308S-L60-90°×110°		60W	6700		5~8m		150W
BC9308S-L80-90°×110°		80W	8400				175W
BC9308S-L30-200°		30W	2800	1.75	2~5m		70W
BC9308S-L40-200°		40W	3700				100W
BC9308S-L50-200°		50W	4500				100W
BC9308S-L60-200°		60W	5400		3~6m		150W
BC9308S-L80-200°		80W	6800				175W
Input voltage: 18~43VAC/ 18~55VDC							
BC9308S-L25D-60°×80°		25W	2900	1.25	3~6m		70W
BC9308S-L40D-60°×80°		40W	4600				100W
BC9308S-L60D-60°×80°		60W	6900		5~8m		150W
BC9308S-L25D-90°×110°		25W	2700	1.75	3~6m		70W
BC9308S-L40D-90°×110°		40W	4400				100W
BC9308S-L60L-90°×110°		60W	6700		5~8m		150W
BC9308S-L25D-200°		25W	2400	1.75	2~5m		70W
BC9308S-L40D-200°		40W	3700				100W
BC9308S-L60D-200°		60W	5400		3~6m		150W

Note 1:Lens can be customized 40°,60°,80°,100°

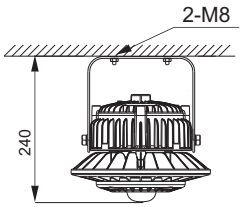
BC9308S
LED Explosion Proof Light(Bracket)

Drawing of dimension (Dimensions in mm)

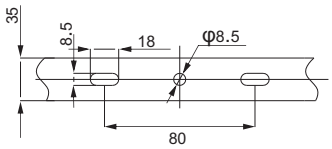
Seat mounting

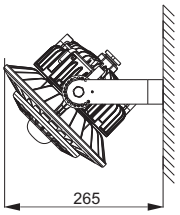


Ceiling mounting

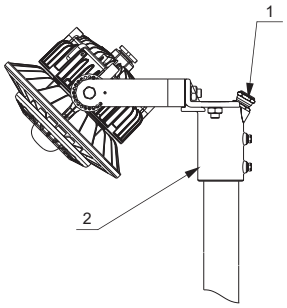


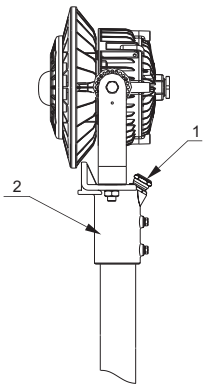
Side wall mounting





Pole mounting





Accessories ordering information(optional)

Ordering reference	Item no	Specification	quantity	note
P07	1	Water proof plug M20	1	ϕ8~ ϕ12mm cable
	2	Vertical Mounting pole	1	ϕ40~ ϕ50mm pole

BC9309P
LED Explosion Proof Light(Pole)

Ex
IP 66
Ta 40/55
Ta -50



Ex marking: Ex nR IIC T3/T4 Gc
Ex tD A21 IP66 T195℃/ T130℃

Characteristics

- Super power, maximum power up to 480W, can replace more than 1000W metal halide lamps and sodium lamps.
- Housing made of special aluminum processing, hardware and brackets adopt 304 stainless steel, using high-tech anti-corrosion surface treatment technology, can be long-term suitable for seaside, chlor-alkali, hydrogen sulfide and other highly corrosive areas.
- Superconducting aluminum comprehensive self-loop thermal design, long-term suitable for operating environment with high temperature and high humidity. Upper and lower ventilation fin structure, no dust.
- Variety of light distribution, variety of installation types, same shape, an effective solution to beautify workshop and device platform.
- It adopts Imported light source, no dark zone in light spot, no ghosting, can save 60% or more on energy than the metal halide lamp.
  AC and DC wide voltage constant power supply, power factor above 0.98.
- It can quickly replace the light source without welding.
- Independent wiring chamber, safe and convenient for installation and maintenance.
- According to user needs, can choose light fixtures with a variety of intelligent control.

Application

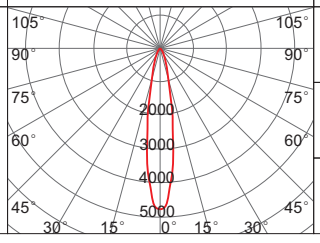
- Ideal to be used in the oilfield, chemical industry, offshore drilling platform, steel industry, petroleum etc.



Main Specification

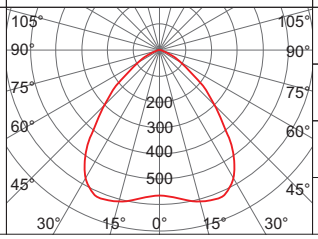
Item	Technical Parameters
Rated voltage (V)	200~277VAC
Rated frequency	50Hz / 60Hz
Light source	LED
Life time (h)	50,000
CRI	Ra 70 (80 optional)
CCT	5000K(3000K/4000K optional)
Leading-in cable diameter	Φ8mm~ Φ12mm
Dimension (mm)	602×300×250
Net Weight (kg)	11.2

Ordering reference

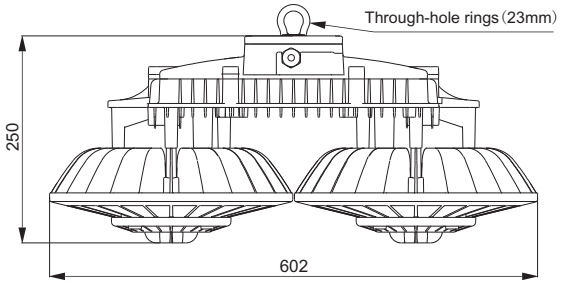
Model Number	Picture	Rated wattage (W)	Light output (lm)	Space height ratio	Mounting height (m)	Light distribution Curve(1000cd/lm)	Equivalent to MH
BC9309P-L300-18°		300W	28800	0.4	25–45m		600W
BC9309P-L400-25°		400W	40600				1000W
BC9309P-L480-25°		480W	47400				>1000W

BC9309P
LED Explosion Proof Light(Pole)

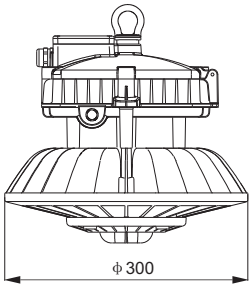
Ordering reference

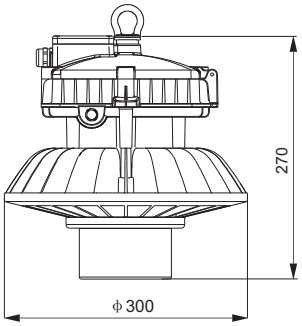
Model Number	Picture	Rated wattage (W)	Light output (lm)	Space height ratio	Mounting height (m)	Light distribution Curve(1000cd/lm)	Equivalent to MH
BC9309P-L240-80°		240W	26000	1.35	15~30m		600W
BC9309P-L300-80°		300W	33100				1000W
BC9309P-L400-80°		400W	46200				＞1000W
BC9309P-L480-80°		480W	56500				/

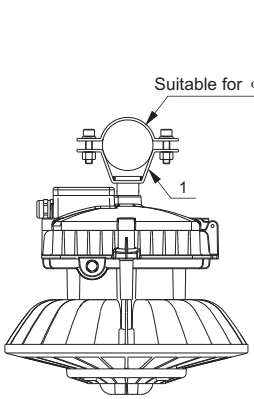
Drawing of dimension (Dimensions in mm)



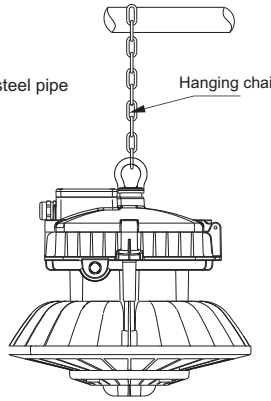
Ring mounting (Standard)







Hold hoop mounting



Hanging chain mounting

Accessories Ordering Information (optional)

Model No.	Number	Specifications Model	Quantity	Remark
P14	1	Hold hoop bracket	1	Suitable for ϕ50~ϕ70 steel pipe

BC9309S
LED Explosion Proof Light(Bracket)

Ex
IP 66
Ta 40/55
Ta -50



Ex marking: Ex nR IIC T3/T4 Gc
Ex tD A21 IP66 T195℃/ T130℃

Application

- Ideal to be used in the oilfield, chemical industry, offshore drilling platform, steel industry, petroleum etc.



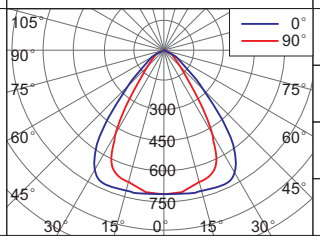
Characteristics

- Super power, maximum power up to 480W, can replace more than 1000W metal halide lamps and sodium lamps.
- Housing made of special aluminum processing, hardware and brackets adopt 304 stainless steel, using high-tech anti-corrosion surface treatment technology, can be long-term suitable for seaside, chlor-alkali, hydrogen sulfide and other highly corrosive areas.
- Superconducting aluminum comprehensive self-loop thermal design, long-term suitable for operating environment with high temperature and high humidity. Upper and lower ventilation fin structure, no dust.
- Variety of light distribution, variety of installation types, same shape, an effective solution to beautify workshop and device platform.
- It adopts Imported light source, no dark zone in light spot, no ghosting, can save 60% or more on energy than the metal halide lamp.
- AC and DC wide voltage constant power supply, power factor above 0.98.
- It can quickly replace the light source without welding.
- Independent wiring chamber, safe and convenient for installation and maintenance.
- According to user needs, can choose light fixtures with a variety of intelligent control.

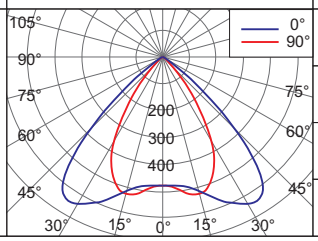
Main Specification

Item	Technical Parameters
Rated voltage (V)	200~277VAC
Rated frequency	50Hz / 60Hz
Light source	LED
Life time (h)	50,000
CRI	Ra 70 (80 optional)
CCT	5000K(3000K/4000K optional)
Leading-in cable diameter	Φ8mm~ Φ12mm
Dimension (mm)	602×250×340
Net Weight (kg)	13

Ordering reference

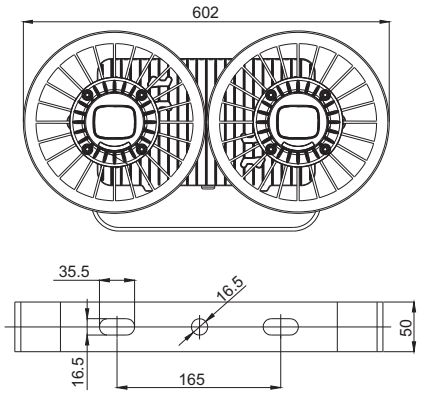
Model Number	Picture	Rated wattage (W)	Light output (lm)	Space height ratio	Mounting height	Light distribution Curve(1000cd/lm)	Equivalent to MH
BC9309S□-L240-60°×80°		240W	27200	1.35	15~25m		600W
BC9309S□-L300-60°×80°		300W	34600				1000W
BC9309S□-L400-60°×80°		400W	46600				＞1000W
BC9309S□-L480-60°×80°		480W	53400				/

BC9309S
LED Explosion Proof Light(Bracket)

Model Number	Picture	Rated wattage (W)	Light output (lm)	Space height ratio	Mounting height (m)	Light distribution Curve(1000cd/lm)	Equivalent to MH
BC9309S□-L240-90°×110°		240W	25200	1.4	15~20m		600W
BC9309S□-L300-90°×110°		300W	32000				1000W
BC9309S□-L400-90°×110°		400W	44000				＞1000W
BC9309S□-L480-90°×110°		480W	50600				/

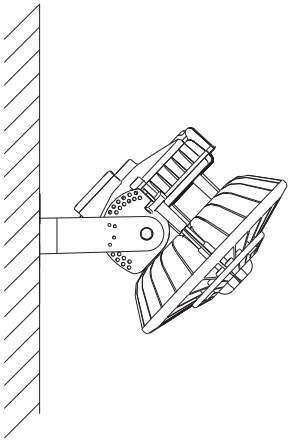
Note 1: the above model with light for the recommended distribution, but also according to the actual need to choose other light distribution.
Note 2: order number "□" according to the actual installation needs fill in 1 or 2, S1 straight stent, S2 angle bracket.

Drawing of dimension (Dimensions in mm)



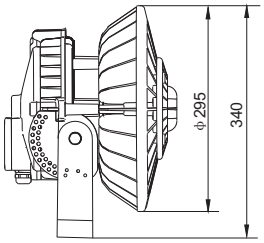
Installation Dimension

Side wall mounting



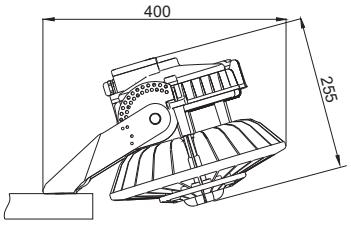
BC9309S1

Seat mountingS1



BC9309S1

Seat mountingS2



BC9309S2

BC9309S LED Explosion Proof Light (Bracket -Spotlight)

Ex
IP 66
Ta 40/55
Ta -50



Ex marking: Ex nR IIC T3/T4 Gc
Ex tD A21 IP66 T195℃/ T130℃

Application

- Ideal to be used in the oilfield, chemical industry, offshore drilling platform, steel industry, petroleum etc.



Characteristics

- Super power, maximum power up to 480W, can replace more than 1000W metal halide lamps and sodium lamps.
- Housing made of special aluminum processing, hardware and brackets adopt 304 stainless steel, using high-tech anti-corrosion surface treatment technology, can be long-term suitable for seaside, chlor-alkali, hydrogen sulfide and other highly corrosive areas.
- Superconducting aluminum comprehensive self-loop thermal design, long-term suitable for operating environment with high temperature and high humidity. Upper and lower ventilation fin structure, no dust.
- Variety of light distribution, variety of installation types, same shape, an effective solution to beautify workshop and device platform.
- It adopts Imported light source, no dark zone in light spot, no ghosting, can save 60% or more on energy than the metal halide lamp.
- AC and DC wide voltage constant power supply, power factor above 0.98.
- It can quickly replace the light source without welding.
- Independent wiring chamber, safe and convenient for installation and maintenance.
- According to user needs, can choose light fixtures with a variety of intelligent control.

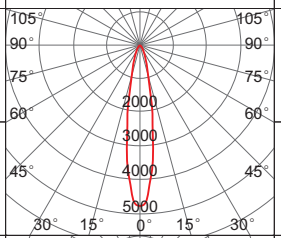
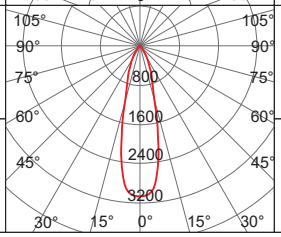
Main Specification

Item	Technical Parameters
Rated voltage (V)	200~277VAC
Rated frequency	50Hz / 60Hz
Light source	LED
Life time (h)	50,000
CRI	Ra 70 (80 optional)
CCT	5000K(3000K/4000K optional)
Leading-in cable diameter	Φ8mm~ Φ12mm
Dimension (mm)	602×270×340
Net Weight (kg)	13.5



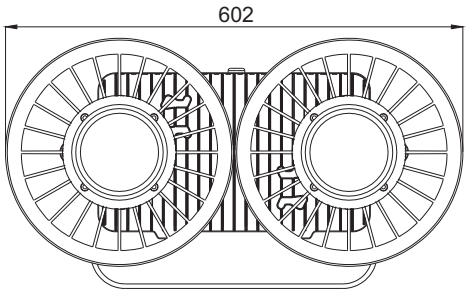
BC9309S LED Explosion Proof Light (Bracket -Spotlight)

Ordering reference

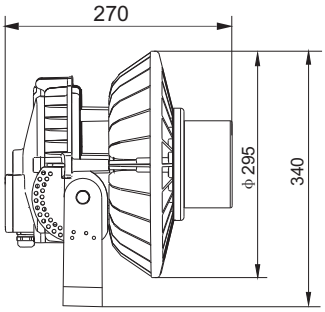
Model Number	Picture	Rated wattage (W)	Light output (lm)	Light distribution Curve(1000cd/lm)	Equivalent to MH
BC9309S□-L240-18°		240W	23000		600W
BC9309S□-L300-18°		300W	29200		600W-1000W
BC9309S□-L400-25°		400W	40600		1000W
BC9309S□-L480-25°		480W	47000		＞1000W

Note : order number "□" according to the actual installation needs fill in 1 or 2, S1 straight stent, S2 angle bracket.

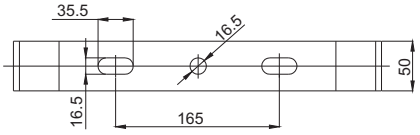
Drawing of dimension (Dimensions in mm)



Seat mountingS1

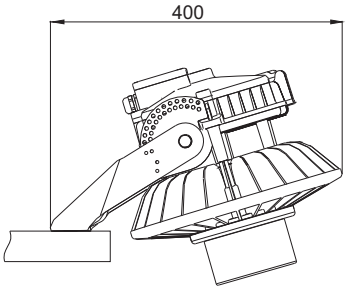


BC9309S1



Installation Dimension

Seat mountingS2



BC9309S2

BC9314A LED Explosion Proof Warning Light [Sound version]



Executive Standard: GB3836/GB12476
Ex Marking: Ex d IIC T6 Gb
Ex tD A21 IP66 T80℃



Application

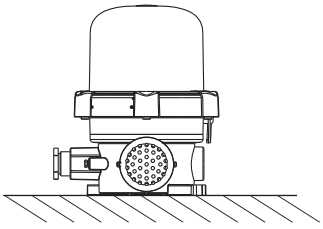
- This product is widely used in areas with explosive gas in petroleum exploration, chemical industry, metallurgy, military reserve and other enterprises;
- Applicable to drilling platforms, huge facilities and areas of oil storage facilities for warning purposes;
- Applicable to places with high humidity and anti-corrosion protection level;
- Suitable for explosive gas or dust environment in Zone 1, Zone 2 or Zone 21, Zone 22;
- Suitable for IIA, IIB, IIC explosive gas environment;
- Suitable for temperature group T1~T6 group.

Characteristics

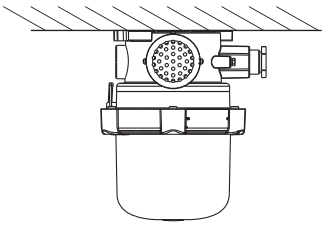
- With sound and flash warning function;
- The explosion-proof type of the product is an explosion-proof type;
- The outer shell is made of high-quality aluminum alloy die-casting shell, which has high strength; the surface is treated with high-pressure electrostatic powder spraying, which is corrosion-resistant;
- Use high temperature resistant and impact-resistant tempered glass transparent cover;
- Choose internationally renowned brand LED light source, with high luminous efficiency, high color rendering, low energy consumption, long service life, maintenance-free, and no subsequent use costs;
- The threaded explosion-proof structure is adopted, and the explosion-proof performance is reliable;
- Scientific sealing structure design, special sealing strip and embedding method, with good waterproof and dustproof performance, can be used in harsh environments;
- The protection level reaches IP66, which can effectively resist heavy rain;
- Has good electromagnetic compatibility.

