

B Series

Explosion Proof LED High Bay Light





B2



B



B3



B4

Globe Glass with Wire Guard
(Optional)

B3



Product Description

The B Series LED luminaire is the ideal choice for marine and hazardous applications. They can be used in locations where moisture, dirt, dust, corrosion and vibration may be present, or areas where wind, water, snow or high ambient can be expected.

Features

- 0-10V dimming
- High luminous efficacy - Up to 140 lumens per watt
- Battery backup function available
- Compact and robust structure, excellent reliability
- Various installation ways for different applications
- Great impact resistance with IK08/IK10 certified

Compliance

ATEX Standard:

II 3G Ex ec IIC T6...T3 Gc

II 2D Ex tb IIIC T85°C...T103°C Db

IECEX Standard:

Certificate No.: IECEX PCET 22.0008X

Ex ec IIC T6...T3 Gc

Ex tb IIIC T85°C...T100°C Db

Ex tc IIIC T85°C...T100°C Dc

Zone 2, 21, 22

CB (Ref. Certif. No.: DE 2-038462-M1)

NSF

UL 844 Hazardous Locations

Class I Division 2, Group A, B, C, D

Class II Division 1, Group E, F, G

Class II Division 2, Group F, G

Class III

Class I, Zone 2, Group IIC

Class II, Zone 21, Group IIIC

UL 1598 Wet Locations

UL 1598A Marine Outside Type

UL 924 Emergency Lighting

UL(ATM for Report E509202)

ABS

NSF

DLC*

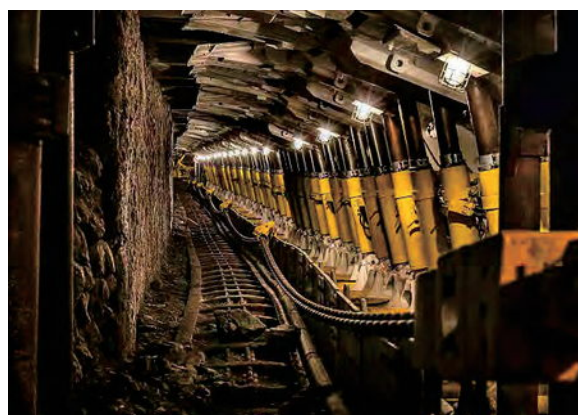
IP66

IK08 (glass cover)

IK10 (with wire guard)

1000 hours salt spray

** Not all product variations listed on this spec sheet are DLC qualified.
Visit www.designlights.org/search to confirm qualification.*



Application

- Power Plants
- Heavy Industrials Storage Facility
- Paper mills
- Wastewater Treatment Plants
- Loading Docks Platforms
- Offshore Environments
- Chemical Processing Facility
- Petrochemical Processing Facility
- Metallurgical Industry
- Food and Alcohol industry

Warranty

5-Year Standard Warranty

LED lumen Maintenance: L70> 150,000 Operation Hours@55°C

Technical Parameter (for Class I Division 2)

• Electrical

Model NO	EX-xxxW B	EX-xxxW B3	EX-xxxWB2	EX-xxxWB4
Rated Power	20/40/50/60/80/100W	20/40/50/60/80/100/ 120/150/180/200W	20/25/30/35/40/50/60/ 70W	150/180/200/250/300/ 350/400W
Input Voltage - Normal	100-277/200-480VAC		120-277/120-347/277-480VAC	
Input Voltage - Emergency	120-277VAC		/	120-277VAC
Input Frequency	50/60Hz		50/60Hz	
Power Factor	> 0.95		> 0.9	
Emergency	No emergency function		No emergency function	Optional (Only for 150W/ 180W/200W)

• Optical

Model NO	EX-xxxW B	EX-xxxW B3	EX-xxxWB2	EX-xxxWB4
Lumen Output	2600-13000lm	2600-26000lm	2600-9100lm	19500-52000lm
Lumens Per Watt	130lm/W (for regular + clear glass)			
CCT	3000K/4000K/5000K/5700K/6500K		2700K/4000K/5000K/5700K/6500K	
CRI	> 70			
Beam Angle	40°/60°/90°/120°/T2/T3/T5			
Dimming	0-10V dimming optional			

• Environmental

Model NO	EX-xxxW B	EX-xxxW B3	EX-xxxWB2	EX-xxxWB4
Ambient Temperature	-40°C to +40°C; -40°C to +50°C; -40°C to +65°C		-40°C to +40°C; -40°C to +55°C; -40°C to +65°C	-40°C to +40°C; -40°C to +50°C; -40°C to +60°C

