



Explosion Protection by SUREALL



To Be SURE
To Be ALL



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Product Catalogue

Explosion Proof LED Lighting
Use in Hazardous Locations



SUREALL TECHNOLOGY LIMITED

Sales



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Explosion Proof Lighting

De-risk Your Facility

SUREALL Tech enables its customers to select all kinds of explosion proof lighting products to achieve the final goal of safety for addressing today's and tomorrow's challenges to protect the security of lives and property security of lives and property.

Consist of specialized and trained professional staff with extensive expertise and experience in wide areas through excellent technical software and hardware, our team have developed various products portfolio and obtained more than 50 international certificates through keeping the safety principle.

Why Choose SUREALL Explosion Proof Lighting?

- > SUREALL dedicate to apply for aesthetics conception to design the artistic shape for every explosion proof lighting based on excellent heat dissipation performance even through normally those lighting are industrial application.
- > SUREALL fully consider the complicated usage environment to design more flexible and convenient mounting accessories for engineers to install those lighting in hazardous locations.
- > SUREALL strictly executive full inspection for every explosion proof enclosures, led drivers, led lamp, even small bolts subject to EU-ATEX and NEC-UL explosion proof standard.
- > SUREALL promise 5 years warranty for all explosion proof lighting based on the latest high efficiency led technology.

Full ranges of Explosion Proof Lighting in Harsh and Hazardous Locations

Explosion proof lighting is based on general lighting purpose to withstand the hazardous and harshest conditions which combustible gas, vapor, dust probably may present in sites, designed with flame proof enclosures, increased safety electrical parts, intrinsically safety parts, spark proof components, along with perfect heat control structure to reduce the temperature rise, lighting electrical spark could be limited the energy to protect the environment from the formation of ignition sources to avoid exploding accident when normal working.

SUREALL innovated the advanced machining and testing technology to ensure the precise, safe, stable explosion proof performance.

Housing Material:

Die cast aluminum alloy
Glass fiber reinforced polyester
Stainless Steel

Class/Division:

Class 1 division 1, class 1 division 2, class 2 division 1, class 2 division 2, class 3

Zone:

Zone 1 to zone 2, zone 21 to zone 22, zone 0

Features

Explosion proof high bay lighting
Explosion proof flood lighting
Explosion proof fluorescent lighting
Explosion proof emergency lighting
Explosion proof flashlight

FAQS about Explosion Proof Lighting



What is the difference between flame proof and explosion proof?

Explosion proof is the umbrella name for many kinds of technology including flame proof, increased safety, intrinsic safety, powder filling, oil immersion, pressured, encapsulation and no spark. So flame proof is one of the most important explosion proof and flame proof is the highest cost, most complicated and supreme safety grade technology.

What is flame proof light?

Flame proof light is the most important and typical type of explosion proof lighting, we also call Ex d light, which means all electrical parts of the light are put inside a high strength flame proof enclosure, when explosion occurs inside the enclosure, the flame proof enclosure can withstand the exploding pressure without any damage and transmit the exploding energy through designed flame proof path to a negligible scope to outside of the enclosure to eliminate the formation of the explosion outside the enclosure.

What is a class 1 light fitting?

Class 1 definition come from the hazardous area classifications of NEC500 standard which classifies flammable substances into four types, "M" for methane under mine, "class 1" for hazardous gas and vapor, "class 2" for hazardous dust and "class 3" for hazardous fiber, thus class 1 light fitting is explosion proof lighting specially used for hazardous locations which hazardous gas and vapor present normally and abnormally, but class 1 light fittings have two types, class 1 div 1 light fitting and class 1 div 2 light fitting. If the hazardous gas and vapor produce normally in the environment, you need to use class 1 div 1 light fitting, if the hazardous gas and vapor produce abnormally in the environment, you need to use class 1 div 2 light fitting.



Full ranges of Explosion Proof Lighting in Harsh and Hazardous Locations



What is hazardous locations light?