Drawing of dimension (Dimension in mm)

Seat mounted



Ceiling mounted



Main Specification

Item	Technical Parameter
Rated wattage	5W
Rated voltage	12V/24V/36V/220V
40m illumination	>2Lx
Luminous color	Red (yellow and green can be customized)
Light source	LED
Life time	100, 000hrs
Cable entry thread	G3/4"
Leading-in cable outer diameter	Suitable for Φ9mm ~Φ14mm cables
Net weight	2.7Kg
Size	Φ160×208mm

BC9314B LED Explosion Proof Warning Light

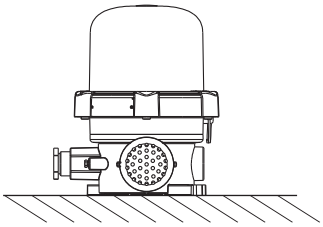


Executive Standard: GB3836/GB12476
Ex Marking: Ex d IIC T6 Gb
Ex tD A21 IP66 T80℃

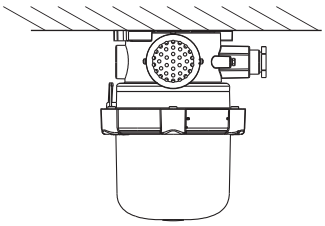


Drawing of dimension (Dimension in mm)

Seat mounted



Ceiling mounted



Application

- This product is widely used in areas with explosive gas in petroleum exploration, chemical industry, metallurgy, military reserve and other enterprises;
- Applicable to drilling platforms, huge facilities and areas of oil storage facilities for warning purposes;
- Applicable to places with high humidity and anti-corrosion protection level;
- Suitable for explosive gas or dust environment in Zone 1, Zone 2 or Zone 21, Zone 22;
- Suitable for IIA, IIB, IIC explosive gas environment;
- Suitable for temperature group T1~T6 group.

Characteristics

- With flashing warning function;
- The explosion-proof type of the product is an explosion-proof type;
- The outer shell is made of high-quality aluminum alloy die-casting shell, which has high strength; the surface is treated with high-pressure electrostatic powder spraying, which is corrosion-resistant;
- Use high temperature resistant and impact-resistant tempered glass transparent cover;
- Choose internationally renowned brand LED light source, with high luminous efficiency, high color rendering, low energy consumption, long service life, maintenance-free, and no subsequent use costs;
- The threaded explosion-proof structure is adopted, and the explosion-proof performance is reliable;
- Scientific sealing structure design, special sealing strip and embedding method, with good waterproof and dustproof performance, can be used in harsh environments;
- The protection level reaches IP66, which can effectively resist heavy rain;
- Has good electromagnetic compatibility.

Main Specification

Item	Technical Parameter
Rated wattage	5W
Rated voltage	12V/24V/36V/220V
40m illumination	>2Lx
Luminous color	Red (yellow and green can be customized)
Light source	LED
Life time	100, 000hrs
Cable entry thread	G3/4"
Leading-in cable outer diameter	Suitable for Φ9mm ~Φ14mm cables
Net weight	2.7Kg
Size	Φ160×208mm

BC9502 series
LED Explosion-proof Sight Light



EX marking: Ex db eb IIC T6 Gb
Ex tb IIIC T80℃ Db



Application

This product is widely used in highly corrosive places such as various reaction kettles in chemical and pharmaceutical factories for local observation and lighting;

Applicable to places with high humidity and corrosion protection;

Applicable to explosive gas or dust environment in Zone 1, Zone 2 or Zone 21, Zone 22;

Suitable for ⅡA,ⅡB,ⅡC explosive gas environment;

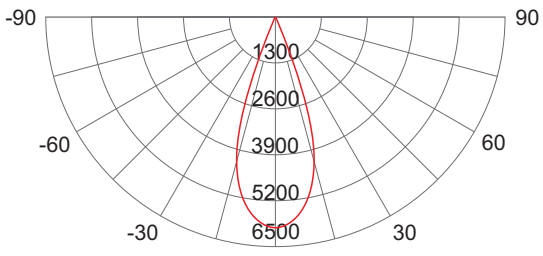
Suitable for temperature group T1~T6 group;

Applicable ambient temperature is 40℃~-40℃.

Characteristics

- The shell is made of anti-corrosion aluminum alloy, the seal is made of high-corrosion-resistant material, the standard parts are made of 304 stainless steel, and the surface adopts high-tech anti-corrosion treatment technology, which is suitable for long-term use in highly corrosive environments;
- Using CREE light source, the color rendering index is as high as Ra90, the light spot has no color and no aperture, and can accurately observe the reaction of substances in the reactor;
- The humanized adjustable mounting bracket is suitable for the installation requirements of various specifications of reactor sight glasses, and the distance between the lamp and the visual environment can be adjusted according to needs;
- After pressing the switch, it will automatically turn off after a delay of 10 minutes, and you can also choose to turn on and off immediately and connect an external switch;
- The protection level reaches IP66, which can effectively resist various pressure sprays and dust;
- The outer surface has a groove-free design, no liquid accumulation, and is easy to clean.

Light distribution curve



Main Specification

Item	Technical Parameters
Input voltage (V)	90~264VAC
	9~42VAC/12~48VDC(low voltage)
Rated frequency	50Hz/60Hz
Light source	LED
CCT	5700K(4000K/ 5000K optional)
CRI (Ra)	90(70/ 80 optional)
Life time	50,000hrs
Cable entry	G1/2"
Net weight	1.3kg
Size	Φ105×144mm

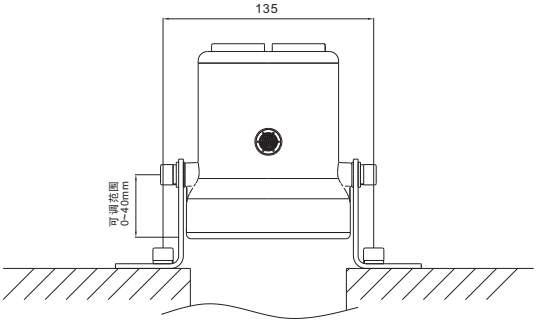
TORMIN

BC9502 series
LED Explosion-proof Sight Light

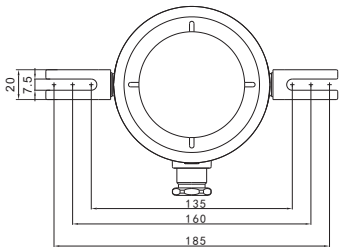
Ordering reference

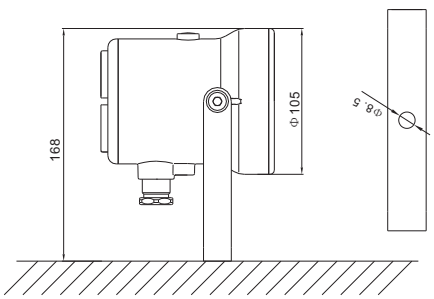
Model number	Mounted type	Rated wattage	Switch mode
Input voltage: 90~264VAC			
BC9502S-L10	Vertical installation	10W	External switch
BC9502BS-L10		10W	Conventional switch
BC9502BS-L10		10W	Delay switch
BC9502S-L20		20W	External switch
BC9502BS-L20		20W	Conventional switch
BC9502BS-L20		20W	Delay switch
BC9502Z-L10	Vertical installation	10W	External switch
BC9502AZ-L10		10W	Conventional switch
BC9502BZ-L10		10W	Delay switch
BC9502Z-L20		20W	External switch
BC9502AZ-L20		20W	Conventional switch
BC9502BZ-L20		20W	Delay switch
Input voltage: 9~42VAC/12~48VDC			
BC9502S-L10	Vertical installation	10W	External switch
BC9502AS-L10		10W	Conventional switch
BC9502BS-L10		10W	Delay switch
BC9502S-L20		20W	External switch
BC9502AS-L20		20W	Conventional switch
BC9502BS-L20		20W	Delay switch
BC9502Z-L10	Vertical installation	10W	External switch
BC9502AZ-L10		10W	Conventional switch
BC9502BZ-L10		10W	Delay switch
BC9502Z-L20		20W	External switch
BC9502AZ-L20		20W	Conventional switch
BC9502BZ-L20		20W	Delay switch
For example: Model No.as BC9502AZ-L10-5000K, BC9502: product model, A: conventional switch, Z: vertical installation method, 10: 10W power, 5000K: color temperature			

Drawing of dimension (Dimensions in mm)



Vertical installation





Seat installation

TORMIN BC9700 series High Power LED Explosion Proof Light

IECEx
ATEX
CE
LM79
LM84
IP 66
Ta 40/55
Ta -40



Ex marking: Ex db IIC T5/T4/T3 Gb
Ex tb IIIC T95℃/T130℃/T195℃ Db

Application

- Zone 1,zone 2;zone 21,zone 22
- Suitable for Low installation height in Moist corrosive environment ,such as offshore drilling platform, Oil Terminal, etc.
- Ideal to be used in the environment of flammable gas, steam and dust environment, such as Petrochemical Plant, Chemical Plant, Coal Washery, Pharmaceutical Factory, etc.
- Areas for high demand of high temperature performance.



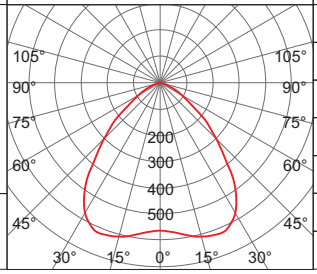
Characteristics

- A full range of high conductivity material accelerate convection cooling structure, effective guarantee long-term use in high temperature environments.
- Variety of light distribution, variety of installation types, an effective solution to beautify workshop and device platform.
- It adopts imported light source, no dark spot, energy-saving is 60% more than Metal Halide Lamp.
- AC-DC wide voltage driver, power factor above 0.98.
- The rapid replacement of power without welding can be realized.
- The adjustable locking device on the bracket can tightly fix the lamp to any desired angle, making the lamp resist to harsh vibration.
- It is made using aluminum housing, all exposed fasteners adopt 304 stainless steel. Using high-tech anti-corrosion surface treatment technology, suitable for hazardous working areas.
- Windward area is only 30% of the traditional lamp, suitable for high-altitude winds area.
- Intelligent control functions can be realized.
- Lighting effect max approx 120lm/W depends on the beam angle and light source

Main Specification

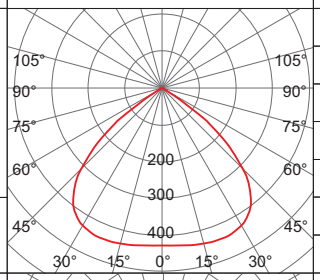
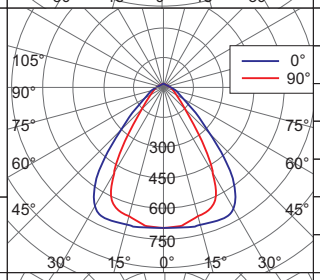
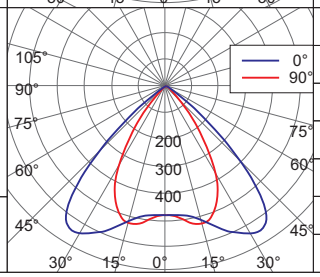
Item	Technical Parameters
Input voltage (V)	90~305VAC
Rated frequency	50Hz / 60Hz
Light source	LED
Life time (h)	50,000
CRI (Ra)	70 (80 optional)
CCT	5000K(3000K/4000K optional)
Cable Entry	M20×1.5, M25×1.5, G3/4", NPT1/2", NPT3/4"
Dimension (mm)	300×202×332
Net weight (kg)	6.3

Ordering Reference

Model number	Picture	Rated Wattage (W)	Light output (lm)	Space height ratio	Mounting height (m)	Light distribution Curve(1000cd/lm)	Equivalent to MH
BC9700-L50-80°		50W	6000	1. 35	8~12m		150W
BC9700-L60-80°		60W	7200				150W
BC9700-L80-80°		80W	9600				175W
BC9700-L100-80°		100W	12000				250W
BC9700-L120-80°		120W	14400				＞250W
BC9700-L150-80°		150W	18000		10~15m		400W
BC9700-L200-80°		200W	24000				＞400W

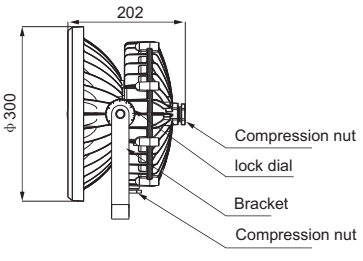
TORMIN BC9700 series High Power LED Explosion Proof Light

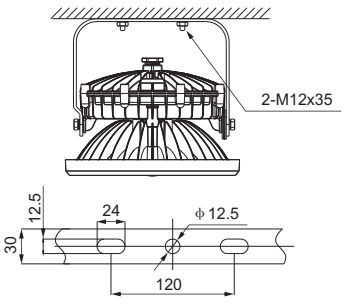
Ordering Reference

Model number	Picture	Rated Wattage (W)	Light output (lm)	Space height ratio	Mounting height (m)	Light distribution Curve(1000cd/lm)	Equivalent to MH
BC9700-L50-100°		50W	6000	1. 4	8~12m		150W
BC9700-L60-100°		60W	7200				150W
BC9700-L80-100°		80W	9600				175W
BC9700-L100-100°		100W	12000				250W
BC9700-L120-100°		120W	14400				＞250W
BC9700-L150-100°		150W	18000		10~15m		400W
BC9700-L200-100°		200W	24000				＞400W
BC9700-L50-60°×80°		50W	6000	1.25	8~12m		150W
BC9700-L60-60°×80°		60W	7200				150W
BC9700-L80-60°×80°		80W	9600				175W
BC9700-L100-60°×80°		100W	12000				250W
BC9700-L120-60°×80°		120W	14400				＞250W
BC9700-L150-60°×80°		150W	18000		10~15m		400W
BC9700-L200-60°×80°		200W	24000				＞400W
BC9700-L50-90°×110°		50W	6000	1.75	8~12m		150W
BC9700-L60-90°×110°		60W	7200				150W
BC9700-L80-90°×110°		80W	9600				175W
BC9700-L100-90°×110°		100W	12000				250W
BC9700-L120-90°×110°		120W	14400				＞250W
BC9700-L150-90°×110°		150W	18000		10~15m		400W
BC9700-L200-90°×110°		200W	24000				＞400W

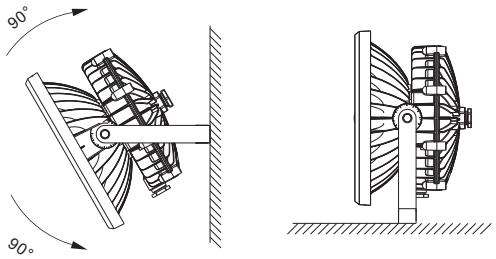
Note: Other lens not shown on the data sheet could be optional base on client requirement.

Drawing of dimension (Dimensions in mm)

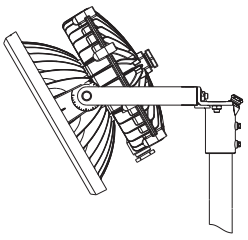


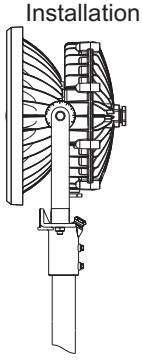


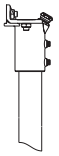
Installation dimensions



Standard







Vertical mounting pole
(Suitable for ϕ40-φ50 mm pole)

Pole mounted (With extra vertical mounting pole)

DGS10/127L(A) DGS24/127L(A) DGS35/127L(A) DGS48/127L(A) LED Explosion-proof Mining Tunnel Light

TORMIN



Ex marking: Ex d I Mb

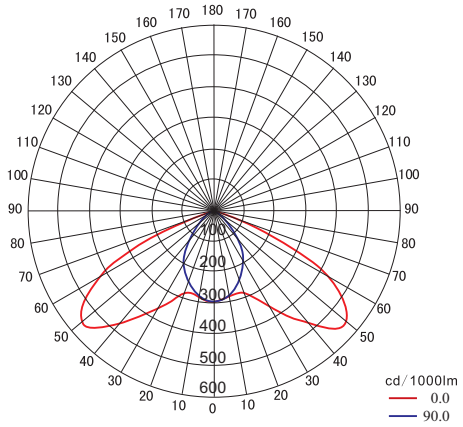
Application

- Approved for safe use in the explosive environment under the coal mine where the methane and the explosive dust exist.
- It is the idea lighting solution for the underground tunnel in the underground chamber in the mining field.

Characteristics

- Its reflector is specially designed for the tunnel. At the height of 3.5meters, 24W can reach 35Lux, 48W can reach 80Lux. The Light distribution distance is more than 15meters. It can save 65% on energy than the metal halide lamp.
- It adopts American CREE LED as light source, service life reach 100,000 hours
- Equipment with world famous brand electrical appliance, has a highly stable performance.
- The LED is seamless connected to the heat sink, which help to heat dissipating, ensured the LED'S life span.
- Supplied with stainless chain which have hooks on the end and the chain's length is adjustable.
- The anti corrosion, abrasion proof, power coated cover which is dust proof, water proof , make the lamp an excellent option for all kinds of high stress environment.

Light distribution curve





Main Specification

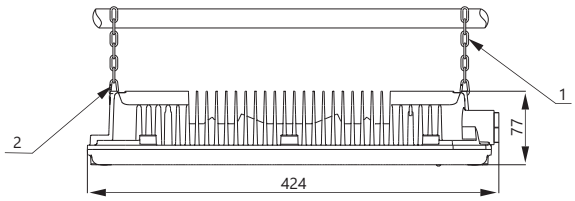
Item	Technical Parameters
Input voltage (V)	90-264VAC
Rated frequency	50Hz / 60Hz
Light source	LED
Life time (h)	100,000
CRI (Ra)	75
CCT	4250K ±250K
Cable entry	G3/4"
Leading-in cable diameter	ϕ9mm~ ϕ14mm
Dimension (mm)	424×177×77
Net weight (kg)	4.1

DGS10/127L(A) DGS24/127L(A) DGS35/127L(A) DGS48/127L(A) LED Explosion-proof Mining Tunnel Light

Ordering Reference

Ordering reference	Rated wattage (W)	Light output (lm)	Space height ratio	Mounting height (m)	Equivalent to MH
DGS10/127L(A)	10W	950	2.4	3~6m	/
DGS24/127L(A)	24W	2000			70W
DGS35/127L(A)	35W	3200			100W
DGS48/127L(A)	48W	3900			100W~150W

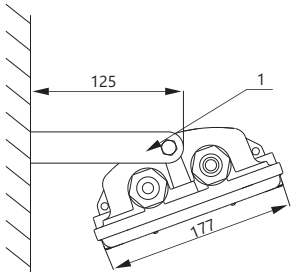
Drawing of dimension (Dimensions in mm)



Chain type mounting(standard)

Accessories order information(Chain type mounting)

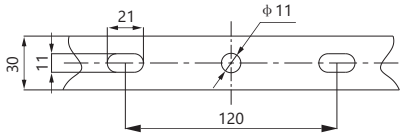
Ordering reference	Item no.	Specification	quantity
P010	1	chain	2
	2	Self locking hook	4



Side wall mounting (optional)

Accessories order information(side wall mounting)

Ordering reference	Item no.	Specification	quantity
P011	1	bracket	1



Installation dimension

DGS20/127L[C] DGS30/127L[C] DGS45/127L[C] LED Explosion-proof Mining Tunnel Light



Ex marking: Ex d I Mb

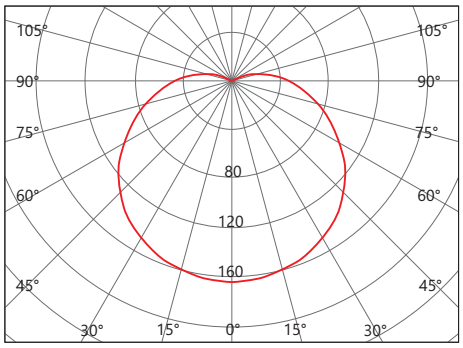
Application

- Idea to be used in underground tunnel, chamber, substations, pump room, parking lot in the mining filed.
- Approved for safe use in mining field with methane, grime and other hazardous explosive mixtures.