• Mechanical

Model NO	EX-xxxW B	EX-xxxW B3	EX-xxxWB2	EX-xxxWB4
Housing Material	Copper-free aluminum			
Diffuser (Optional)	Flat glass/Flat polycarbonate/Convex glass/ Convex polycarbonate		Flat PC/Flat Glass/ Convex PC/Convex Glass/Spherical Glass	Flat PC/Flat Glass/ Convex PC/ Convex Glass
Hardware	Stainless steel			
Protection	IP66/IK08 (without wire guard)/IK10 (with wire guard)		IP66/IK08	
Mounting	Ceiling, Wall, Stanchion 25°, Pendant, Surface		Surface, Pendant	Ceiling, Wall, Pendant, Stanchion 25°, Surface
Cable Entries	3/4" NPT (standard); 1/2" NPT, M20 or M25 (optional) *		Side: 3/4" NPT; Top: 3/4" NPT	

* For cable entries of B and B3, 3/4" NPT is standard. 1/2" NPT, M20 and M25 can be achieved with an adapter, and customer needs to indicate which is required when placing an order.

Technical Parameter (for Zone 2/21/22)

• Electrical

Specification	EX-xxxWB2 N**D**	EX-xxxWB N**D**	EX-xxxWB3 N**D**	EX-xxxWB4 N**D**
Rated Power	20/40/60W	60/80/100W	100/120/150/200W	250/300/350/400W
Input Voltage	100-277VAC			
Input Frequency	50/60Hz			
Power Factor	> 0.95			
Emergency	No emergency function	No emergency function	Optional (3 hours)	No emergency function

• Optical

Specification	EX-xxxWB2 N**D**	EX-xxxWB N**D**	EX-xxxWB3 N**D**	EX-xxxWB4 N**D**
Lumen Output	2800-8400lm	8400-14000lm	14000-28000lm	35000-56000lm
Lumens Per Watt	140lm/W			
CCT	3000K-6500K			
CRI	>70			
Beam Angle	40°/60°/90°/120°			
Dimming	0-10V dimming			

• Environmental

Specification	EX-xxxWB2 N**D**	EX-xxxWB N**D**	EX-xxxWB3 N**D**	EX-xxxWB4 N**D**
Ambient Operating Temperature	T3: -40°C to +55°C (-40°F to +131°F)			

• Mechanical

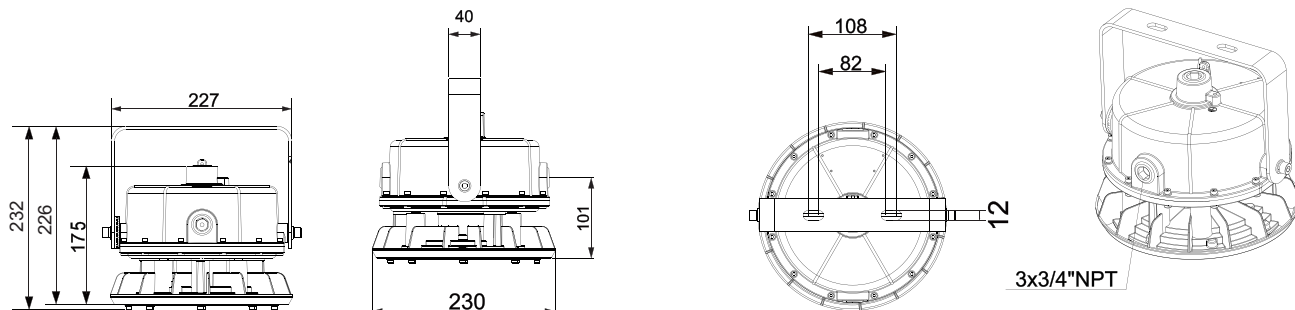
Specification	EX-xxxWB2 N**D**	EX-xxxWB N**D**	EX-xxxWB3 N**D**	EX-xxxWB4 N**D**
Housing Material	Copper-free aluminum			
Lens	Tempered glass & PC			
Hardware	Stainless steel			
Fixture Color	Gray RAL7040 (Standard)			
Protection	IP66/IK08 (glass cover)/IK10 (with wire guard)			
Mounting	Ceiling, Wall, Pole, Hook Pendant, Stanchion, Wall, Trunnion			
Cable Entries*	Side: 3/4" NPT (standard); M20, M25, 1/2" NPT (optional) Top: 3/4" NPT (standatd); M25 (optional)			

* For cable entries, 3/4" NPT is standard. Others can be achieved with an adapter, and customer needs to indicate which is required when placing an order.