Hazardous locations light is looked as explosion proof lighting used in hazardous locations for NEC500 standard. Depends on the flammable ingredient group, class 1 means hazardous gas and vapor, class 2 means hazardous dust, class 3 means hazardous fiber. Classified by the frequency the flammable ingredient present in locations, class 1 division 1 means hazardous gas and vapor present intermittently (more than 10 hours every year), class 2 division 1 means hazardous dust present intermittently (more than 10 hours every year), class 1 division 2 means hazardous gas and vapor present abnormally (less than 10 hours every year), class 2 division 2 means hazardous dust present abnormally (less than 10 hours every year). So hazardous locations light have five types, class 1 division 1 light, class 1 division 2 light, class 2 division 1 light, class 2 division 2 light and class 3 light.

Does Class 1 div 2 require explosion proof?

Yes, class 1 div 2 require explosion proof. Class 1 div 2 is one of the hazardous locations classification which means the ignitable gas or vapor will produce not normally which is exactly a lower hazardous level, but it is still one kind of hazardous level of explosion proof whose classification intrinsically can be divided into higher level class 1 div 1, lower level class 1 div 2, higher level class 2 div 1, lower level class 1 div 2 and higher level class 3. Thus, class 1 div 2 require explosion proof no matter for what kind of electrical apparatus not limited to explosion proof lighting.

Is intrinsically safe same as explosion proof?

No, intrinsically safe is not the same as explosion proof. Intrinsically safe mean any products are safe enough and do no harm to the people or environment when using. Explosion proof means any products can eliminate the possibility for any explosion.

What class is explosion proof?

Subject to NEC standard, explosion proof could be divided to class 1 div 1, class 1 div 2, class 2 division 1, class 2 division 2 and class 3. Subject to EU, ATEX standard, explosion proof could be divided to zone 0, zone 1, zone 2, zone 21 and zone 22.

Where can you use explosion proof light?

Explosion proof light are widely used in oil and gas industry, chemical and pharmaceutical industry, ship and tanker industry, mining and metal processing industry, waste water treatment industry, power generation industry.

What makes a light fixture explosion proof?

Mainly when flame proof and increased safety technology is applied into a light fixture, the ignition source of electrical spark and high temperature could be avoided for formation of explosion to make a light fixture explosion proof.

General information for Luminaires for Use in Hazardous Locations

1.Expllosion Formation

Explosion takes place in the conditions of the following factors:
>Combustible substances, such as gas, vapour, mist and dust
>Air (oxygen)
>Ignition source

2. Explosion Protection

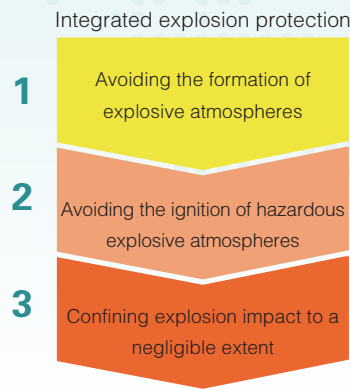
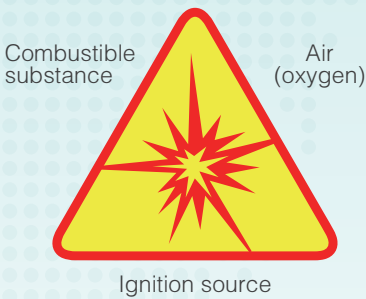
In order to avoid explosions and consequential dangers, the operator must incorporate effective explosion-proof protection precautions.

Measures :

- >Avoiding the formation of explosive atmospheres
- >Avoid the ignition of hazardous explosive atmospheres
- >Confining explosion impact to a negligible extent

3.Hazardous Location Classificaton

Hazardous locations are classified into different Group/Class, Zones/Divisions depending on the composition and presence of an flammable substances, which enables anyone to select the suitable explosion-proof equipments.



3.1 Group/Class

Locations	Group		Class
	EU	IEC	US NEC500
methane under mine	Group I	Group I	M
hazardous gas and vapour	Group II	Group II	Class I
hazardous dust		Group III	Class II
hazardous fiber			Class III

3.2 Division/Zone

Gas and Vapour			
Presence Frequency	Flammable Substances		
	Present Continuously	Present Intermittently	Present Abnormally
EU/IEC	Zone 0	Zone 1	Zone 2
US NEC500	Division 1		Division 2

Dust and Fiber			
Presence Frequency	Flammable Substances		
	Present Continuously	Present Intermittently	Present Abnormally
EU/IEC	Zone 20	Zone 21	Zone 22
US NEC500	Division 1		Division 2

4.Flammable Substances Classificaton

Flammable substances are classified into different groups depending on the exact flammable substances, which enables anyone to select the suitable explosion–proof equipments.