Characteristics

- It is made using a special aluminum housing, all exposed fasteners adopt 304 stainless steel. Using high-tech anti-corrosion surface treatment technology, suitable for long-term highly corrosive environment under coal mine.
- A full range of high conductivity material accelerate convection cooling structure, effective guarantee long-term use in high temperature environments.
- Optoelectronic integrated technology no dark spot, no ghosting, the average light efficiency of whole lamp can reach to 100 lm/W, energy-saving is 60% more than Metal Halide Lamp.
- Universal AC-DC, power factor above 0.98.
- Quick replay light source without welding.
- Independent wiring chamber, safe and easy installation and maintenance.
- Designed for Roadway Layout with ring mounted which can be connected in parallel.

Light Distribution Curve



cd/1000lm



Main Specification

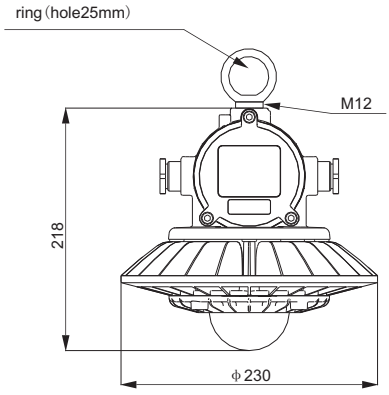
Item	Technical Parameters
Input voltage (V)	90-264VAC
Rated frequency	50Hz / 60Hz
Light source	LED
Life time (h)	50,000
CRI (Ra)	70 (80 optional)
CCT	5000K(3000K/4000K optional)
Cable entry	G3/4"
Leading-in cable diameter	Φ9mm~ Φ14mm
Dimension (mm)	Φ230×218(Ring Mounting)
	218×230×268(Bracket)
Net weight (kg)	2.7(Ring Mounting)
	3.2(Bracket)

DGS20/127L[C] DGS30/127L[C] DGS45/127L[C] LED Explosion-proof Mining Tunnel Light

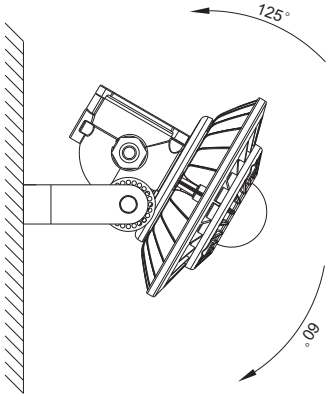
Ordering Reference

Ordering reference	Picture	Rated wattage (W)	Light output (lm)	Mounting Type	Space height ratio	Mounting height (m)	Equivalent to MH
DGS20/127L(C)-P		20W	1800	Ring	1.75	2~6m	50W
DGS30/127L(C)-P		30W	2600				70W
DGS45/127L(C)-P		45W	3400				100W
DGS20/127L(C)-S		20W	1800	Bracket		2~6m	50W
DGS30/127L(C)-S		30W	2600				70W
DGS45/127L(C)-S		45W	3400				100W

Drawing of dimension (Dimensions in mm)



Ring Mounting (Standard)

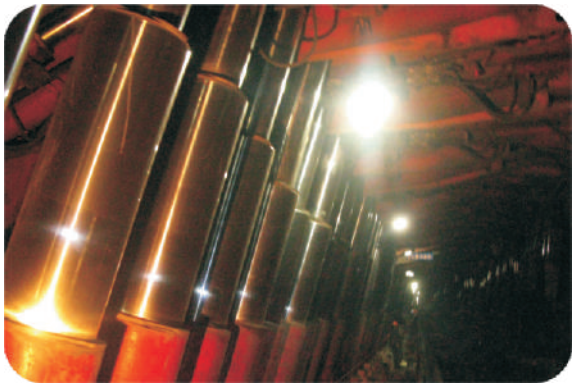


Wall Mounting (bracket)

DGC20/127L[A] DGC24/127L[A] DGC30/127L[A] DGC41/127L[A] DGC45/127L[A] LED Explosion-proof Mining Tunnel Light



Ex marking：Ex d I Mb



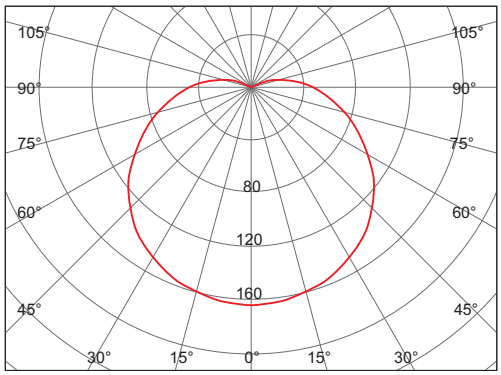
Application

- This product is widely used in coal mining face dedicated;
- Applicable to places with high humidity and high anti-corrosion protection level;
- Suitable for mine sites with explosive gas (methane) and coal dust;
- Suitable for Class I explosive gas environment;

Characteristics

- This lamp is specially designed for coal mining working face, and the shell is made of 304 stainless steel. It is solved that the coal mining face required by the MT221 standard prohibits the use of aluminum alloy casings. Flameproof housing material: The housing of the electrical equipment on the mining face can be made of gray cast iron with a grade of not lower than HT250. (GB3836.2, specified in Appendix F1.1);
- The meaning of MT221 model stipulates: DGC where "C" represents lamps for mining face;
- All-round self-circulation heat dissipation design, which can be used in the working environment of the mining face for a long time; the upper and lower ventilation fin structure does not accumulate dust;
- American Lumileds light source, the average light efficiency of the whole light is as high as 100lm/W, and the energy saving of metal halide lamps is more than 60% compared with that of metal halide lamps;
- AC and DC universal, power factor up to 0.99;
- The light source can be quickly replaced without welding on site.

Light Distribution Curve



cd/1000lm

Main Specification

Item	Technical Parameters
Input voltage (V)	90-264VAC
Rated frequency	50Hz / 60Hz
Rated wattage	20W/24W/30W/40W/45W
Light source	LED
Life time (h)	50,000
CRI (Ra)	70 (80 optional)
CCT	5000K(3000K/4000K optional)
Cable entry	G3/4"
Leading-in cable diameter	Φ9mm~Φ14mm
Dimension (mm)	Φ230×218 (Ring mounted)
	218×230×268 (Bracket mounted)
Net weight (kg)	5.5Kg (Ring mounted)
	6Kg (Bracket mounted)

DGC20/127L[A] DGC24/127L[A] DGC30/127L[A] DGC41/127L[A] DGC45/127L[A] LED Explosion-proof Mining Tunnel Light

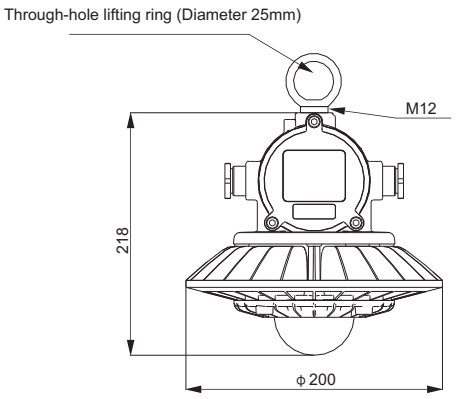
Ordering Reference

Model number	Picture	Rated wattage (W)	Light output (lm)	Mounted type	Space height ratio	Mounting height (m)	Equivalent to MH
DGC20/127L(A)-P		20W	1800	Ring mounted	1.75	3~6m	50W
DGC30/127L(A)-P		30W	2600				70W
DGC41/127L(A)-P		41W	3690				100W
DGC45/127L(A)-P		45W	3825				100W
DGC20/127L(A)-S		20W	1800	Bracket mounted	1.75	3~6m	50W
DGC30/127L(A)-S		30W	2600				70W
DGC41/127L(A)-S		41W	3690				100W
DGC45/127L(A)-S		45W	3825				100W

General example: The order number of the lamp is DGC30/127L(A)-P-L30-5000K, DGC30/127L(A) is the model number, P for ring type installation, wattage as 30W,color temperature as 5000K

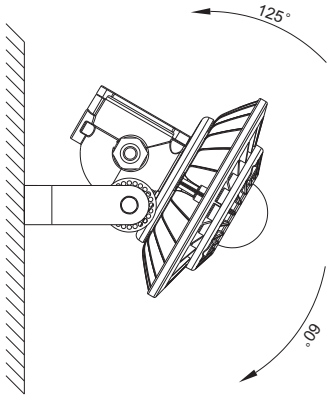
Drawing of dimension (Dimensions in mm)

Ring mounting



Standard

Side wall mounted



Optional

TORMIN BC4210 Explosion proof LED Emergency Light



Ex marking: Ex db eb IIC T6 Gb
Ex tb IIIC T80℃ Db



Drawing of dimension (Dimensions in mm)



Other Sign for optional



Customized Sign Drawing for reference





Application

■ It is suitable for hazardous locations in Zone 1 and Zone 2 containing explosive mixtures of Class II C, T1-T6 groups of combustible gas or steam and air, and hazardous locations containing inflammable dust in Zone 21 and Zone 22.

■ Explosion-proof emergency light has the characteristics of small size, light weight, and easy installation. It is widely used in petroleum, chemical, dock, port, aerospace, aviation, military, processing and other places.

Characteristics

■ The luminaires use flameproof requirement to ensure that the products work safely in various flammable and explosive places. With automatic emergency function, emergency work time is up to 3 hours.

■ The optimized structure is designed with a lightweight aluminum alloy casing that is dust-proof, waterproof and impact-resistant, ensuring maintenance-free lighting and avoiding unsafe factors during maintenance.

■ LED light source, high brightness, long life, high efficiency and energy saving. Advanced and reasonable circuit design, high electrical efficiency and high reliability.

■ The cable is connected to the terminal through the connecting device wiring cavity, and the grounding screw is provided inside and outside the casing, and the user should be grounded reliably when using the product.

■ It is treated with high-tech surface electrostatic spray technology. It is waterproof, dustproof and anti-corrosive. It is reliable and durable and can be used reliably in harsh environments.

■ Exit Sign could be customized with PVC Sticker on the Milk white glass surface with extra cost. **It is inevitable that the color of the sticker will be different from the design format.**

Main technical parameter

Item	Technical data
Rated voltage (V)	100~240V AC
Rated frequency (Hz)	50/60Hz
Rated wattage (W)	1.5W
Emergency time (min)	180min
Efficiency (lm/W)	> 90
Lighting Color	Green (White customized)
Color rendering index (Ra)	>70
Service life (h)	>5000
Ingress protection	IP66
Factor	>0.8
Total harmonic distortion (THD)	>15%
Highest surface temperature (℃)	<80
Leading-in cable entry	G3/4"* 1nos, suitable for unarmored cable outer diameter φ9~φ11mm

BC5210 Explosion proof LED Emergency Light

IECEx ATEX IP 66 Ta 45 Ta 0



Ex marking: Ex db eb IIC T6 Gb
Ex tb IIIC T80℃ Db



Application

■ It is suitable for hazardous locations in Zone 1 and Zone 2 containing explosive mixtures of Class II C, T1-T6 groups of combustible gas or steam and air, and hazardous locations containing inflammable dust in Zone 21 and Zone 22.

■ Explosion-proof emergency light has the characteristics of small size, light weight, and easy installation. It is widely used in petroleum, chemical, dock, port, aerospace, aviation, military, processing and other places.

Characteristics

■ The luminaires use flameproof requirement to ensure that the products work safely in various flammable and explosive places. With automatic emergency function, emergency work time is up to 3 hours.

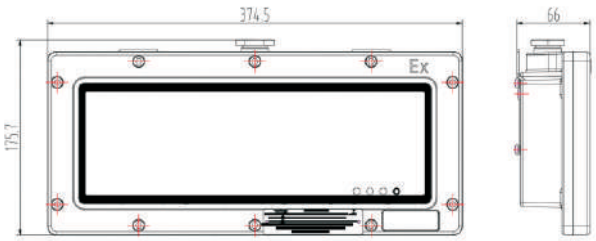
■ The optimized structure is designed with a lightweight aluminum alloy casing that is dust-proof, waterproof and impact-resistant, ensuring maintenance-free lighting and avoiding unsafe factors during maintenance.

■ LED light source, high brightness, long life, high efficiency and energy saving. Advanced and reasonable circuit design, high electrical efficiency and high reliability.

■ The cable is connected to the terminal through the connecting device wiring cavity, and the grounding screw is provided inside and outside the casing, and the user should be grounded reliably when using the product.

■ It is treated with high-tech surface electrostatic spray technology. It is waterproof, dustproof and anti-corrosive. It is reliable and durable and can be used reliably in harsh environments.

Drawing of dimension (Dimensions in mm)



Main technical parameter

Item	Technical data
Rated voltage (V)	100~240V AC
Rated frequency (Hz)	50/60Hz
Rated wattage (W)	2W
Emergency time (min)	180min
Efficiency (lm/W)	> 90
Color temperature (K)	5000(3000K, 4000K option)
Color rendering index (Ra)	>70
Service life (h)	>5000
Ingress protection	IP66
Factor	>0.8
Total harmonic distortion (THD)	>15%
Highest surface temperature (℃)	<80
Leading-in cable entry	G3/4"* 1nos, suitable for unarmored cable outer diameter φ9~φ11mm

TORMIN TM-ZFZD-E6W-BC5200 Explosion proof Fire Emergency Light

Ex

IP 66

Ta 40

Ta -40



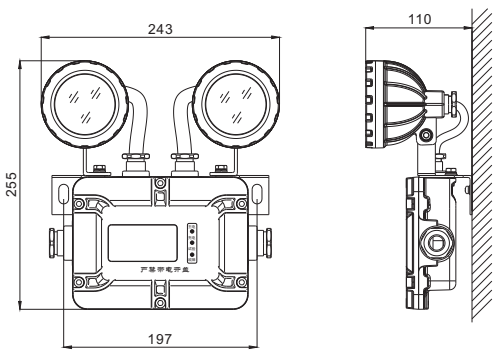
Ex mark: Ex d IIC T6 Gb
Ex tD A21 IP66 T85℃
Executive standard: GB/T 3836 GB17945

Application

Emergency lighting for hazardous locations
Hazardous gas zone 1 and zone 2



Installation dimension drawing



Application

- This product is widely used in emergency lighting in hazardous areas;
- Applicable to places with high moisture and corrosion protection level;
  Applicable to explosive gas or dust environment Zone 1, Zone 2 or Zone 21, Zone 22;
- Applicable to IIA, IIB, IIC and IIIA, IIIB, IIC combustible environments;
- Applicable to temperature groups T1~T6.

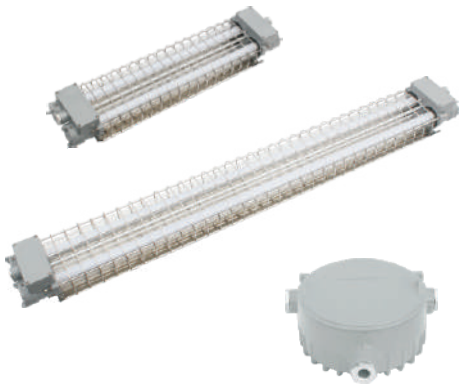
Characteristics

- This product has an aluminum alloy shell, electrostatic spraying on the surface, beautiful appearance, and high waterproof, dustproof and anti-corrosion functions;
- The lamp has a force start function and can be controlled locally or centrally.
- The transparent cover and the shell are treated with an adhesive structure, which can be used in harsh working conditions indoors and outdoors for a long time, with a protection level of IP66;
- The cable is introduced into the wiring cavity through the outer diameter of the cable and connected to the wiring terminal. There are grounding screws inside and outside the shell. Users should reliably ground when using this product;
- It has a monthly inspection function, which automatically discharges once a month, and the emergency working state is maintained for 120s, and the main power state is automatically restored;
- It has an annual inspection function, which automatically switches from the main power to the emergency working state every other year and continues until the discharge ends, and then automatically restores the main power state.

Main Specification

Item	Technical parameter
Rated voltage	AC 220V
Rated Fre.	50Hz
Emergency wattage	2×3W
Emergency time	≥90min
Light source	LED
Cable entry	G3/4"
Leading-in cable diameter	ϕ9mm~ϕ12mm
Dimension	255mm×243mm×110mm
Net weight	2.9Kg

TORMIN BC5401 LED Explosion Proof Light (With BXP01)(For emergency usage)



BC5401 series LED Explosion proof light
Ex mark: Ex db eb IIC T6 Gb Ex tb IIIC T80℃ Db

BXP01 series Explosion-proof emergency box
Ex mark: Ex db IIC T6 Gb Ex tb IIIC T80℃ Db

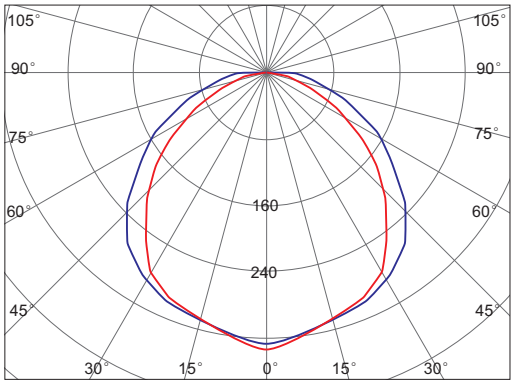
Characteristics

- It is made using a special aluminum housing, anti-corrosion performance than 304 stainless steel, suitable for long-term highly corrosive environment of offshore platforms, chlor-alkali, hydrogen sulfide, etc.
- The anti corrosion, abrasion proof, power coated cover which is dust proof, water proof, make the lamp an excellent option for all kinds of high environment.
- All 304 stainless steel bracket screw (customizable 316), can effectively guarantee the long-term strength and strong corrosion problems of lamps.
- Terminals are provided at both ends, can be directly wired in parallel, eliminating the junction box and installation costs.
- A variety of installation as optional: ceiling, oil derrick, the side walls, curved rods, boom, etc.