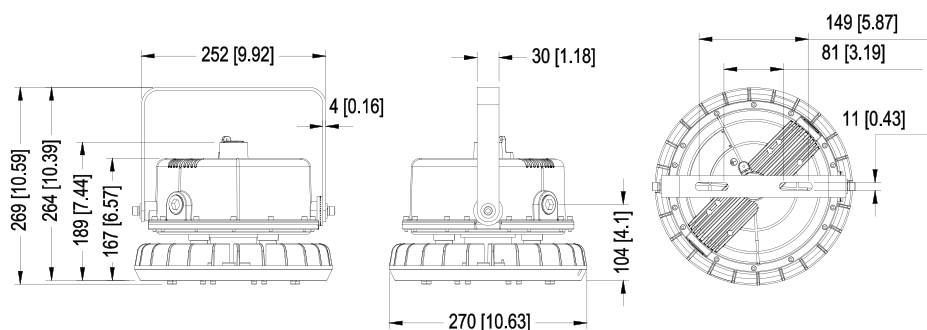
Product Dimensions

Unit: mm [inch]

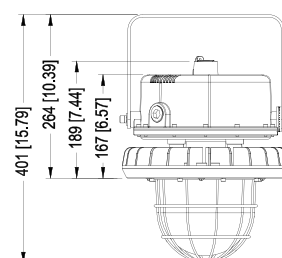
B2



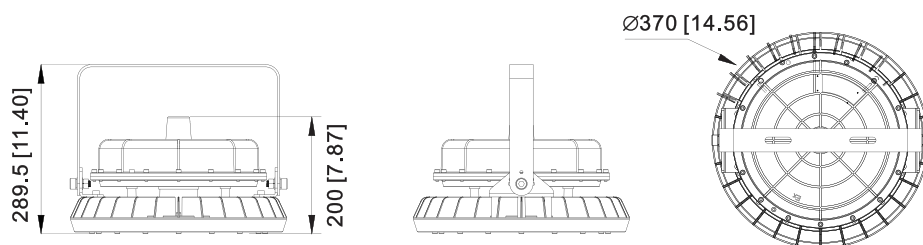
B without drop lens



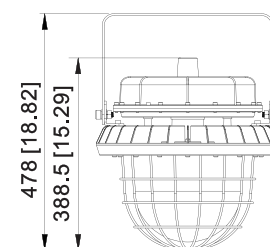
with drop lens



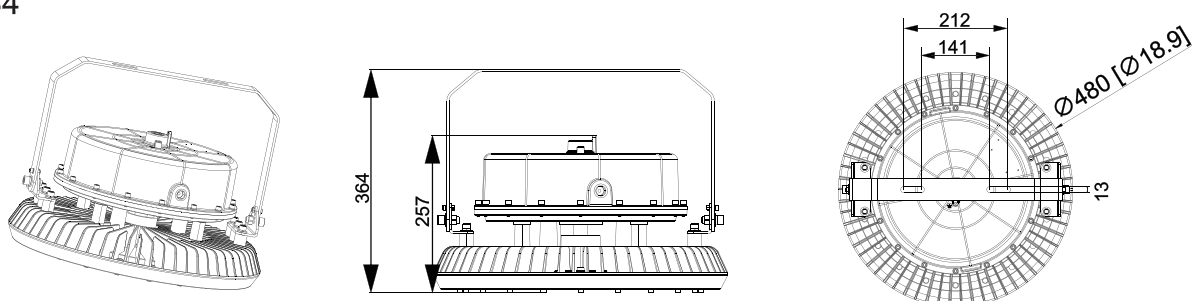
B3 without drop lens



with drop lens



B4



• Packing Information

Model	Net Weight*	Gross Weight*	Quantity/Carton	Package Dimensions (LxWxH)
B2	3.5 kg/7.72 lb	5.0 kg/11.02 lb	1 pc	360x354x260mm/14.17x13.94x10.24inch
B	4.4 kg/9.70 lb	5.65 kg/12.46 lb	1 pc	400x350x250mm/15.75x13.78x9.84inch
B3	8.2 kg/18.08 lb	10.6 kg/23.37 lb	1 pc	500x480x290mm/19.69x18.90x11.42inch
B4	17.0 kg/37.48 lb	23.5 kg/51.81 lb	1 pc	600x600x390mm/23.62x23.62x15.35inch

*Please note that net weight and gross weight may be subject to change because of actual configuration.