Gas and Vapour		
Typical Gas and Vapour	EU/IEC	NEC500
Acetylene C ₂ H ₂	IIC	Class I/Group A
Hydrogen H ₂	IIB+H2	Class I/Group B
Ethylene C ₂ H ₄	IIB	Class I/Group C
Propane C ₃ H ₈	IIA	Class I/Group D
Methane CH ₄	I	Mining


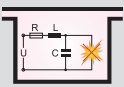
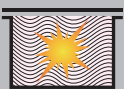


Dust and Fiber		
Typical Dust and Fiber	EU/IEC	NEC500
Metal dusts	IIIC	Class II/Group E
Carbonaceous dusts	IIIB	Class II/Group F
Non–conductive dusts	IIIB	Class II/Group G
Fibers and flyings	IIIA	Class III

5. Explosive Temperature Classification

Explosive temperature is the lowest temperature of a surface of an explosion–proof products at which an flammable substance is able to ignites on it. Explosion–proof products may be classified into different temperature groups.

Marking	EU/IEC	US NEC500
450°C	T1	T1
300°C	T2	T2
280°C		T2A
260°C		T2B
230°C		T2C
215°C		T2D
200°C	T3	T3
180°C		T3A
165°C		T3B
160°C		T3C
135°C	T4	T4
120°C		T4A
100°C	T5	T5
85°C	T6	T6

6. Explosion–proof Protection Types

Ex–Mark	Protection Types	Diagram	Illustration
Ex d	Flameproof		The enclosures are constructed so that the internal explosions can not be transmitted to the external atmosphere
Ex e	Increased safety		Prevention to ignition sources, only simple electrical components
Ex p	Pressurized		Electrical parts are purged and pressurized with a protective gas
Ex q	Powder filling		Electrical parts are submerged in a quartz powder
Ex i	Intrinsic safety		Limitation of the energy stored in the electrical circuits
Ex o	Oil immersion		Electrical parts are submerged in oil
Ex m	Encapsulation		Electrical parts are encapsulated in a specific resin
Ex n	“n” protection		No ignition source in normal operation, no sparks, no hot surfaces

CONTENT

Part 1- Explosion Proof LED High Bay Lighting

1. SVM Series
30-240W
01/54
(C1 D2; Zone 2)



2.SHB Series
30-240W
06/54
(C1 D1; Zone 1&2)



3. SHB-II Series
20-400W
10/54
(C1 D2; Zone 2)

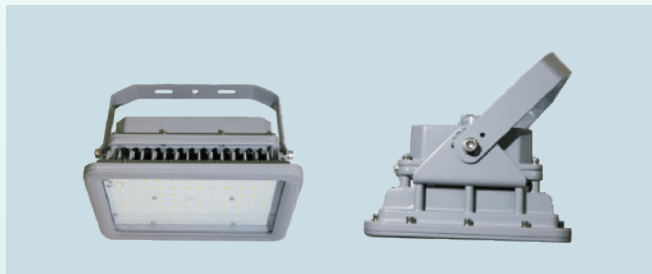


4.SO-I Series
10-240W
15/54
(C1 D1; Zone 1&2)



Part 2- Explosion Proof LED Flood Light

5.SHF-IIA Series
20-400W
18/54
(C1 D2; Zone 2)



6. SHF-IA Series
20-200W
21/54
(C1 D1; Zone 1&2)



7.SHF-II Series
150-240W
24/54
(C1 D2; Zone 2)