Application

- It can be widely used in petrochemical plants, oil platforms, oil pump housing, transit stations and other flammable and explosive places as fixed lighting.
- Gas explosive environment: Group IIA, IIB, IIC.
- Zone1, Zone2; Zone21, Zone22

Light Distribution Curve



Space Height Ratio：1. 5 — 0° — 90°

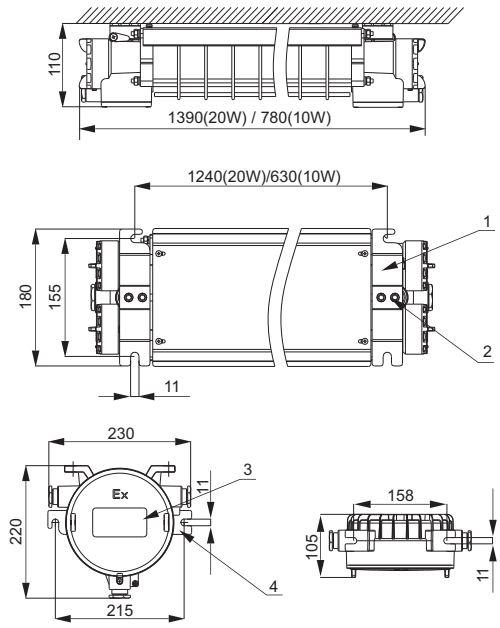
Main Specification

Item	Technical Parameters	
Rated wattage (W)	2×20W	2×10W
Emergency wattage (W)	20W	10W
Input voltage (V)	90~264VAC	
Rated frequency	50Hz / 60Hz	
Light source	LED	
Light efficiency (lm/W)	≥90	
CRI	80	
Life time (h)	50, 000	
CCT	5000K	
Emergency duration (min)	>70	>140
Time of charging (h)	6	
Rated capacity	2.6Ah/14.8V	
Leading-in cable diameter	Φ10mm~Φ14mm	
Cable entry	M20×1.5, M25×1.5, NPT3/4", NPT1/2", G3/4"	
Dimension (mm)	(2×20W) 1390×180×110	
	(2×10W) 780×180×110	
	(Emergency box) 230×220×105	
Net weight (kg)	10.7	6.6
	(Emergency box) 2. 8	

BC5401 LED Explosion Proof Light (With BXP01)(For emergency usage)

Drawing of Dimension (Dimensions in mm)

Ceiling mounting



BXP01 Explosion-Proof Emergency Box

Lamps ordering information

Order number	Installation	Emergency wattage	Emergency duration
BC5401-L2×10A	Ceiling	10W	>140min
BC5401-L2×20A		20W	>70min

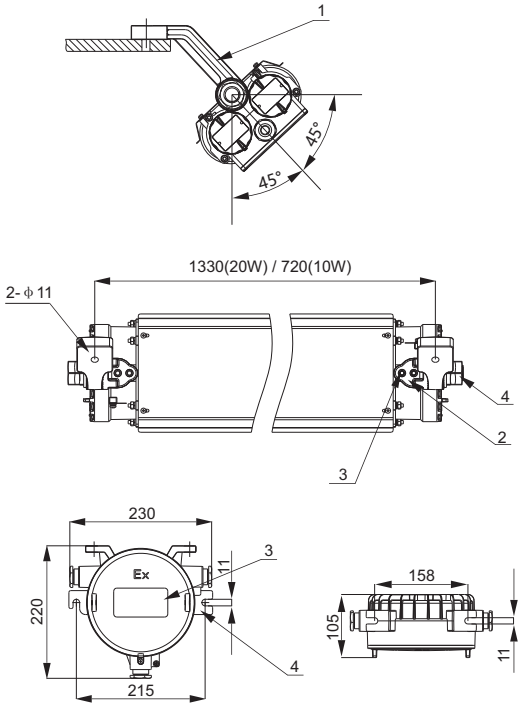
Fitting ordering information (Standard)

Order number	No.	Specification	Quantity
P01	1	Ceiling Bracket	2
	2	M8 Inner six angle bolt	4

Emergency box ordering information (Standard)

Order number	No.	Specification	Quantity
BXP01	3	Explosion-Proof Emergency Box	1
	4	Bracket	1

Derrick installation



BXP01 Explosion-Proof Emergency Box

Lamps ordering information

Order number	Installation	Emergency wattage	Emergency duration
BC5401-L2×10A	Derrick type	10W	>140min
BC5401-L2×20A		20W	>70min

Fitting ordering information (Optional)

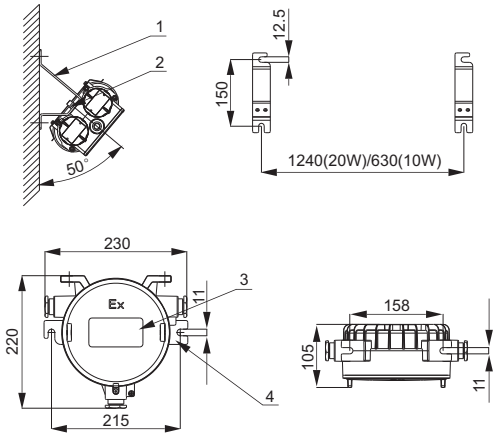
Order number	No.	Specification	Quantity
P02	1	Derrick bracket	2
	2	Base	2
	3	M8 Inner six angle bolt	4
	4	M24 screw	2

Emergency box ordering information (Standard)

Order number	No.	Specification	Quantity
BXP01	3	Explosion-Proof Emergency Box	1
	4	Bracket	1

TORMIN BC5401 LED Explosion Proof Light (With BXP01)(For emergency usage)

Side wall mounting



BXP01 Explosion-Proof Emergency Box

Lamps ordering information

Order number	Installation	Emergency wattage	Emergency duration
BC5401-L2×10A	Sidewall	10W	>140min
BC5401-L2×20A		20W	>70min

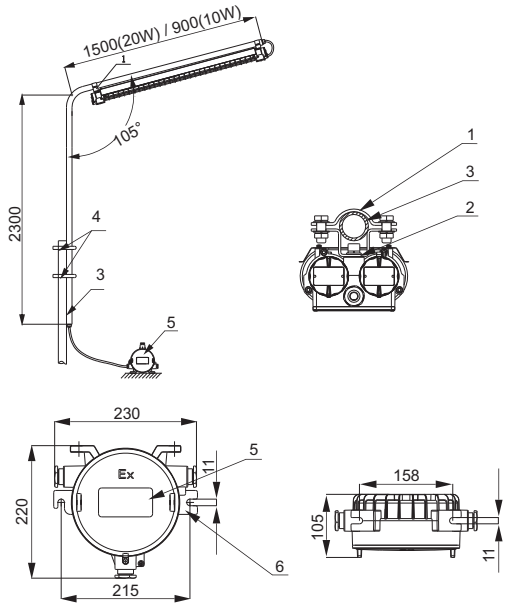
Fitting ordering information (Optional)

Order number	No.	Specification	Quantity
P03	1	Side wall bracket	2
	2	M10 Inner six angle bolt	4

Emergency box ordering information (Standard)

Order number	No.	Specification	Quantity
BXP01	3	Explosion-proof emergency box	1
	4	Bracket	1

Rod mounting



BXP01 Explosion-Proof Emergency Box

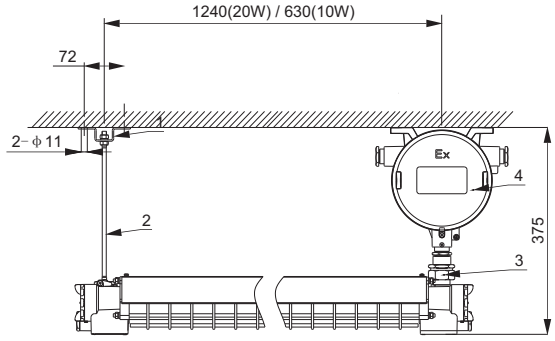
Lamps ordering information

Order number	Installation	Emergency wattage	Emergency duration
BC5401-L2×10A	Rod	10W	>140min
BC5401-L2×20A		20W	>70min

Fitting ordering information (Optional)

Order number	No.	Specifications Model	Quantity
P04	1	Upper hoop	2
	2	Under hoop	2
	3	Dn32 Poles	1
	4	U tube clip	2
BXP01	5	Explosion-Proof Emergency Box	1
	6	Bracket	1

Pole mounting



Lamps ordering information

Order number	Installation	Emergency wattage	Emergency duration
BC5401-L2×10B	Pole	10W	>140min
BC5401-L2×20B		20W	>70min

Fitting Ordering Information (Optional)

Order number	No.	Specification	Quantity
P05	1	Pole mounting bracket	1
	2	19cm Screw(M8)	1
P02	3	Connector G3/4" male- male	1
BXP01	4	Explosion-proof emergency box	1

TORMIN BC5402B Series LED Explosion-proof Light [Emergency]



Ex marking: Ex nR IIC T6 Gc
Ex tc IIIC T80℃ Dc



Application

This product is widely used in the lighting of on-site control rooms, on-site offices, battery rooms, liquid ammonia areas, refining tower trails, oil storage tank trails, platform trails, pump valve sheds, pipelines, dangerous chemical terminal planks, and other places;

It is suitable for places with high requirements for moisture-proof and anti-corrosion protection;

Applicable to explosive gas zone 2 places;

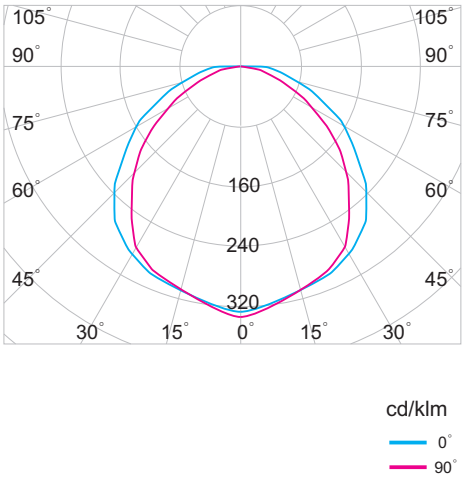
Suitable for IIA, 11B, IIC explosive gas environment;

Suitable for temperature group T1~T6 group.

Characteristics

- Seawater resistant, anodized aluminum housing.
- Flexible light exit cover, soft and comfortable light.
- The whole lighting effect is over 105 lm/W.
- Ship-level anti-vibration test.
- Outdoor light diffusion material translucent cover, strong weather resistance.
- Independent junction box design, convenient wiring, can be used in parallel with multiple lamps.
- Exposed fasteners are all made of 304 stainless steel (Ocean platform requires custom 316 stainless steel).

Light distribution Curve



Characteristics

Item	Technical Parameters
Input voltage (V)	90~264VAC
Rated frequency	50Hz / 60Hz
Rated wattage	40W
Emergency wattage	15W/25W
Emergency time	120min(15W)/ 70min(25W)
Light source	LED
CRI (Ra)	70
CCT	5000K(3000K/4000K optional)
Light source life (h)	100,000
Cable Entry	M20×1.5

TORMIN BC5402B Series LED Explosion-proof Light [Emergency]

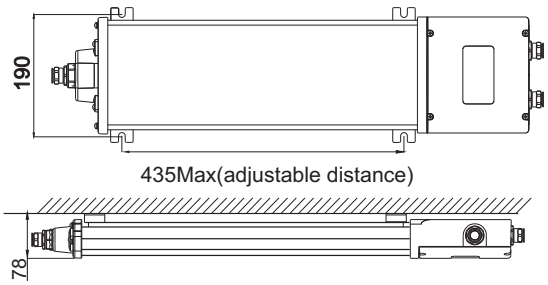
Ordering reference

Emergency Mode	Model number	Normal wattage (W)	Emergency wattage (W)	Normal Light output (lm)	Mounting height (m)	Net Weight (kgs)	Size (mm)	Mounted type	Number of cable inlets	Equivalent to MH
Normal + Emergency	BC5402B-L40-15	40W	15W	>4800 (Normal)	2~5m	3.4	720× 182× 68	S1 Bracket mounted S2 Side wall mounted S3 Guardrail installation S4 Flange mounting	E1(one cable inlet) E2(two cable inlets)	100W/35W
	BC5402B-L40-25	40W	25W	>4800 (Normal)	2~5m	3.4	720× 182× 68			100W/70W
Pure Emergency	BC5402B-L-15	/	15W	/	2~5m	3.2				/35W
	BC5402B-L-25	/	25W	/						/70W

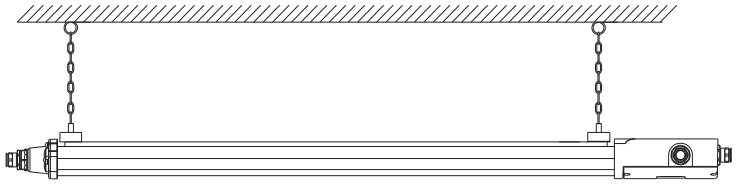
Example: Model number: BC5402B-L40-15-5000K-S2-E1, BC5402B is the product model, 40W as normal power, 15W as emergency power, 5000K as color temperature, sidewall type as installation method, 1 nos cable inlet.

Drawing of dimension (Dimensions in mm)

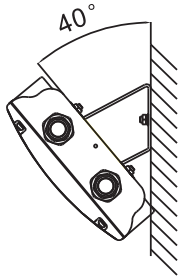
1. Bracket mounting(Standard)



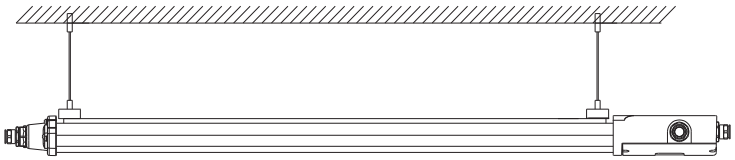
3. Hanging Chain mounting



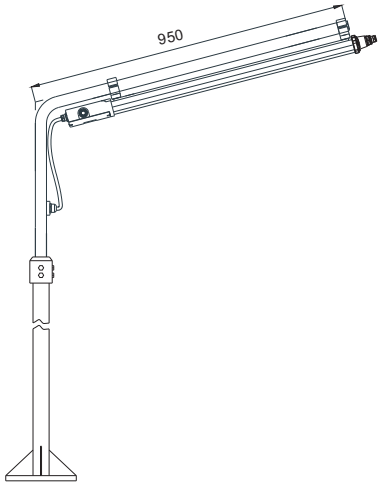
2. Side wall mounting (40 degree)



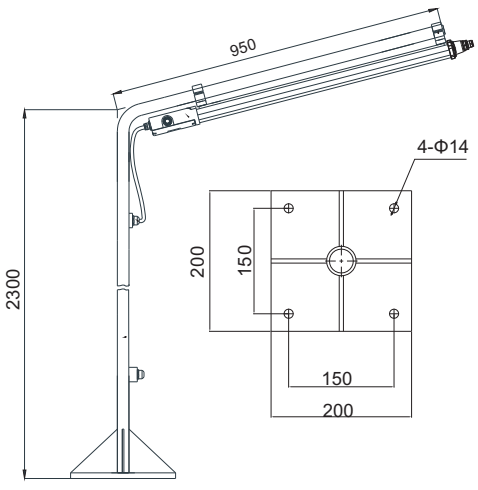
4. Pendant mounting



5. Guardrail installation



6. Flange mounting



TORMIN BC9101A BC9101B LED Explosion Proof Emergency Light



Ex mark: Ex db IIB T6 Gb
Ex tD IIIC T80℃ Db IP66



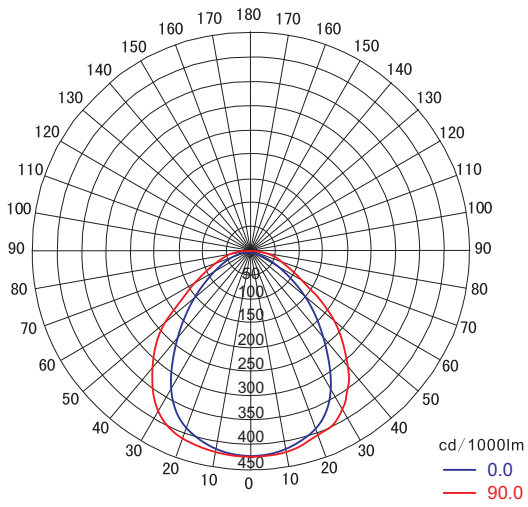
Application

- Ideal to be used in the oilfield, chemical industry, steel industry, power, port, petroleum etc.
- Harsh environment, moist area.
- Gas explosive environment: Group IIA, IIB.
- Zone 1, Zone2; Zone 21, Zone 22.
- Temperature class: T1 to T6.

Characteristics

- Type A: usually can be used for 24 hours of lighting, the accident provides emergency lighting;
- Type B : the accident to provide emergency lighting.
- With its reflector which have different angles design, it efficiently utilize the light. Have a good performance of illuminance uniformity, glare free, can avoid eyestrain to the worker.
- A full range of high conductivity material accelerate convection cooling structure, effective guarantee long term use in high temperature environments.
- It adopts CREE LED as light source, no dark spot, It adopts American CREE LED as light source, can save 60% or more on energy than metal halide lamp.
- The adjustable locking device on the bracket can tightly fix the lamp to any desired angle, making the lamp resist to harsh vibration.
- It is made using aluminum housing, all exposed fasteners adopt 304 stainless steel. Using high-tech anti-corrosion surface treatment technology, suitable for hazardous working areas.
- Intelligent control functions can be realized.

Light Distribution Curve



Main Specification

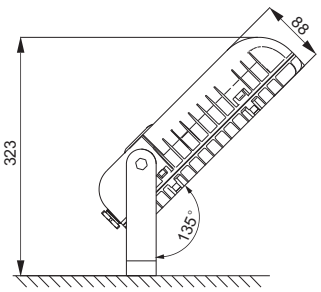
Item	Technical Parameters
Input voltage (V)	90~264VAC
Life time (h)	100,000
Rated frequency	50Hz / 60Hz
Time of charging (h)	>6
Rated capacity	2.6Ah/14.8V
Cable entry	G3/4"
Leading-in cable diameter	ϕ9mm~ϕ14mm
Dimension (mm)	370×326×88
Net weight (kg)	9

BC9101A BC9101B LED Explosion Proof Emergency Light

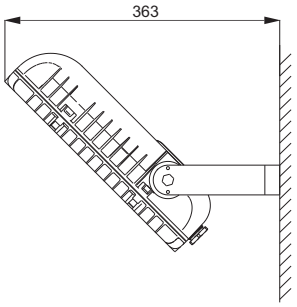
Ordering Reference

Model number	Rated wattage (W)	Emergency wattage (W)	Emergency light output (lm)	Emergency duration (min)	Mounting height (m)	Equivalent to HM
BC9101A-L25-15	25W	15W	1800	120	2~5	70W/35W
BC9101A-L40-15	40W	15W	1800	120		100W/35W
BC9101A-L60-15	60W	15W	1800	120	3~8	150W/35W
BC9101A-L25-25	25W	25W	3000	70	2~5	70W/70W
BC9101A-L40-25	40W	25W	3000	70		100W/70W
BC9101A-L60-25	60W	25W	3000	70	3~8	150W/70W
BC9101B-L15	/	15W	1800	120	2~5	35W
BC9101B-L25	/	25W	3000	70		70W

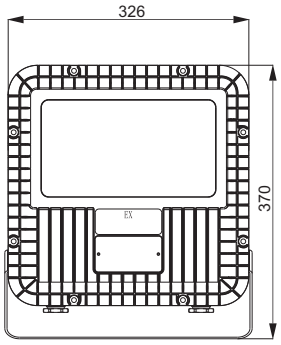
Drawing of Dimension (Dimensions in mm)

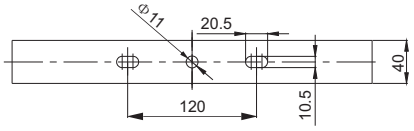


Seat mounting



Side wall mounting





Installation dimension

TORMIN BC9306AP/BP LED Explosion Proof Emergency Light(Pole)



Ex mark: Ex db eb IIC T6/T5 Gb
Ex tb IIIC T80℃/T95℃ Db, IP66

Characteristics

- It is made using a special aluminum housing, highly corrosive environment of offshore platforms, chlor-alkali, vulcanization cyanide a full range of high conductivity material accelerate convection cooling structure, effective guarantee long-term use in high temperature environments.
- variety of light distribution, variety of installation types, an effective solution to beautify workshop and device platform.
- The shell is made of high-tech surface coating technology, corrosion resistant, waterproof and dustproof, suitable for harsh environments.
- Imported light, high luminous efficiency, low-light failure, reliability ranking first in the same light source.
- Taiwan Meanwell power supply or same quality power supply, power factor above 0.98, high reliability and long time Life time .
- Independent wiring chamber, safe and easy installation and maintenance.
- All exposed fasteners adopt 304 stainless steel.
- Type A: usually can be used for 24 hours lighting lamps and lanterns to use, when the accident to provide emergency lighting; Type B: accident to provide emergency lighting.
- B type A type with manual emergency function.