Ordering Guide (for Class I Division 2)

EX - xxxW XX D 27 D40 CFG A A A N 1 H 1 2

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

1. Basic Model Series Name	2. Rated Input Wattage	3. Lamp Enclosure Heatsink
EX = Explosion Proof Product	B: 20/40/50/60/80/100W B3: 20/40/50/60/80/100/120/150/180/200W B2: 20/25/30/35/40/50/60/70W B4: 150/180/200/250/300/350/400W	B B3 B2 B4

4. Dimming Function	5. CCT	6. Beam Angle	7. Diffuser Type
Blank = non-dimmable D = dimmable	27: 2700K 40: 4000K 50: 5000K 57: 5700K 65: 6500K	"D40" = 40 degrees "D60" = 60 degrees "D90" = 90 degrees "D120" = 120 degrees "T2" = 60 degrees "T3" = 90 degrees "T5" = 120 degrees	"CFG" = Clear Flat Glass, "CCG" = Clear Convex Glass, "CFP" = Clear Flat PC, "FFG" = Frosted Flat Glass, "FCG" = Frosted Convex Glass

8. Driver Housing Type	9. Heat Sink Type	10. Lens Cover Type	11. Backup Power Source
B/B3: A, B, C, D B2: E, H B4: A, A1, B, B1, C, C1, D, D1, E, F, G	A = Heat Sink A B = Heat Sink B C = Heat Sink C	"A" = Alternate Enclosure Cover 1 (normal cover)	N=Without Backup Power E=With Backup Power

12. Internal Code	13. Input Voltage	14 and 15. Commercial Use
1 = 5050 2 = 2835	H=277-480V L=120-277V M=120-347V	1 2

* Spherical Glass option is available only for B, B3, and B2 series.

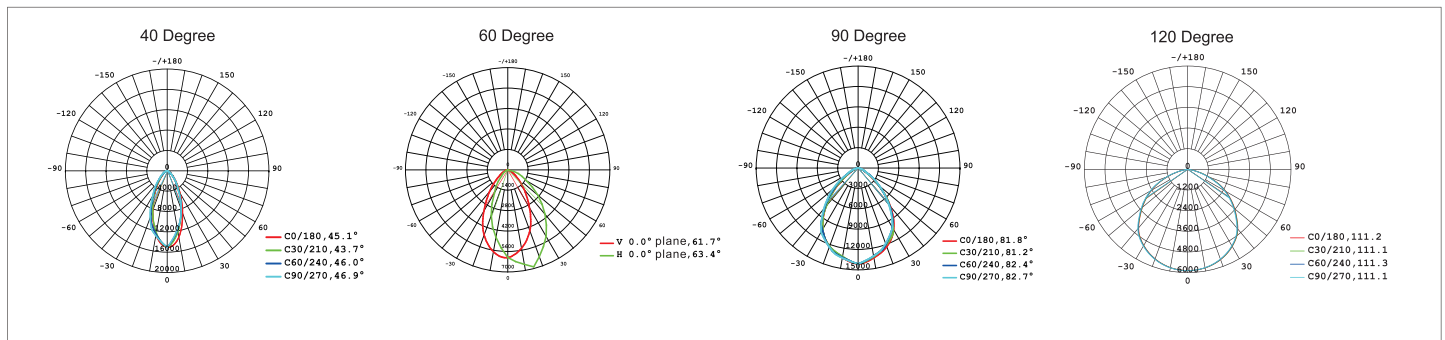
Ordering Guide (for Zone 2/21/22)

Ex - * * W * * N * * D * *

1 2 3 4

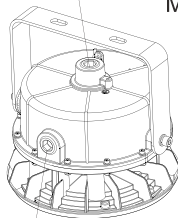
1. Wattage (W)	2. Product Code	3. Color Temperature	4. Beam Angle (Degree)
B2:20/40/60W B:60/80/100W B3:100/120/150/200W B4:250/300/350/400W	Can be: B, B2, B3, B4	Can be 30 to 65, means 3000K to 6500K	Can be: 40, 60, 90, 120

Photometric



Cable Entries

Compatible with NPT1 thread with an adapter

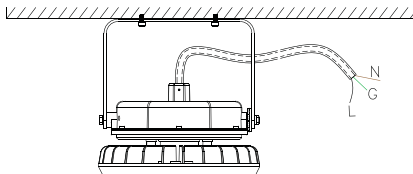
Top: 3/4 NPT (standard),
M25

Wire outlet

Side: 3/4 NPT (standard),
M20, M25, 1/2NPT(available from stock or in bulk. Small orders can add adapters.)