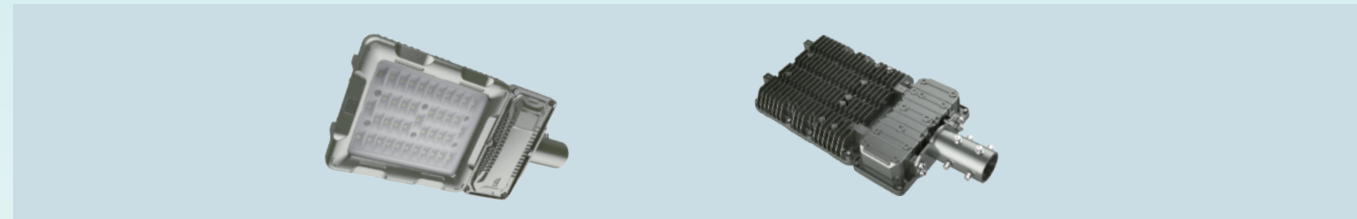


8. SHF-I Series
30-240W
27/54
(C1D1; Zone 1&2)



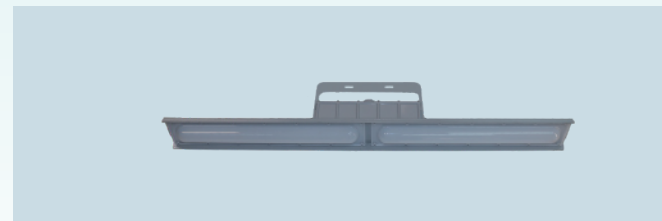
9.SSL Series
80-200W

30/54
(C1 D1; Zone 1&2)



Part 3- Explosion Proof Fluorescent Lighting

10.SLL-II Series
20-80W
32/54
(C1 D2; Zone 1&2)



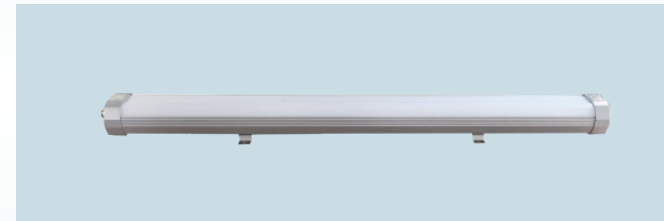
11. SLn
40-120W
35/54
(C1 D2; Zone 2)



12.SLe Series
9-80W
38/54
(C1 D2; Zone 1&2)



13.SLL-IIA
36-56W
42/54
(C1 D2; Zone 1&2)



Part 4- Explosion Proof Emergency Lighting

14.SEG Series
(C1 D1; Zone 1&2) 46/54
Bug-eye Lights



15.SES Series
(C1 D1; Zone 1&2) 48/54
Exit Sign Lights



16.SAV Series
(C1 D1; Zone 1&2) 50/54
Alarm Lights



Part 5- Explosion Proof Flashlight

17.SPL-A Series
(C1 D1; Zone 1&2) 52/54
Torch Light 3W



18.SPL-C Series
(C1 D1; Zone 1&2) 53/54
Torch Light 9/12W



19.SPL-E Series
(C1 D1; Zone 1&2) 54/54
Work Light 30/35W



SVM Series LED High Bay Luminaires

Class I, Div.2, Group A, B, C, D	Hazardous Locations
Class II, Div. 1, Group E, F, G	Wet Locations, Type 4X, IP 66
Class II, Div. 2, Group E, F, G	
Class III	
Zone 2; Zone21&22	



Model	Luminous Flux(LM)	Wattage	Lumen/Wattage	Equivalent HID luminaire
SVM-30W	4200	30W	140	70-100W
SVM-50W	7000	50W	140	100-150W
SVM-80W	11200	80W	140	175-250W
SVM-100W	14000	100W	140	320-400W
SVM-120W	16800	120W	140	400W
SVM-150W	21000	150W	140	400-600W
SVM-180W	25200	180W	140	600-750W
SVM-200W	28000	200W	140	750-1000W
SVM-240W	33600	240W	140	1000W-



Applications

- Dramatic advances in technology for LED luminaires broadened the applicability of this type of illumination, creating an exciting new option for hazardous, industrial and other highly demanding locations. Compared to traditional light sources, LED luminaires can deliver longer life, enhanced energy efficiency, greater eco-friendliness, lowered maintenance demands and equal or better quality of light.
- Featuring nine mounting types, optional color temperature, the state-of-the-art LED achieves out-standing versatility and flexible mounting applications. Allowing the end users and engineering firms to maximize spacing, while minimizing the number of fixtures required in a project, to improve light distribution while reducing project costs.
- Rated for Class I, Division 2 and Class II, Class III hazardous locations for CSA certification, marine and wet locations, certificate for ATEX Zone 2,Zone 21&22.Applicable for oil and gas refineries, petrochemical facilities, drilling rigs, platforms, food and beverage facilities, loading docks, tunnels, outdoor wall and stanchion mounted general area lighting, indoor/outdoor spotlighting, and where flammable vapors, gases, ignitable dusts, fibers or flying are present.