Application

- Ideal to be used in the oilfield, chemical industry, offshore drilling platform, steel industry, petroleum etc.
- Gas explosive environment: Group IIA, IIB, IIC.
- Zone 1,zone 2;zone 21,zone 22.

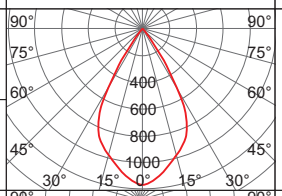
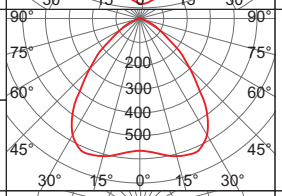
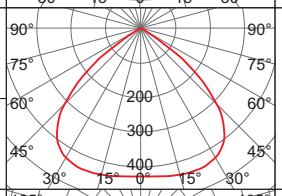
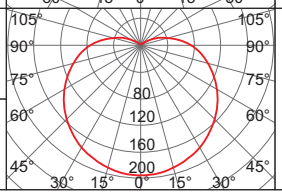
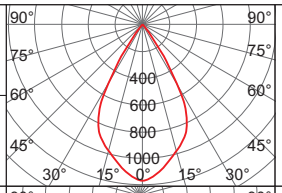
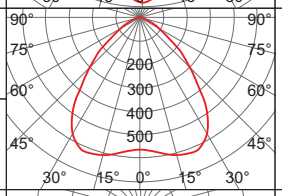
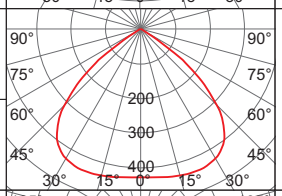
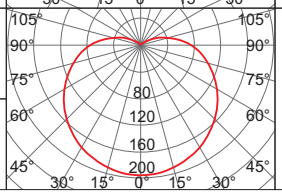


Main Specification

Item	Technical Parameters
Type	BC9306AP/BP
Input voltage (V)	90~264VAC
Rated frequency	50Hz / 60Hz
Light source	LED
CRI (Ra)	70 (80 optional)
Life time (h)	50,000
CCT	4000K(3000K/5000K optional)
Cable entry	M20×1.5, M25×1.5, NPT3/4", NPT1/2", G3/4"
Leading-in cable diameter	Φ 10mm~ Φ 14mm
Terminals	Multi core: ≤2.5mm^2
	Single core: ≤4mm^2
Time of charging (h)	>6
Rated capacity	2.6Ah / 14.8V
Dimension (mm)	φ230×270
Net weight (kg)	4.2

TORMIN BC9306AP/BP LED Explosion Proof Emergency Light(Pole)

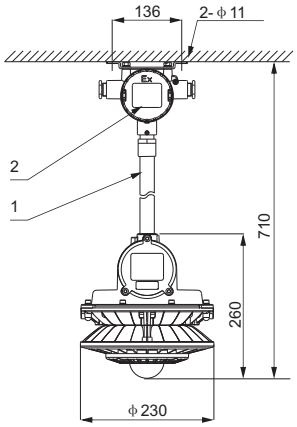
Ordering Reference

Model number	Picture	Rated wattage(W)	Emergency wattage (W)	Emergency duration (min)	Emergency light output (lm)	Light distribution curve(1000cd/lm)	Space height ratio	Equivalent to MH
BC9306AP-L40-15-60°		40W	15W	120min	1800		0.9	100W / 35W
BC9306AP-L40-25-60°		40W	25W	70min	3300			100W / 70W
BC9306AP-L40-15-80°		40W	15W	120min	1800		1.35	100W / 35W
BC9306AP-L40-25-80°		40W	25W	70min	3300			100W / 70W
BC9306AP-L40-15-100°		40W	15W	120min	1800		1.4	100W / 35W
BC9306AP-L40-25-100°		40W	25W	70min	3300			100W / 70W
BC9306AP-L40-15-200°		40W	15W	120min	1400		1.75	100W / 35W
BC9306AP-L40-25-200°		40W	25W	70min	2600			100W / 70W
Auto Emergency								
BC9306BP-15-60°		/	15W	120min	1800		0.9	35W
BC9306BP-25-60°		/	25W	70min	3300			70W
BC9306BP-15-80°		/	15W	120min	1800		1.35	35W
BC9306BP-25-80°		/	25W	70min	3300			70W
BC9306BP-15-100°		/	15W	120min	1800		1.4	35W
BC9306BP-25-100°		/	25W	70min	3300			70W
BC9306BP-15-200°		/	15W	120min	1400		1.75	35W
BC9306BP-25-200°		/	25W	70min	2600			70W

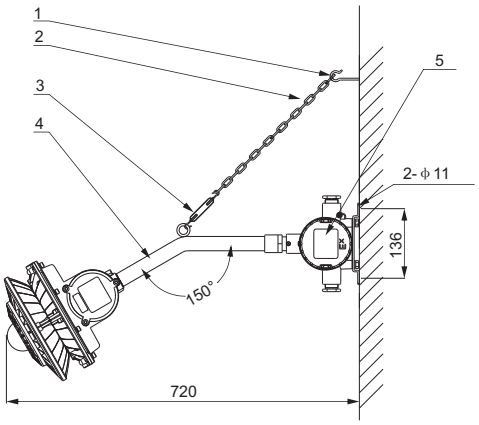
TORMIN BC9306AP/BP LED Explosion Proof Emergency Light(Pole)

Drawing of Dimension (Dimensions in mm)

Pole mounting



Wall mounting 150°



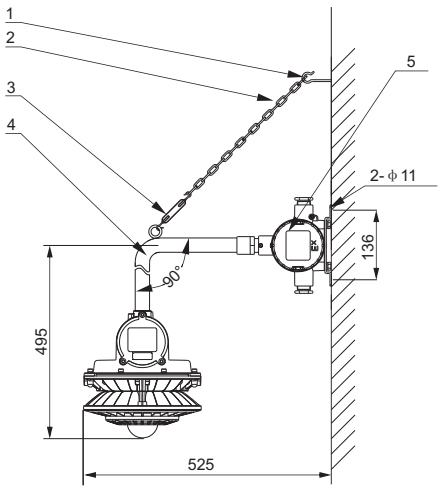
Accessories order information (Pole mounting)

Order number	No.	Specification	Quantity
P01	1	G3/4” pole 30cm	1
BHD01	2	Explosion proof junction box	1

Accessories order information (Wall mounting 150°)

Order number	No.	Specification	Quantity
P03	1	Expansion screw hook	1
	2	Chain	1
	3	C-C turn buckle	1
	4	G3/4" bend pipe 150Degree	1
BHD01	5	Explosion proof junction box	1

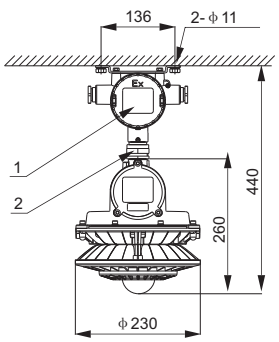
Wall mounting 90°



Accessories order information (Wall mounting 90°)

Order number	No.	Specification	Quantity
P04	1	Expansion screw hook	1
	2	Chain	1
	3	C-C turn buckle	1
	4	G3/4" bend pipe 90Degree	1
BHD01	5	Explosion proof junction box	1

Ceiling mounting

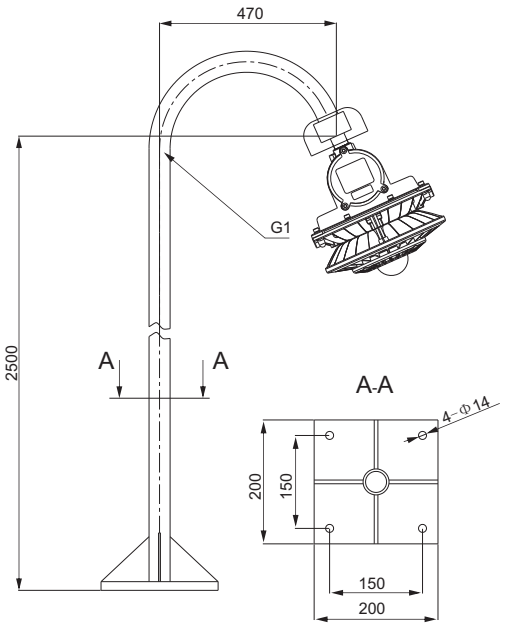


Accessories order information (Ceiling mounting)

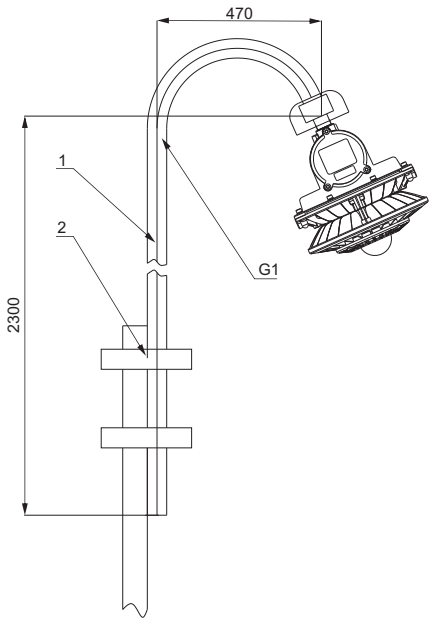
Order number	No.	Specification	Quantity
BHD01	1	Explosion proof junction box	1
P02	2	Adapter G3/4”(male - male)	1

BC9306AP/BP LED Explosion Proof Emergency Light(Pole)

Flange mounting



Guardrail mounting



Accessories order information (Flange mounting)

Order number	No.	Specification	Quantity
P06	1	Flange pole	1

Accessories order information (Guardrail mounting)

Order number	No.	Specification	Quantity
P05	1	Fence pole	1
	2	U type bolts	2

TORMIN BC9306AS/BS LED Explosion Proof Emergency Light(bracket)



Ex mark: Ex db eb IIC T6/T5 Gb
Ex tb IIIC T80℃/T95℃ Db, IP66

Characteristics

- It is made using a special aluminum housing, highly corrosive environment of offshore platforms, chlor-alkali, vulcanization cyanide a full range of high conductivity material accelerate convection cooling structure, effective guarantee long-term use in high temperature environments.
- variety of light distribution, variety of installation types, an effective solution to beautify workshop and device platform.
- The shell is made of high-tech surface coating technology, corrosion resistant, waterproof and dustproof, suitable for harsh environments.
- Imported light chip, high luminous efficiency, low-light failure, reliability ranking first in the same light source.
- Taiwan Meanwell power supply or same quality power supply, power factor above 0.98, high reliability and long time Life time .. Independent wiring chamber, safe and easy installation and maintenance.
- All exposed fasteners adopt 304 stainless steel.
- Type A: usually can be used for 24 hours lighting lamps and lanterns to use, when the accident to provide emergency lighting; Type B : accident to provide emergency lighting.
- B type A type with manual emergency function.

Application

- Ideal to be used in the oilfield, chemical industry, offshore drilling platform, steel industry, petroleum etc.
- Gas explosive environment: Group IIA, IIB, IIC.
- Zone 1,zone 2;zone 21,zone 22.

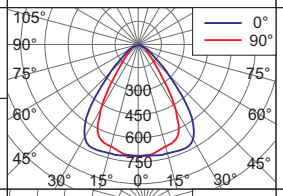
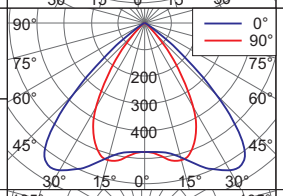
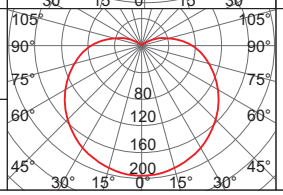
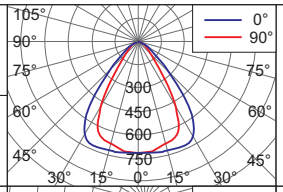
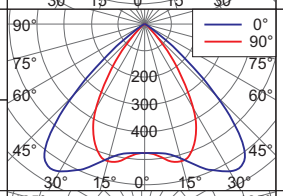
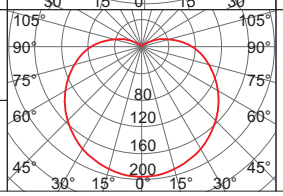


Main Specification

Item	Technical Parameters
Input voltage (V)	90~264VAC
Rated frequency	50Hz / 60Hz
Light source	LED
CRI (Ra)	70 (80 optional)
Life time (h)	50,000
CCT	4000K(3000K/5000K optional)
Cable entry	M20×1.5
Leading-in cable diameter	Φ6mm~Φ12mm
Terminals	Multi core：≤2.5mm
	Single core：≤4mm
Time of charging (h)	>6
Rated capacity	2. 6Ah / 14. 8V
Dimension (mm)	245×260×270
Net weight (kg)	4.9

TORMIN BC9306AS/BS LED Explosion Proof Emergency Light(bracket)

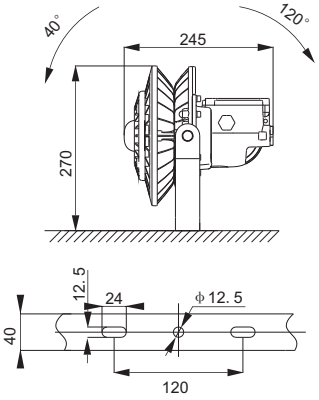
Ordering Reference

Model number	Picture	Rated wattage (W)	Emergency wattage (W)	Emergency duration (min)	Emergency light output (lm)	Light distribution curve(1000cd/lm)	Space height ratio	Equivalent to MH
BC9306AS-L40-15-60°×80°		40W	15W	120min	1800		1.25	100W / 35W
BC9306AS-L40-25-60°×80°		40W	25W	70min	3300			100W / 70W
BC9306AS-L40-15-90°×110°		40W	15W	120min	1700		1.75	100W / 35W
BC9306AS-L40-25-90°×110°		40W	25W	70min	3100			100W / 70W
BC9306AS-L40-15-200°		40W	15W	120min	1400		1.75	100W / 35W
BC9306AS-L40-25-200°		40W	25W	70min	2400			100W / 70W
Auto Emergency								
BC9306BS-L15-60°×80°		/	15W	120min	1800		1.25	35W
BC9306BS-L25-60°×80°		/	25W	70min	3300			70W
BC9306BS-L15-90°×110°		/	15W	120min	1700		1.75	35W
BC9306BS-L25-90°×110°		/	25W	70min	3100			70W
BC9306BS-L15-200°		/	15W	120min	1400		1.75	35W
BC9306BS-L25-200°		/	25W	70min	2600			70W

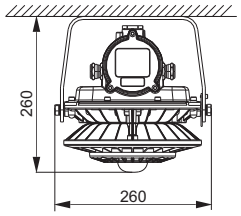
BC9306AS/BS LED Explosion Proof Emergency Light(bracket)

Drawing of Dimension (Dimensions in mm)

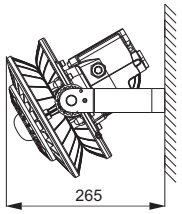
Seat mounting



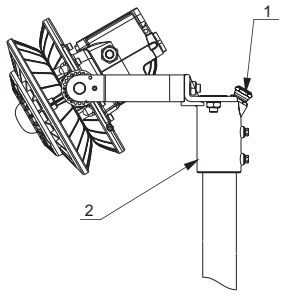
Ceiling mounting

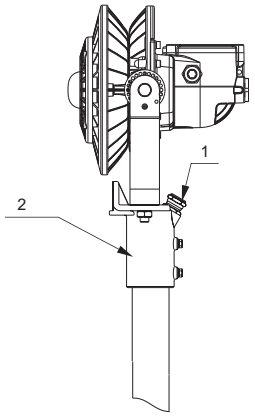


Side wall mounting



Pole mounting





Accessories ordering information(optional)

Order number	No.	Specification	Quantity	Note
P07	1	Water proof plug M20	1	Φ8~Φ12mm cable
	2	Vertical mounting pole	1	Φ40~Φ50mm pole

TORMIN BHD series Explosion Proof Junction Box

IECEx ATEX IP 66 Ta 60 Ta -50



BHD01



BHD02

Ex Marking: Ex db IIC T6 Gb
Ex tb IIIC T80°C Db IP66

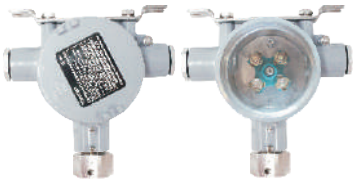
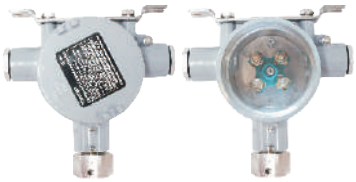
Application

Used as a junction box and mounting element for lighting equipment installed in explosion hazardous areas, like petrochemical plants, chemical plants, pharmaceutical factory, polishing plant, etc.

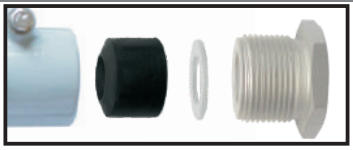
Characteristics

- The junction box has the characteristics of small volume, light weight, convenient installation, etc.
- The shell adopts anti-corrosive processing, standard for the 304 stainless steel material, using high-tech surface anti-corrosion treatment technology, applicable to all kinds of bad industrial environment.

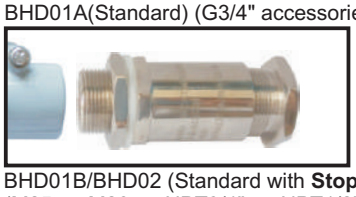
Ordering Reference

Item	Technical Parameters		
Type	BHD01A	BHD01B	BHD02
Picture			
Input voltage (V)	⩽500V		
Rated frequency	50Hz / 60Hz		
Rated current	＜20A		
Cord section	0.75~2.5mm²		
Cable entry	G3/4"	M25×1.5 or M20×1.5 or NPT3/4" or NPT1/2"	M25×1.5 or M20×1.5 or NPT3/4" or NPT1/2"
Dimension (mm)	185×185×75	185×185×75	116×116×75
Cable entry quantity	2	2	4
Drop cable quantity	1	1	/
Weight (kg)	1.2		0.8

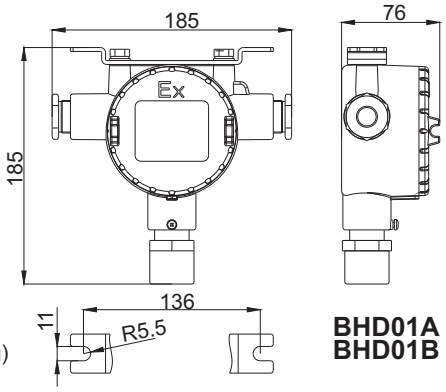
Cable entry



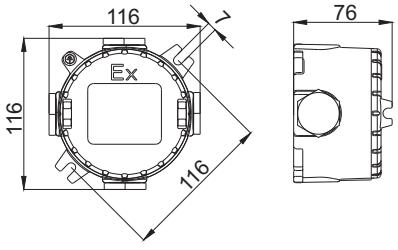
BHD01A(Standard) (G3/4" accessories)



BHD01B/BHD02 (Standard with **Stopping plug**)
(M25 or M20 or NPT3/4" or NPT1/2")
(**"Ex D" gland optional**)



BHD01A
BHD01B



BHD02

TORMIN BHD01/02 series (with Terminal Block) Explosion Protected Junction Box

IECEx ATEX IP 66 Ta 60 Ta -50



BHD01



BHD02

Ex Marking: Ex db IIC T6 Gb
Ex tb IIIC T80°C Db IP66

Application

Used as a junction box and mounting element for lighting equipment installed in explosion hazardous areas, like petrochemical plants, chemical plants, pharmaceutical factory, polishing plant, etc;

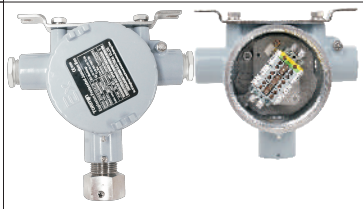
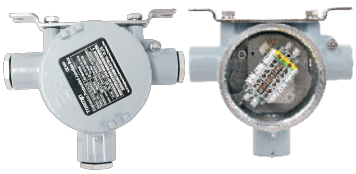
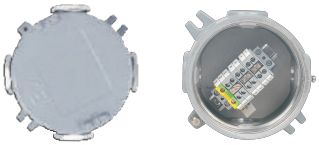
For Group IIA, IIB, IIC and IIIA, IIIB, IIIC Surface;

Zone1, Zone2 and Zone 21, Zone 22.