Mounting Methods

• Option 1: Ceiling Mounting

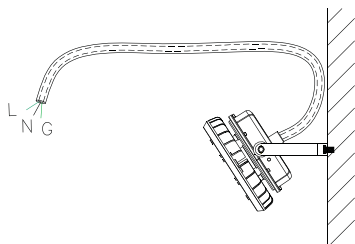


• Accessory



Bracket

• Option 2: Wall Mounting



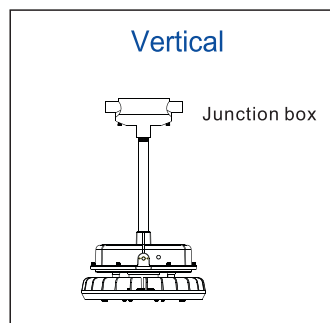
• Accessory



Bracket

• Option 3: Pole Pendant Mounting

Vertical

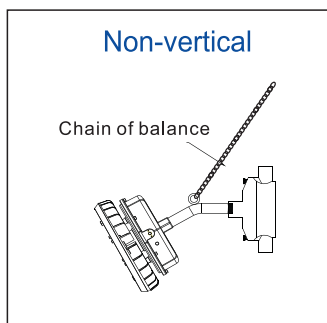


Junction Box
EX-HD51-KB1



Pole
Ex-Straight Pipe

Non-vertical



Junction Box
EX-HD51-KB1

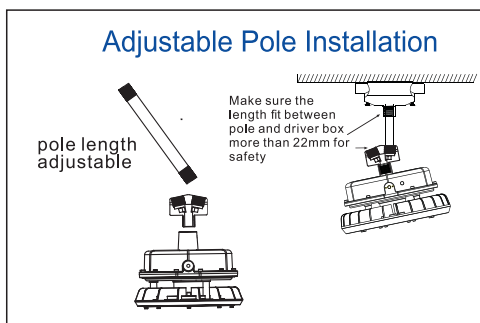


Pole
Ex-Bended Pipe



Pendant Chain
Ex-Straight Chain

Adjustable Pole Installation



Junction Box
EX-HD51-KB1



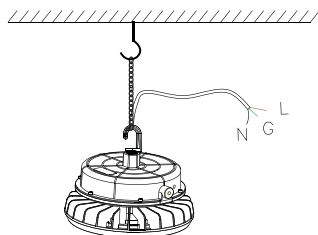
Pole
Ex-Straight Pipe



Pendant Direction Adapter
Ex-D01

Mounting Methods

• Option 4: Hook Pendant Mounting



• Accessories

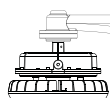


Hook
Ex-Hook



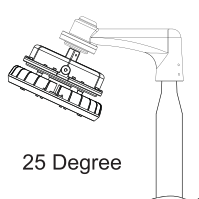
Pendant Chain
Ex-Straight Chain

• Option 5: Stanchion Mounting



90 Degree

Lamp post



25 Degree

• Accessories

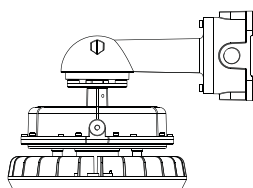


EX-90PSupport

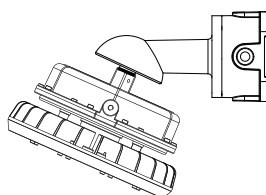


EX-25PSupport

• Option 6: Wall Mounting to Junction Box



90 Degree



25 Degree

• Accessories

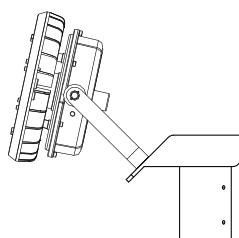


Stanchion Arm
EX-HD51-KYD 90



Stanchion Arm
EX-HD51-KYD 25

• Option 7: Trunnion Mounting (Only for B and B2)



• Accessory



**EX-Slip
Fitter Mounting Kit**