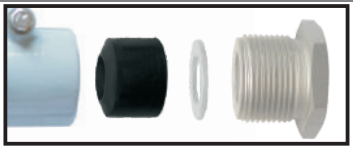
Characteristics

- The junction box has the characteristics of small volume, light weight, convenient installation, etc.
- The shell adopts anti-corrosive processing, using high-tech surface anti-corrosion treatment technology, with 304 stainless steel exposed fasteners, applicable to all kinds of bad industrial environment.
- Any combination of 3-Way or 4-Way, 20mm and 25mm entries.
- Ex Terminals fitted on request.

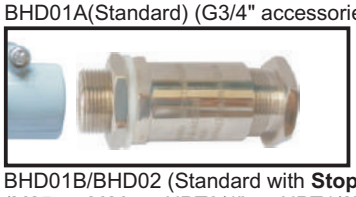
Ordering Reference

Item	Technical Parameters		
Type	BHD01A	BHD01B	BHD02
Picture			
Input voltage (V)	⩽500V		
Rated frequency	50Hz / 60Hz		
Rated current	＜20A		
Cord section	0.75~2.5mm²		
Cable entry	G3/4"	M25×1.5 or M20×1.5 or NPT3/4" or NPT1/2"	M25×1.5 or M20×1.5 or NPT3/4" or NPT1/2"
Dimension (mm)	185×185×75	185×185×75	116×116×75
Cable entry quantity	2	2	⩽4
Drop cable quantity	1	1	/
Weight (kg)	1.2		0.8

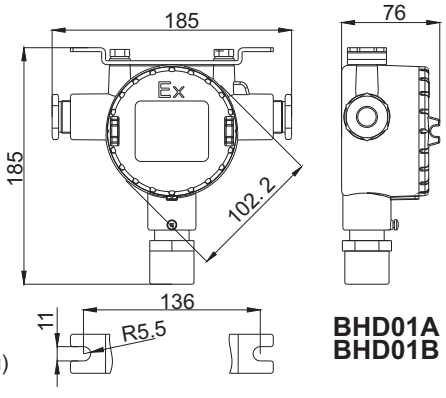
Cable entry



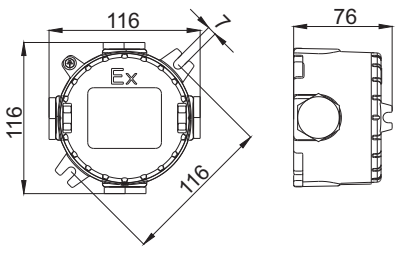
BHD01A(Standard) (G3/4" accessories)



BHD01B/BHD02 (Standard with **Stopping plug**)
(M25 or M20 or NPT3/4" or NPT1/2")
(**"Ex D" gland optional**)



BHD01A
BHD01B



BHD02

BXP01 Series
Explosion-proof Emergency Box



Ex mark: Ex db IIC T6 Gb
Ex tb IIIC T80℃ Db, IP66



Application

- Low installation height equipment area like petrochemical plants, chemical plants, pharmaceutical factory, polishing plant, etc.

Characteristics

- The junction box has the characteristics of small volume, light weight, convenient installation, etc.
- The shell adopts anti-corrosive processing, standard for the 304 stainless steel material, using high-tech surface anti-corrosion treatment technology, applicable to all kinds of bad industrial environment.

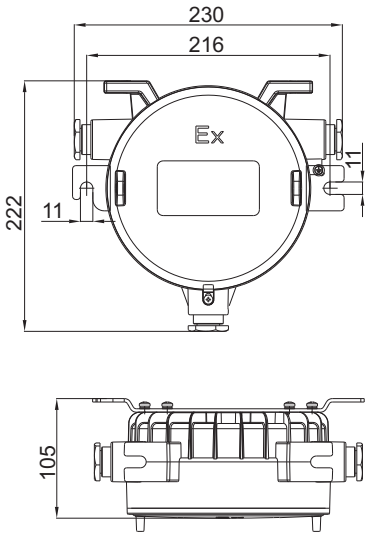
Main Specification

Item	Technical Parameter
Input voltage (V)	90~264VAC
Rated frequency	50Hz / 60Hz
Life time (h)	6000
Rated capacity	2.6Ah/14.8V
Cable entry	M20×1.5, M25×1.5, NPT3/4", NPT1/2", G3/4"
Dimension (mm)	238×222×106
Net weight (kg)	2.9

Ordering Reference

Model number	Rated wattage (W)	Emergency duration (min)
BXP01	10W	>140min
	20W	>70min
	30W	>45min

Drawing of Dimension (Dimensions in mm)



BXP02 Series
Explosion-proof Emergency Box



Ex Marking: Ex db IIC T6 Gb
Ex tb IIIC T80°C Db IP66

Application

- It is widely used as emergency power supply in petroleum ,petrochemical, wharf, port, aviation, military industry;
- Suitable for places with high humidity and corrosion protection;
- Applicable to explosive gas and dust zones 1, 2, 21 and 22;
- Suitable for IIA, IIB, IIC explosive gas environment;
- Suitable for temperature group T1~T6 .

Characteristics

- It is made of aluminum alloy with high voltage electrostatic spraying, the standard parts are stainless steel 304;
- High-tech anti-corrosion surface treatment technology,which is suitable for varies of harsh industrial environment;
- IP 66, could effectively withstand strong rainstorms;
- Various emergency ways, suitable for a variety of lamps and different places;
- Self-contained mounting bracket, can be hoisted or wall-mounted explosion-proof lamps directly.

Adaptable lamp type


BC9302


BC9308


BC9311B


BC9313

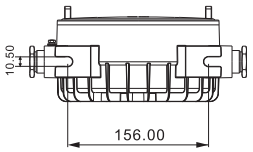

BC9700

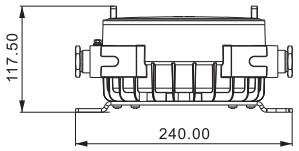
Main Specification

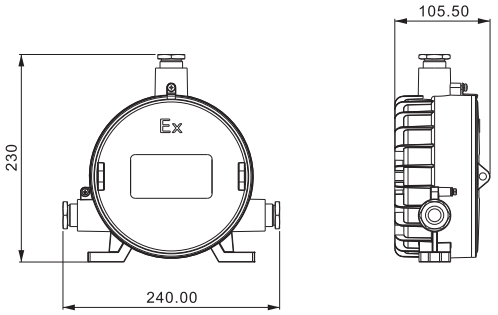
Item	BXP02A-L50-L5	BXP02A-L40-L15/25	BXP02B-L5/10	BXP02B-L15/25
Input Voltage	AC 100~240V			
Illuminating Wattage	50W	40W	Max.200W	Max.200W
Emergency Wattage	5W	15/25W	5/10W	15/25W
Adaptive Light Source Voltage	DC 27~54V	DC 30~40V	DC 3~42V	DC 36V/DC 54V
Emergency Duration	≥180min	≥180min/≥90min	≥180min/≥90min	≥180min/≥90min
Battery Voltage	7.4V	14.8V	7.4V	14.8V
Rated Capacity	2600mAh			
Protection Grade	IP66			
Ambient Temperature	-25℃~+55℃			
Lead-in Cable Diameter	φ9~φ10mm/φ11~φ12mm/φ13~φ14mm			
Dimension	240×230×105.5mm			
Mounting Angle	360°			
Surface Maximum Temperature	<80℃			
Wire cross-sectional area	1.0~2.5mm²			
Net Weight	2.5Kg			

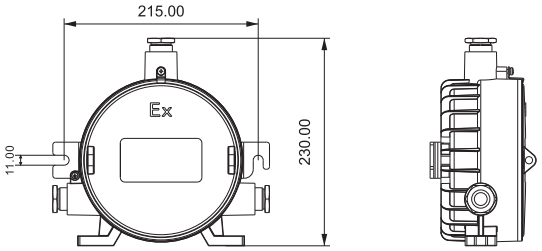
BXP02 Series
Explosion-proof Emergency Box

Drawing of dimension(Dimensions in mm)

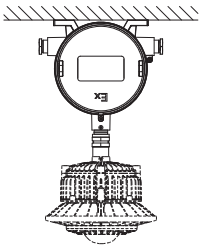




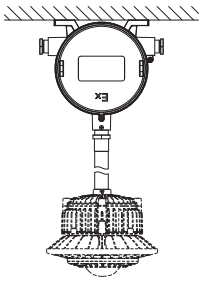




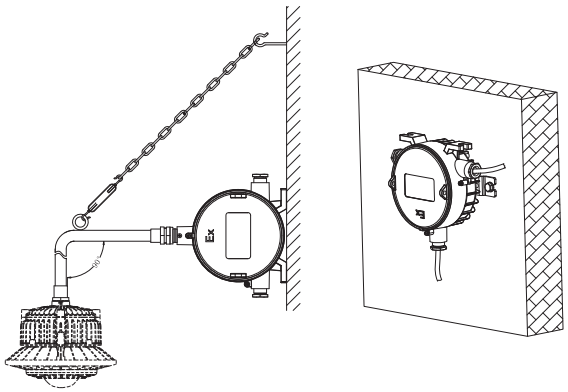
Ceiling mounting



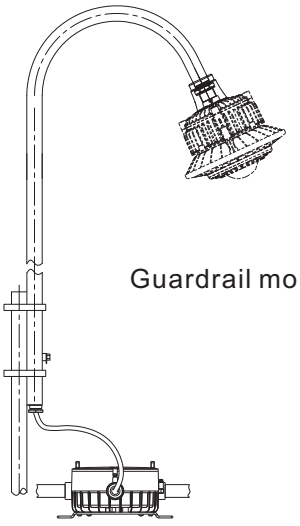
Pole mounting



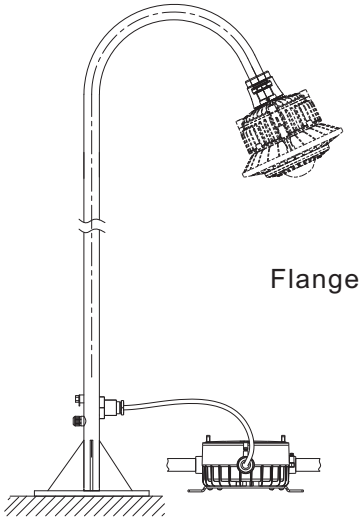
Side wall mounting



Guardrail mounting



Flanged mounting



Ordering Reference：

Order No.	Product Description
BXP02A-L50-L5	Illuminating Emergency, Illuminating Wattage 50W, Emergency Wattage 5W
BXP02A-L40-L15/25	Illuminating Emergency, Illuminating Wattage 40W, Emergency Wattage 15W or 25W
BXP02B-L5/10	Emergency only, Emergency Wattage 5W or 10W
BXP02B-L15/25	Emergency only, Emergency Wattage 15W or 25W

Ex
IP 66
Ta 55
Ta -40



A1/ A2: Button



B1:Ammeter/
B2: Voltmeter



D type:Indicator light

BZA5200 series

Explosion-proof master controller

Scope of application

- Widely used in flammable and explosive gas environments such as oil mining, oil refining, chemical industry, offshore oil platforms, tankers, etc., and also used in combustible dust places such as military industry and metal processing;
- Applicable to explosive gas environment Zone 1 and Zone 2 area;
- Applicable to IIA, IIB, IIC explosive gas environments;
- Applicable to combustible dust environment Zone 21 and Zone 22 area;
- Applicable to combustible dust categories IIIA, IIIB, IIIC;
- Applicable to temperature groups T1~T6;
- **Ex marking: Ex db IIC T6 Gb/Ex tb IIIC T80℃ Db, IP66;**
- **Explosion-proof Certificate: CNEX**

Catalogue number logic

BZA 5200 – □ □ □

Specification code

Component code	Specification code	Specification description
A1 A2	11	1 normally open 1 normally closed
	20	2 normally open
	02	2 normally closed
D1 D2 D3 D4	R	Red
	G	Green
	Y	Yellow
	W	White
	B	Blue

Component code

Component code	Description	Component code	Description
A1	Explosion-proof emergency stop button	D1	Indicator light AC/DC 24~36V
A2	Explosion-proof ordinary button	D2	Indicator light AC 220~380V
B1	Ammeter	D3	Indicator light DC 12~60V
B2	Voltmeter	D4	Indicator light AC/DC 110~240V

Component type

A: Button
B: Ammeter (voltmeter/ammeter)
D: Indicator light

Design serial number

Explosion-proof master controller

BZA5200 series
Explosion-proof master controller

Technical data

Conformity to standards：GB/T 3836.1、GB/T 3836.2、GB/T 3836.31、IEC 60079-0、IEC 60079-1、IEC 60079-31、EN 60079-0、EN 60079-1、EN 60079-31

Ex marking： Ex db IIC T6 Gb/Ex tb IIIC T80℃ Db, IP66

Rated voltage：220/380V(A/B type); High/ Low voltage optional(D type)

Rated current：10A,

Degree of protection：IP66

Degree of anti-corrosive：WF1*WF2

Ambient temperature：-40℃~+55℃

Use Category：AC-15、DC-13

Internal components：buttons, electric meters, indicator lights

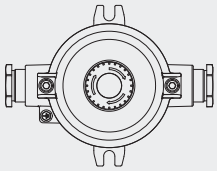
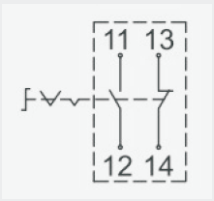
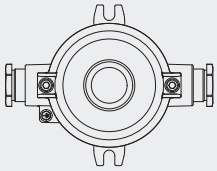
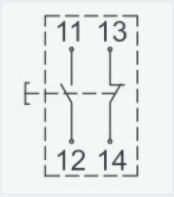
Inlet and outlet threads：G3/4” please indicate if there are special requirements

Applicable cable outer diameter：Applicable to 10mm~14mm cables

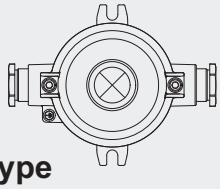
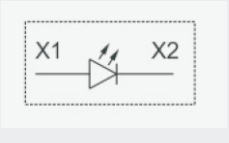
Installation method：hanging type

Wiring method：cable wiring (please indicate steel pipe wiring)

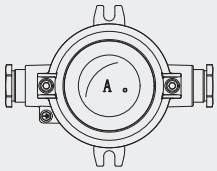
Selection table(A1/ A2: Push button)(Rated voltage: 220V/380V, 10A)

Outline	Colour		Contact diagram	Net Weight（kg）
Explosion-proof emergency stop button: **A1**  **A1**	Red			0.77
Explosion-proof ordinary button  **A1**	Red			0.71
	Green			

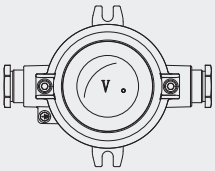
Selection table(D type: Indicator light)(Rated voltage: D1: AC/DC 24V~36V, D2: AC 220V~380V, D3:DC 12~60V/ AC 12~250V, D4: AC/DC 110~240V;≤ 1W)

Outline	Colour		Contact diagram	Net Weight（kg）
Indicator light  **D type**	Red Green Yellow White Blue			0.71

Selection table(B1: Ammeter)(Rated voltage: 220V/380V, Max 10A)

Outline	Description	Overload multiple	Measuring range	Net weight（kg）
Indicator light  B1	Direct measurement	2times	0~20/40mA	0.71
			4~20/40mA	
	Direct measurement	2times	0~1A	
			0~5A	
	Distribution current transformer	2times or 6 times	sec.1A	
			sec.5A	

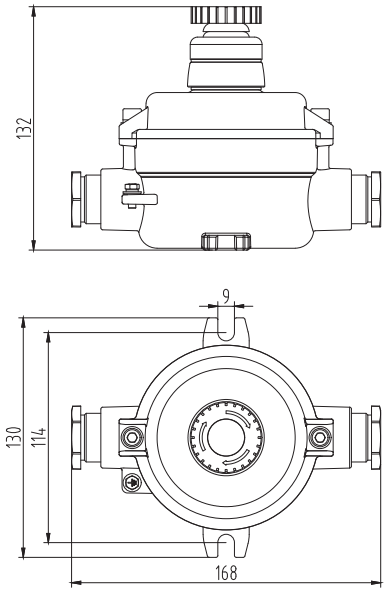
Selection table(B2: Voltmeter)(Rated voltage: 220V/380V, Max 10A)

Outline	Description	Measuring range	Net weight（kg）
Indicator light  B2	Direct measurement	0~10V	0.8
		0~25V	
		0~40V	
		0~60V	
		0~100V	
		0~150V	
		0~250V	
		0~300V	
		0~450V	
		0~500V	
	Distribution current transformer	sec.100V	
		sec.110V	
		sec.120V	

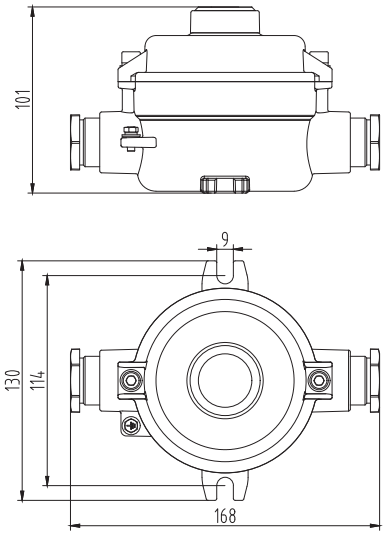
Ordering Instructions

- Please refer to the selection table for user scheme selection;
- For internal components, please refer to: ammeter (48 type), voltmeter (48 type) component appearance drawing, button selection (normally 1NO+1NC, no note);
- Example: BZA5200-A1, component: mushroom head flameproof emergency stop button, 1 normally open and 1 normally closed (1NO+1NC);
  BZA5200-D2 R, component: AC220~380 red indicator light
- Please specify special requirements when ordering;
- Default cable wiring entry device (please specify for steel pipe wiring).

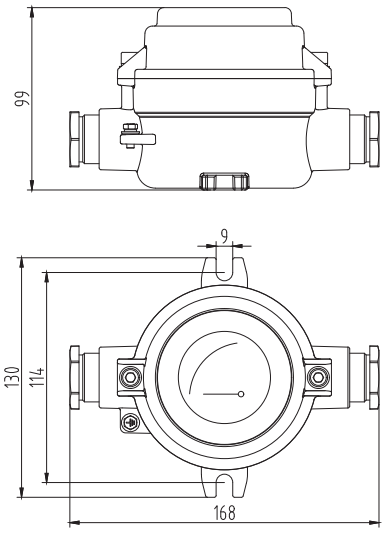
Dimension and installation (size in mm)



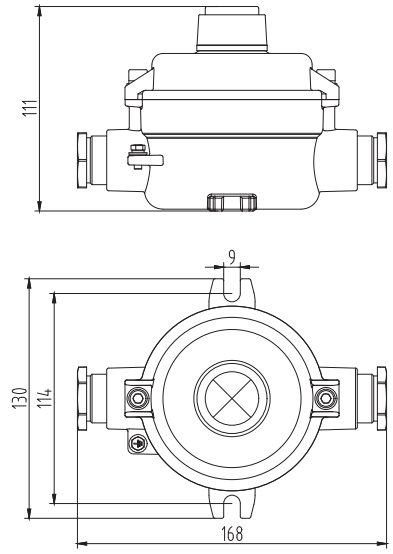
BZA5200-A1
Emergency stop button



BZA5200-A2
Original Button



BZA5200-B
Voltmeter/Ammeter



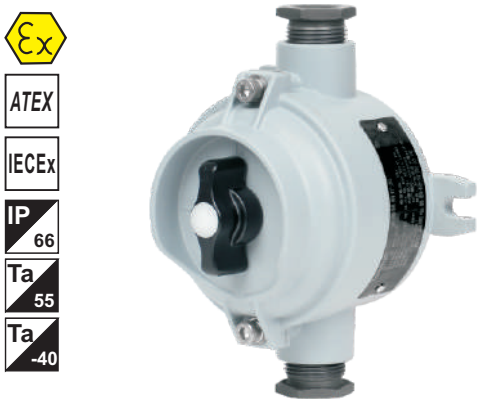
BZA5200-D
Indicator light

TORMIN

BZM series
Explosion-proof lighting switch

Application

- Can be used in Zone 1 and Zone 2, group IIA, IIB, and IIC explosive gas mixture atmosphere; Zone 21 and Zone 22, group IIIA, IIIB, and IIIC flammable dust atmosphere;
- Applicable to ambient temperature: -40°C~+55°C;
- Applicable to relative air humidity: ≤95% (25°C);
- Applicable to explosive gas mixture temperature groups: T1~T6.

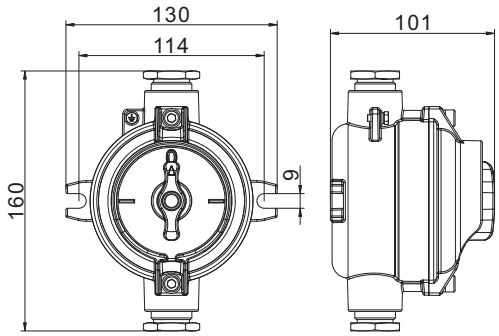


Ex marking: Ex db IIC T6 Gb
Ex tb IIIC T80°C Db

Technical Parameters

- Rated voltage: 220V/230V/250V; 50Hz
- Rated current: 10A/16A/20A;
- Explosion-proof mark: Ex db IIC T6 Gb/Ex tb IIIC T80℃ Db;
- Protection level: IP66;
- Product material: aluminum alloy;
- Cable entry thread: G3/4", M25×1.5, NPT3/4";
- Suitable cable outer diameter: φ10~φ14;
- Executive standards: EN IEC 60079-0, EN 60079-1, EN 60079-31, IEC 60079-0, IEC 60079-1, IEC 60079-31, GB/T 3836.1, GB/T 3836.2
- Explosion proof certificate: ATEX, IECEX, CNEX.

Drawing of dimension (Dimensions in mm)



Ordering number

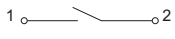
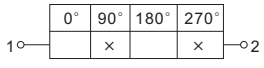
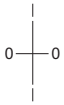
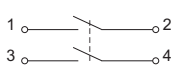
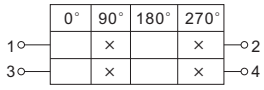
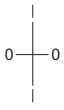
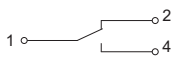
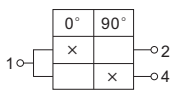
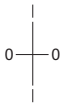
- Example: BZM-10: Rated current 10A, Monopolar
  BZM-16/B: Rated current 16A, Bipolar

Model number

BZM □/□

- Contact type: A:Monopolar (No need to label); B:Bipolar; C:Dual control
- Rated current: 10:10A; 16:16A; 20:20A
- Explosion-proof lighting switch

Product selection table

Model specifications	Rated current(A)	Number of poles	Contact combination type	Equivalent switch	Panel position	Explosion -proof level
BZM 10/A	10	Mono-polar				II C, IIIC
BZM 16/A	16					
BZM 20/A	20					
BZM 10/B	10	Bipolar				II C, IIIC
BZM 16/B	16					
BZM 20/B	20					
BZM 10/C	10	Dual control				II C, IIIC
BZM 16/C	16					
BZM 20/C	20					

BW3210
LED Explosion-proof Work Light



Ex marking: Ex db eb mb IIC T6 Gb



Application

This product is suitable for accident repair, engineering construction and various flammable and explosive places as portable lighting.

Characteristics

- Freely switch between spotlight and floodlight modes, when the lamp is working, press and hold the switch for 5 seconds to switch;
- Foldable handle, suitable for towing comfortably during moving;
- The projection angle of the lamp head can be adjusted freely within the range of 360 degrees horizontally and 135 degrees of pitch. You can also remove the lamp head and hold the lamp head at any angle for illumination
- The lamp head can be adjusted freely within the height range of 1.7 meters by inserting the lifting rod, or can be freely adjusted within the height range of three meters with a tripod;
- The light source adopts the famous brand, and the battery uses the
- Japanese Panasonic long-life battery, which can effectively guarantee the life of the product;
- Protection grade reaches IP66, can effectively resist heavy rain;
- Press and hold for 3 seconds to automatically detect the power, flash 5 times for full power, flash 4 times for 80% power, and so on.

Main Specification

Specification		Unit	Spotlight	Floodlight
Rated Voltage		V	24	
Rated capacity		Ah	15	
Rated wattage	High	W	30	30
	Low		15	15
Beam angle		degree	3	95
Lighting output	High	lm	3088	2485
	Low		1373	1244
Effective range	High	m	320	44
	Low		220	26
Continuous lighting time	High	h	13	13
	Low		28	28
Time of Charging		h	⩾8	
Service life of battery		Recycle	≈1000	
Dimension		mm	255×250×610	
Net weight		Kg	10. 5	

BW4100B Explosion Proof Tracker Light

Ex

LED

IP 68



Ex marking: Ex ia IIC T4 Ga

Application

It is ideal as a personal indicator to identify the position of workers, it also can serve as signal communication tools in all kinds of hazardous area such as construction, fire fighting, rescue, etc.

Characteristics

- Intrinsically safe type of protection, can be safely used in various flammable and explosive fields (including Zone 0).
- Waterproof & Drop Resistant: Made of PC material, drop resistant to 1 meter.
- Runtime: Powered by two AAA battery. Continuous runtime can exceed 500 hours.
- Flexible&Convenience: Small size, Light weight, easy to operation. It is magnetic, can be attached to the iron surface.
- Ambient Temperature: -60℃-150℃.
- Colour Available: The tracker light is available in the following five different colours according to customers requirements: red, blue, yellow, green, white.



Main Specification

Specification	Unit	Values
Rated voltage	VDC	1.5×2
Current	μA	<3
Flashing frequency	Hz	2.7
Max impulse current	mA	80
Dimension(L*W*H)	mm	70×47×39
Net weight	kg	0.1



Insurance clip

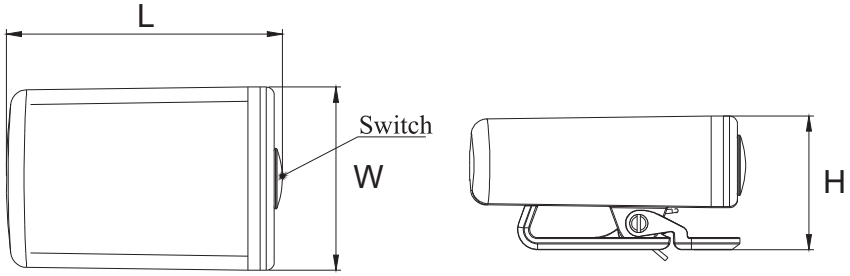


Magnetic base



Arm mounting

Drawing of dimension (Dimensions in mm)



BW6210 LED Explosion Proof Multifunction Searchlight

Ex

LED

IP 66



Ex marking: Ex ib IIC T4 Gb





Magnetic



Head of the lamp tilt:120 degree

Application

It is widely used as mobile lighting in the power station, oil field, chemical industry, fire fighting, police, military and some other flammable and explosive or high stress environment.

Characteristics

- It adopt CREE LED light source with long service life. Powered by rechargeable lithium battery, no memory effect, low discharge rate and environment friendly.
- Press the button for 2 seconds, the lamp will switch to flood beam mode which runtime can reach 55 hours.
- Equipped with magnetic base on the bottom, available adsorb to all kinds of iron material equipment
- The head of the searchlight is adjustable, within 120° according to the operator requirement.
- Small size and light weight, easy to carry.
- Light mode: High intensity light and low intensity light are switchable.
- Battery status indication and lower battery warning function. Operator can check the battery status at any time.
- The searchlight design has a large size handle and large button switch, easy to operate even with gloved hands.
- It is made of PC material, high strength body, have a good impact resistant performance. The searchlight is sealed to IP66.

Main Specification

Specification		Unit	values
Rated voltage		V	3.7
Rated wattage		W	>1
Rated capacity		mAh	5200
Light output		lm	190
Continuous Runtime	High	h	⩾8
	Low	h	⩾40
	Floodlight	h	⩾55
Recharge time		h	8~10
Service life of battery		Times	≈1000
Dimension		mm	193×74×115
Net weight		kg	0.35

BW6310A, BW6310B
LED Explosion Proof Mini Headlight

Ex

LED

IP 65



Ex marking: Ex ib IIC T4 Gb





Head mounting



Helmet mounting



Head mounting



Charger

Application

It is used as safety helmet head light explosive gas, vapor and mist places. It is the ideal lighting solution for workers in power station, oil filed, chemical industry, fire fighting, railway station, military etc.

Characteristics

- It not only can be fixed onto the helmet with the screws provided, but also can be fixed onto the helmet or head by the elastic headband. The head of the light is adjustable within 90° , operator can rotate the head of light to the desired direction.
- The red strobe light design to suit numerous application where indication is critical during emergency. Press the button and switch to the red strobe light mode, It can let others identify the position of the worker.
- This product has battery status indication and low battery warning function, operator can check the battery status at any time. Towards the end of discharge, the beam flashes off repeatedly, warning recharging is required.
- Adopts CREE LED light source with high light efficacy and long service life. Use of the latest safety increased lithium-ion battery technology improves reliability and environment friendly.
- The charger is controlled by intelligent chip, with various protection.

Main Specification

Specification		Unit	BW6310A	BW6310B
Rated voltage		V	3.7	3.7
Rated sapacity		Ah	1.5	1.5
Light output	High	lm	148	83
	Low		83	55
lux in 1 m	High	Lux	⩾1750	⩾980
	Low		⩾950	⩾550
Continuous runtime	High	h	4	8
	Low		8	16
Recharge time		h	4	4
Service life of battery		Times	≈1000	≈1000
Dimension		mm	50×65×60	50×65×60
Net weight		g	85	85

TORMIN BW6610A Multifunction LED Explosion Proof Work Light

Ex

LED

IP 66



Ex marking: Ex db eb mb IIC T6 Gb





Magnetic base



LED light source(CREE)



Charger

Application

This product is ideal for use in patrol, inspection, repairing and other night work tasks in explosive and flammable atmosphere.

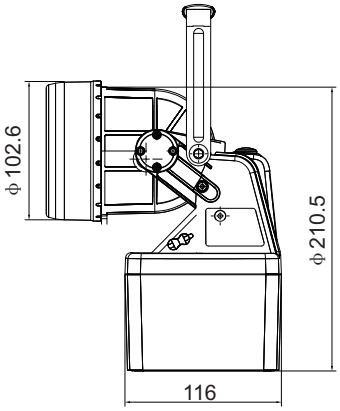
Characteristics

- Flame proof type of protection, approved for safe use in Potentially explosive gas, vapor and mist atmospheres. The head of the searchlight can give 135°vertical tilt so that operator can adjust the light to the desired location.
- Small size, light weight, easy to carry. It is portable, beside the magnetic base on the bottom, making the lamp can adsorb to all kinds of iron material equipment.
- The housing is made of imported PC material, drop resistant to 1 meter.
- It is sealed to IP66, suitable to be used in all kinds of high stress environment.
- Adopts CREE LED light source with high light efficacy and long service life. Use of the latest safety increased lithium-ion battery technology improves reliability and environment friendly.
- This product has battery status indication and low battery warning function, operator can check the battery status at any time.
- Towards the end of discharge, the beam flashes off repeatedly, warning recharging is required.
- The charger is controlled by intelligent chip, with various protection function.

Main Specification

Specification	Unit	values
Rated voltage	V	22.2
Rated power	W	3×3W
Rated capacity	mAh	2600
Light output (high/low)	lm	810 / 465
Continuous runtime (high/low)	h	8 / 15
Recharge time	h	6
Service life of battery	times	≈1000
Dimension	mm	151×131×272
Net weight	kg	1.5

Drawing of dimension (Dimensions in mm)



TORMIN BW6610B Multifunction LED Explosion Proof Work Light





Ex marking: Ex db eb mb IIC T6 Gb
Ex tb IIIC T80°C Db





Magnetic adsorption



Charger



LED light source(CREE)

Application

This product is suitable for construction work, accident rescue, line, equipment inspection, maintenance and various flammable and explosive places as mobile lighting

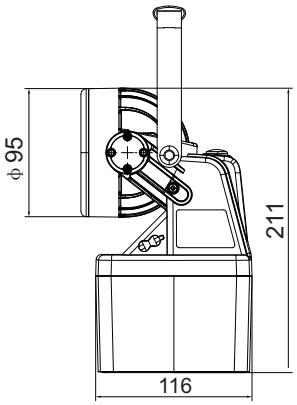
Characteristics

- Free switching between spotlight and floodlight modes. When the lamp is working, press and hold the switch for 3 seconds to switch;
- The bottom of the lamp has a strong adsorption function, which can be easily adsorbed on all kinds of pipes and cabinets. The adsorption force is much higher than similar products.
- The irradiation angle can be adjusted arbitrarily within the range of 135 degrees.
- Using CREE light source, strong light power of 13 watts;
- Stainless steel 304 externally coated silicone rubber handle, long-time carrying will not hurt your hands;
- The protection level reaches IP66, which can effectively resist heavy rain;
- When the lamp is off, long press for two seconds to automatically detect the power, flash 5 times for full power, flash 4 times for 80% power, and so on.

Main Specification

Specification		Unit	Spot/ Flood Mode
Wattage of light source		W	13
Rated voltage		V	22.2
Rated capacity		mAh	2600
Light output	High	lm	1500
	Low	lm	900
Continuous runtime	High	h	8
	Low	h	15
Recharge time		h	⩾6
Service life of battery		times	≈1000
Dimension		mm	151×131×272
Net weight		Kg	1.5

Drawing of dimension (Dimensions in mm)



TORMIN BW6640 LED Explosion Proof Worklight

Ex

LED

IP 66



Ex mark: Ex ib IIC T4 Gb





Battery display



Switch button



TYPE-C charging port



Magnet adsorption

Application

This product is widely used in various flammable and explosive places as well as grid power, factory power, oil fields, chemical industry, fire protection, railway, army, and other industries as mobile lighting;

Suitable for area with high degree of humidity and corrosion;

Suitable for areas in Zone 1 and Zone 2 of explosive gas or dust environments;

Applicable to IIA, IIIB, IIC explosive gas environment;

Applicable to temerature group T1-T4.

Characteristics

- The lamp is an intrinsically safe explosion-proof structure;
- The lamp has a spotlight flashlight mode and a floodlight mode;
- It has a built-in three-mode control chip, which switches modes according to needs;
- It has red/blue flash and yellow light signal modes, which can provide continuous danger or emergency warning signal lights;
- There is a blue LED remaining power indicator on the side, and the remaining power can be checked at any time;
- With a magnetic rubber bracket, the lamp can be adsorbed for easy maintenance;
- The protection level is IP66, which can effectively resist heavy rain;
- The switch is set on the side, which is convenient for handheld or magnetic operation;
- The shell is made of aluminum alloy with hard oxidation treatment, exquisite craftsmanship, exquisite appearance, corrosion resistance, and durability;
- The charging port uses Type-C wide voltage adaptive interface;
- The lamp has passed the 1-meter multi-directional drop test.

Main Specification

Specification	Unit	BW6640	
		Spotlight	Floodlight
Wattage of light source	W	3	6
Rated voltage	V	3.7	
Rated capacity	mAH	5200	
Luminous flux(High)	lm	290	650
Luminous flux(Low)	lm	105	330
Continuous runtime(High)	h	>8	>4
Continuous runtime(Low)	h	>16	>8
Recharge time	h	≤ 6	
Service life of battery	cycle	≈ 1000	
Dimension	mm	Φ47×243	
Net weight	g	364	

Remark: Switch A controls the spotlight & floodlight shift.
Switch B controls the signal light

TORMIN

BW6650 Series Explosion-proof Hand Lamps

EX

LED

IP 66



BW6650A

Ex marking: Ex db eb ib mb IIC T6 Gb
Ex tb IIIC T80℃ Db



BW6650B

Ex marking: Ex db eb ib mb IIC T5 Gb
Ex tb IIIC T95℃ Db

Application

This product is widely used in military, petrochemical, oil field, mine, electric power, public security and other places;

Applicable to places with high level of moisture and corrosion protection;

Applicable to explosive gas or dust environment in Zone 1, Zone 2, Zone 21, Zone 22;

Applicable to Class II A, B, C;

Applicable to temperature group T1~T6.

Characteristics

- 15W LED ultra-high brightness, large lighting range, more comfortable working in sealed space;
- The lamp has a simple appearance and can be used in handheld, stand-type, hook and other ways, easy to operate;
- **BW6650A type:** within built-in battery, the control circuit has overcharge and over-discharge protection, strong light, working light, power prompt and other functions;
- **BW6650B type:** External power supply configuration, can be connected to 12V/24V/36V AC and DC safe voltage, safe to use in flammable and explosive places;
- Protection level IP66, can effectively withstand heavy rain.

Main Specification

Parameter name		BW6650A Parameter Value	BW6650B Parameter Value
Rated voltage		/	AC 15V-40V/ DC 12V-48V
Battery capacity		8Ah	/
Battery voltage		DC11.1V	/
Rated wattage		15W	
Lighting output	High	1400lm	
	Low	500lm	
Continuous runtime	High	⩾7h	/
	Low	⩾12h	
Charging time		8h	
Net weight		1.3kg	1kg
Dimensions		Φ118×311mm	

BW7101A/ B LED Portable Explosion-proof Searchlight



Ex marking: Ex db ib IIC T6 Gb
Ex ib tb IIIC T80℃ Db IP68





Battery power display



Switch button



Charging port

Application

This product is suitable for high-voltage line inspection, search and rescue, equipment inspection, maintenance and various flammable and explosive places as mobile lighting;
Suitable for places with high moisture and corrosion protection level;
Suitable for explosive gas or dust environment Zone 1, Zone 2 or Zone 21, Zone 22;
Suitable for IIA, IIB, IIC explosive gas environment;
Suitable for temperature group T1~T6.

Characteristics

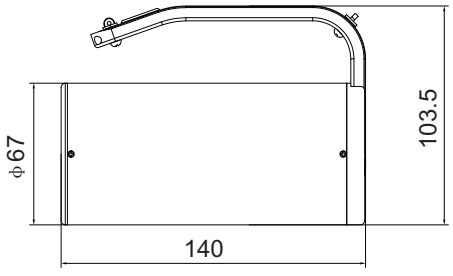
- Digital power display, real-time understanding of lighting time;
- Using LED light source, suitable for field line inspection operations and search targets;
- The heat dissipation adopts a patented structure to quickly reduce the temperature of the light source, effectively ensuring the reliability and service life of the light source;
- The shell is made by CNC precision processing, the surface of the shell is treated with the hardest oxidation, and the overall exquisite atmosphere;
- It can be equipped with a rubber protective sleeve to increase the resistance to wear and tear and extend the service life of the product;
- Built-in 4 or 6pcs 18650 lithium batteries, strong battery life, you can choose according to the use.

Main Specification

Description	Unit	BW7101A		BW7101B	
		Model 1	Model 2	Model 1	Model 2
Rated capacity	Ah	2.6			
Rated voltage	V	14.8 (4 batteries series)		22.2 (6 batteries series)	
Rated wattage	W	9 (3×3)			
Luminous(High)	lm	≥890	≥670	≥890	≥670
Luminous(Low)	lm	≥515	≥370	≥515	≥515
High intensity lighting time	h	≥5	≥7.5	≥7. 5	≥10
Low intensity lighting time	h	≥10	≥15	≥15	≥15
Time of charging	h	8			
Service life of battery	Recycled	≈1000			
Net weight	g	750		830	
Dimension	mm	φ67×140			

Note: Press and hold for 5 seconds when BW7101A/B is on, you can switch between mode 1 and mode 2; When switching to mode 1, the display shows P1; when switching to mode 2, the display shows P2.

Drawing of dimension (Dimensions in mm)



BW7320 Strong Light Explosion-Proof Flashlight



Ex marking: Ex ib IIC T4 Gb





LED light source (CREE)



Side switch



Charging socket



Attack head



Battery indicator

Application

- This product is widely used in flammable and explosive places, such as electric power, railway, fire fighting, petrochemical, oil field, metallurgy, etc., for mobile lighting for inspection, maintenance and emergency rescue;
- Applicable to places with high humidity and corrosion protection level;
- Applicable to Zone 1 and 2 of explosive gas ;
- Suitable for IIA, IIB, IIC explosive gas environment;
- Suitable for temperature group T1~T4 group.

Characteristics

- The charging port adopts a Type-C socket, which can be used for docking with the mobile phone's Type-C charging cable;
- Four blue LEDs on the side display battery power, which is intuitive and practical;
- The plum blossom-shaped percussion head design on the head can be used as a safety hammer in case of emergency, breaking glass to escape;
- Side switch, anti-slip groove design of the barrel body, equipped with a hand-held safety rope, the tail is larger than the barrel body, not easy to remove;
- No impact from 1 meter drop, normal operation in low temperature environment;
- American CREE light source, high brightness and long life.

Main Specification

Specification	Unit	Parameter value
Wattage of light source	W	3
Rated voltage	V	3. 7
Rated capacity	mAh	2600
Strong luminous flux	lm	146
Low luminous flux	lm	86
Strong light discharge time	h	3
Low light discharge time	h	9
Recharge time	h	6
Service life of battery	times	≈1000
Dimension	mm	ϕ35×152
Net weight	g	165

BW7300A, BW7300B
LED Explosion Proof Flashlight

Ex

LED

IP 67



Ex marking: Ex db IIC T6 Gb





Angle adjustable buckle



LED light source(CREE)



Tail switch



Package



Charger

Application

It is applicable to mobile lighting in Zone 1 and Zone 2 explosive and flammable places.

This product is used in the fields of electric power, fire fighting, petrol, petrochemical, metallurgy, etc. It can also be used for signal communication and personal indicator to identify the position of the workers.

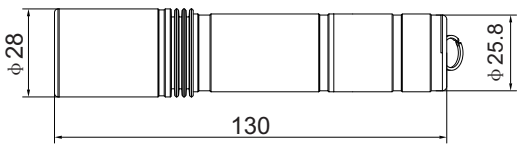
Characteristics

- It adopts CREE LED light source.
- It is sealed to IP67, water proof to 1 meter. Powered by lithium battery which provide a long service life and low discharge performance.
- Light mode: high, low, strobe light.
- This product has battery status indication and low battery warning function,
- Operator can check the battery status at any time. Towards the end of discharge, the beam flashes off repeatedly, warning recharging is required.
- The flashlight can also fixed onto the helmet by the buckle. Its light beam angle is adjustable.
- The flashlight is supplied with a short strap. And it is designed for easy storage in pocket.
- The recharging and discharging is controlled by the chip with multiple protection.

Main Specification

Specification	Unit	BW7300A	BW7300B
Rated voltage	V	3.7	3.7
Rated power	W	3	1
Rated capacity	mAh	2600	2600
Light output (high/low)	lm	290 / 105	170 / 75
Continuous runtime (high/low)	h	4 / 10	8 / 18
Recharge time	h	6	6
Dimension	mm	ϕ28×130	ϕ28×130
Net weight	g	125	125

Drawing of dimension (Dimensions in mm)



BW7500A, BW7500B
LED Explosion Proof Flashlight

Ex

LED

IP 67



Ex marking: Ex db IIC T6 Gb

Application

This product is developed to meet the market demand for high-brightness small energy-saving lighting fixtures. It can safely and reliably provide mobile lighting for fire protection, power, industrial and mining enterprises and other flammable and explosive places.

Characteristics

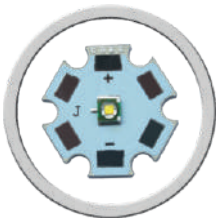
- BW7500 A/B built-in dual-mode control chip can choose lighting mode according to actual needs
- Lightweight, high brightness, long irradiation distance
- Side switch and barrel anti-skid groove design, flexible and convenient to use
- Equipped with a hand-held safety rope and strap to prevent injury from falling hands
- Side transparent front cover design to prevent accidental discharge
- 1-meter drop has no effect, normal working in low-temperature environment
- American cree light source, high brightness and long life time.



Charging position



Portable



LED light source(CREE)



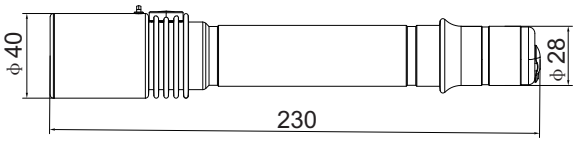
Charger

Main Specification

Description	Unit	BW7500A		BW7500B	
		Model 1	Model 2	Model 1	Model 2
Power	W	5		3	
Rated voltage	V	7.4			
Rated capacity of battery	mAh	2600			
Luminous(High)	lm	≥430	≥290	≥290	≥150
Luminous(Low)	lm	≥180	≥180	≥180	≥120
High intensity lighting time	h	⩾4	⩾6	⩾6	≥12
Low intensity lighting time	h	≥10	≥10	≥10	≥20
Time of charging	h	8-10	8-10	8-10	8-10
Service life of battery	Recycled	≈1000			
Dimension	mm	φ40×230			
Net weight	g	300			

Note: BW7500 When the light is on, press and hold for 2 seconds and immediately press the switch twice to switch between mode 1 and mode 2.

Drawing of dimension (Dimensions in mm)



ATEX certified instrumentation

ATEX Marking

Marking example:

CE XXXX Ex II 2G

- CE marking
- Identification code of notified body
- Ex mark
- Equipment group
- Category of protection
- Gas, vapors

Type of Protection

unchanged

EEx ia IIC T4

- Protection method
- Apparatus group/Gas group
- Temperature classification

Approval number EC

KEMA 01 ATEX 1234 X

- Notified body i.e. KEMA, PTB, CESI, TÜV, DMT, etc.
- Year of issue
- ATEX directive
- Consecutive number
- Special conditions

II 2G

Category of Equipment

ATEX directive divides equipment into groups and additional into categories:

Group I (Mines)	Group II (Surface (non-mining) equipment)		
Subdivided into categories	Category	subdivided into	Zone
M1 Equipment remains functional with an explosive atmosphere present	1G (gas) 1D (dust)	Equipment with a very high level of protection	0 (gas) 20 (dust)
	2G (gas) 2D (dust)	Equipment with a high level of protection	1 (gas) 21 (dust)
M2 Equipment to be de-energized in the event of an explosive atmosphere	3G (gas) 3D (dust)	Equipment with a normal level of protection	2 (gas) 22 (dust)

Note: category 2D apparatus required for Zone 22 (conductive dust).

Examples of Category marking:
1/2G for equipment interfacing Zone 0 and Zone 1 areas
1/3D for equipment interfacing Zone 20 and Zone 22 areas
(1) for associated apparatus with intrinsically safe output into Zone 0

ATEX

ATEX Directives

ATmosphère EXplosible

Old directives
specify the European standards

New directives
specify the so called Essential Health and Safety Requirements

Dust-Ex hazardous areas are regulated first time in EC.

At this moment there are three directives for equipment intendedfor use in Hazardous Area:

82/139/EEC(Mines)
Will be valid until June 30, 2003
Only Electrical Equipment

76/117/EEC (Surface Industries)
Will be valid until June 30, 2003
Only Electrical Equipment

New directive
94/9/EC (ATEX) valid since
March 1,1996 mandatory July 1, 2003
All Equipment, Protective Systems and Components

Summary of changes:
Categorisation of equipment matching area classifications.
Categorisation based upon Essential Safety Requirements (ESR):
- Consider electrical and non-electrical equipment,also dust-Ex hazardous areas
- Influencing equipment design with respect to
  - Protective method
  - Choice of materials
  - Equipment marking
  - Safety instructions included
  - Environmental and atmospheric conditions
  - Software included

It will be mandatory to re-certify equipment certified under the old directives if you want to sell this equipment after July 1, 2003.

T4

Temperature Classification

Maximum Surface Temperature		Temperature Classification	
Degree C	Degree F	IEC/European	North American*1
450	842	T1	T1
300	572	T2	T2
280	536		T2A
260	500		T2B
230	446		T2C
215	419		T2D
200	392	T3	T3
180	356		T3A
165	329		T3B
160	320		T3C
135	275	T4	T4
120	248		T4A
100	212	T5	T5
85	185	T6	T6

*1 for comparison only

IIC

Apparatus Group and Gas/Dust Group

Hazard Categories	Apparatus Classification Europe	North America*1	Min. Ignition Energy
Mines	Group I	Group D (gaseous mines)	
Acetylene	Group IIC	Class I, Group A	20 µJ
Hydrogen	Group IIC	Class I, Group B	20 µJ
Ethylene	Group IIB	Class I, Group C	60 µJ
Propane	Group IIA	Class I, Group D	180 µJ
Metal dust	-	Class II, Group E	More easily ignitable
Coal dust	-	Class II, Group F	
Grain dust	-	Class II, Group G	
Fibers	-	Class III	

EEx ia

Protection Method

Summary of protection methods against explosion

General Principles	IEC / European Practice	Zone	Cenelec EN	American*1 Practice	Division	Principle Characteristics
Explosion Containment	Explosion-proof Ex »d«	1, 2	50018	Explosion-proof	1, 2	Relatively easy to be applied, but with specific mechanical requirements. Maintenance and checks are more time consuming.
Segregation	Pressurization Ex «p«	1, 2	50016	Purging	1, 2	Suitable for cabinets and motors. Requires specific monitoring alarm systems.
	Encapsulation Ex «m«	1, 2	50028	Not recognized		Suitable for sensors, small circuits and solenoid valves. Maintenance practically impossible.
	Oil-immersion Ex »o«	1, 2	50015	Oil-immersion	1, 2	Suitable for transformers and where there aremoving parts. Generally not widely used.
	Powder filling Ex «q«	1, 2	50017	Not recognized	-	Suitable where there are no moving parts. Present maintenance difficulty. Not widely used.
Prevention	Increased safety Ex »e«	1, 2	50019	Not recognized	-	Suitable for non-sparking apparatus during normal functioning (terminals, connections, lamp sockets, motors). Particular construction requirements.
	Intrinsic safety Ex »ia«	0, 1, 2 (20, 21, 22)*	50020 50039 50284	Intrinsic safety	1, 2	Suitable for process instrumentation. Economical and easy installation, maintenance and checks. Limited to low power circuits.
	Intrinsic safety Ex »ib«	1, 2 (21, 22)*	50020 50039	Not recognized	-	Similar to Ex «ia« except for the number of faults to be considered.
	Type n Ex »n«	2	50021	Non incendive	2	Alternative to standardized types of protection for zone 2 and division 2. No certificate required in Europe.
Special requirement for category 1 equipment		0 (1, 2)*	50284	Not recognized	-	Additional requirements for equipment protected by standardized types of protection.
Dust Ex Protection	Protection by enclosure and temperature limitation	20, 21, 22	50281	NEC Section 90-4	1, 2	Special requirements for equipment in dust explosion hazardous areas.

Certified Instrumentation for North America

Markings for Canada (Marking Examples)

Option A: Zones — Option B: Divisions

Ex ia IIC T4 | **Class I, Division 1, Groups A,B,C&D T4**

Means:		Means:	
Ex	Explosion protected	Class I	Flammable gas or vapor
ia	Protection method (Intrinsic Safety)	Division 1	Area classification (explosive atmosphere may exist under normal operating conditions)
IIC	Gas group (acetylene & hydrogen)	Group A,B,C&D	Gas groups
T4	Temperature class	T4	Temperature code

Markings for the United States (Marking Examples)

Option A: Zones — Option B: Divisions

Class I, Zone 0, AEx ia IIC T4 | **IS Class I, Division 1, Groups A,B,C&D T4**

Means:		Means:	
Class I	Flammable gas or vapor	IS	Protection method (Intrinsic Safety)
Zone 0	Area classification (explosive atmosphere present continuously)	Class I	Flammable gas or vapor
A	Conformity to US requirements	Division 1	Area classification (explosive atmosphere may exist under normal operating conditions)
Ex	Explosion protected	Group A,B,C&D	Gas groups
ia	Protection method (Intrinsic Safety)	T4	Temperature code
IIC	Gas group (acetylene & hydrogen)		
T4	Temperature class		

Special Purpose Enclosures

Enclosure Type US (NEMA 250) and Canada (CSA Std. C22.2 No. 94)	Approximate equivalent IP-Code (IEC 60529)	Protection against
1	→ IP10	incidental contact with the enclosed equipment
2	→ IP11	dripping and light splashing of liquids
3	→ IP54	windblown dust, rain, sleet, snow and external formation of ice
3R	→ IP14	rain, sleet, snow and external formation of ice
3S	→ IP54	windblown dust, rain, sleet, snow and external mechanism(s) remain operable when ice laden
4	→ IP56	windblown dust, rain, sleet, snow, splashing water, hose-directed water
4X	→ IP56	windblown dust, rain, sleet, snow, splashing water, hose-directed water and corrosion
5	→ IP52	settling airborne dust, lint, fibers, flyings, dripping and light splashing of liquids
6	→ IP67	hose-directed water, entry of water during occasional temporary submersion at limited depth
6P	→ IP67	hose-directed water, entry of water during prolonged submersion at limited depth

Zone/Division

Area Classification

IEC		Flammable Material Present Continuously (> 1000 h/y)	Flammable Material Present Intermittently (10…1000 h/y)	Flammable Material Present Abnormally (< 10 h/y)
CENELEC	Gas	Zone 0	Zone 1	Zone 2
CENELEC	Dust	Zone 20	Zone 21	Zone 22
NEC & CEC (North America)	Gas, Dust and Fibers	Division 1	Division 1	Division 2
	Gas	Zone 0	Zone 1	Zone 2

IIC/Groups

Hazardous Locations Groups

Typical Hazard	North America CEC Section 18, NEC Article 500	CENELEC/IEC CENELEC EN50014, IEC 60079
Acetylene	Class I/Group A or IIC	IIC
Hydrogen	Class I/Group B or IIC	IIC
Ethylene	Class I/Group C or IIB	IIB
Propane	Class I/Group D or IIA	IIA
Methane	Group D (gaseous mines) or I	I
Metal Dust	Class II/Group E	—
Coal Dust	Class II/Group F	—
Grain Dust	Class II/Group G	—
Fibers	Class III	—

Ex/AEx

Protection Concepts

Method of Protection	Code	Permitted Use	Standard US (FM)	Standard Canada (CSA)	Protection Principle
Increased Safety	AEx e	Class I, Zone 1	FM 3600* (ISA S12.16.01)		No arcs, sparks or hot surfaces
	Ex e	Zone 1	IEC 60079-7	CSA Std. E79-7	
Non-incendive	(NI)	Class I, Div 2	FM 3611	CSA Std. C22.2 No. 213 and CEC, Part I, App. J	
Non-sparking	Ex nA	Zone 2	IEC 60079-15	CSA Std. E79-15	
Explosionproof	(XP)	Class I, Div 1	FM 3615	CSA Std. C22.2 No. 30	
Flameproof	AEx d	Class I, Zone 1	FM 3600* (ISA S12.22.01)		Contain the explosion and quench the flame
	Ex d	Zone 1	IEC 60079-1	CSA Std. E79-1	
Powder Filled	AEx q	Class I, Zone 1	FM 3600* (ISA S12.25.01)		
	Ex q	Zone 1	IEC 60079-5	CSA Std. E79-5	
Enclosed Break	Ex nC	Zone 2	IEC 60079-15	CSA Std. 79-15	
Intrinsic Safety	(IS)	Class I, Div 1	FM 3610†	CSA Std. C22.2 No. 157	
	AEx ia	Class I, Zone 0	FM 3610†		Limit energy of sparks and surface temperature
	AEx ib	Class I, Zone 1	FM 3610†		
	Ex ia	Zone 0	IEC 60079-11	CSA Std. C22.2 No. 157/ CSA Std. E79-11	
	Ex ib	Zone 1	IEC 60079-11	CSA Std. E79-11	
	Ex nA	Zone 2	IEC 60079-15	CSA Std. E79-15	
Limited Energy	Ex nL	Zone 2	IEC 60079-15	CSA Std. E79-15	
Pressurized	Type X	Class I, Div 1	FM 3620		Keep flammable gas out
	Type Y	Class I, Div 1	FM 3620		
	Type Z	Class I, Div 2	FM3620		
	Ex p	Zone 1		CSA Std. E79-2	
	Ex px	Zone 1	IEC 60079-2		
	Ex py	Zone 1	IEC 60079-2		
	Ex pz	Zone 2	IEC 60079-2		
	Ex nZ	Zone 2	IEC 60079-15	CSA Std. E79-15	
Restricted Breathing	Ex nR	Zone 2	IEC 60079-15	CSA Std. E79-15	
Encapsulation	AEx m	Class I, Zone 1	FM 3600* (ISA S12.23.01)		
	Ex m	Zone 1	IEC 60079-18	CSA Std. E79-18	
Oil Immersion	AEx o	Class I, Zone 1	FM 3600* (ISA S12.26.01)		
	Ex o	Zone 1	IEC 60079-6	CSA Std. E79-6	

*Also shall comply with ISA S12.00.01 — †Based on ISA S12.02.01

T4

Temperature Code and Temperature Class

Maximum Surface Temperature [°C]	North American Temperature Code	CENELEC/IEC Temperature Class
450	T1	T1
300	T2	T2
280	T2A	
260	T2B	
230	T2C	
215	T2D	
200	T3	T3
180	T3A	
165	T3B	
160	T3C	
135	T4	T4
120	T4A	
100	T5	T5
85	T6	T6