Features

- Independent chamber for LED module, driver and wiring, high efficiency LED exceeds 170lm/w fixture lumen efficiency exceeds 140lm/w. High Reliability Driver, efficiency exceeds 98%. Nine lumen outputs, ranging from 30W-240W(HID Equivalences of 70W-1000W),4200m-33600lm.
- Quick Retrofit Adaptor,all mounting parts can be connected to an universal lighting housing, easy installation and maintenance. Six mounting options, Stanchion 25° ,Stanchion Straight, Pendant, Ceiling, Wall, Trunnion.
- Three color temperature options, warm 3000K, neutral 4000K and cool 5000K, suitable for different latitude applications.
- Two input voltages,100-277V AC 50/60Hz,277-480 AC 50/60Hz, applied for power grid of different countries and states.
- Customized adapter options for cable wiring and steel pipe wiring connections layout.
- Customized back-up emergency battery 120 minutes or 180 minutes.
- Extra protection with corrosion-resistant stainless steel wiring guard.

Compliances

IEC Standard

IEC60079-0, IEC60079-15, IEC60079-31
Ex nR IIC T6/T5 Gc
Ex tb IIIC T80°C/T95°C Db IP66
Zone 2; Zone 21, Zone 22
IP66

EU Standard

EN60079-0, EN60079-15, EN60079-31
II 3G Ex nR IIC T6/T5 Gc
II 2D Ex tb IIIC T80°C/T95°C Db IP66
Zone 2; Zone 21, Zone 22
IP66

NEC & CEC Standard

Class I, Division 2, Groups A, B, C, D
Class II, Division 1, Groups E, F, G
Class II, Division 2, Groups F, G
Class III
Wet Locations, Type 4X, IP66

UL Standard

UL844,UL 1598,UL1598A,UL8570,UL924,
UL50,UL50E

Technical Datasheet

Classification	Class I, Division 2, Groups A, B, C, D Class II, Division 1, Groups E, F, G Class II, Division 2, Groups F, G Class III Zone 2; Zone 21&22								
Standards	IEC60079-0, IEC60079-15, IEC60079-31 EN60079-0, EN60079-15, EN60079-31 UL Standard UL844,UL 1598,UL1598A,UL8570,UL924,UL50,UL50E CSA Standard CSA C22.2 No.137-18,CSA C22.2 No.250.0,CSA C22.2 No.250.13-30,CSA C22.2 No.141-15,CSA C22.2 No.94.1:15,CSA C22.2 No.94.2:20								
Ex-mark	II 3G Ex nR IIC T6/T5 Gc II 2D Ex tb IIIC T80°C/T95°C Db IP66								
Rated Voltage	AC 100-277V 50/60Hz AC 220-480V 50/60Hz DC 18-36V								
Rated Wattage(W)	30W	50W	80W	100W	120W	150W	180W	200W	240W
Luminous Flux(LM)	4200	7000	11200	14000	16800	21000	25200	28000	33600
Color Temperature	2900K-5000K								
IP Grade	Wet Locations, Type 4X, IP66								
Ambient Temperature	-40° C~ +60° C / -40° F~+140° F								
Cable Entry	M25x1.5 or NPT 3/4"								
Terminals	Terminals blocks≤2.5mm², cable diameter 10-14mm								
Installation	Stanchion 25° ,Stanchion Straight, Pendant, Ceiling, Wall, Trunnion								
Beam Angle	40° , 60° , 90° , 120°								

CSA Standard

CSA C22.2 No.137-18,CSA C22.2 No.250.0:21,CSA C22.2 No.250.13-30,CSA C22.2 No.141-15,CSA C22.2 No.94.1:15,CSA C22.2 No.94.2:20

Standard Materials

- Lamp housing and adapter – die cast aluminum with anti-corrosion powder coat
- Lens – heat-resistant and impact-resistant tempered glass
- Gaskets – silicone
- External hardware – carbon steel or stainless steel

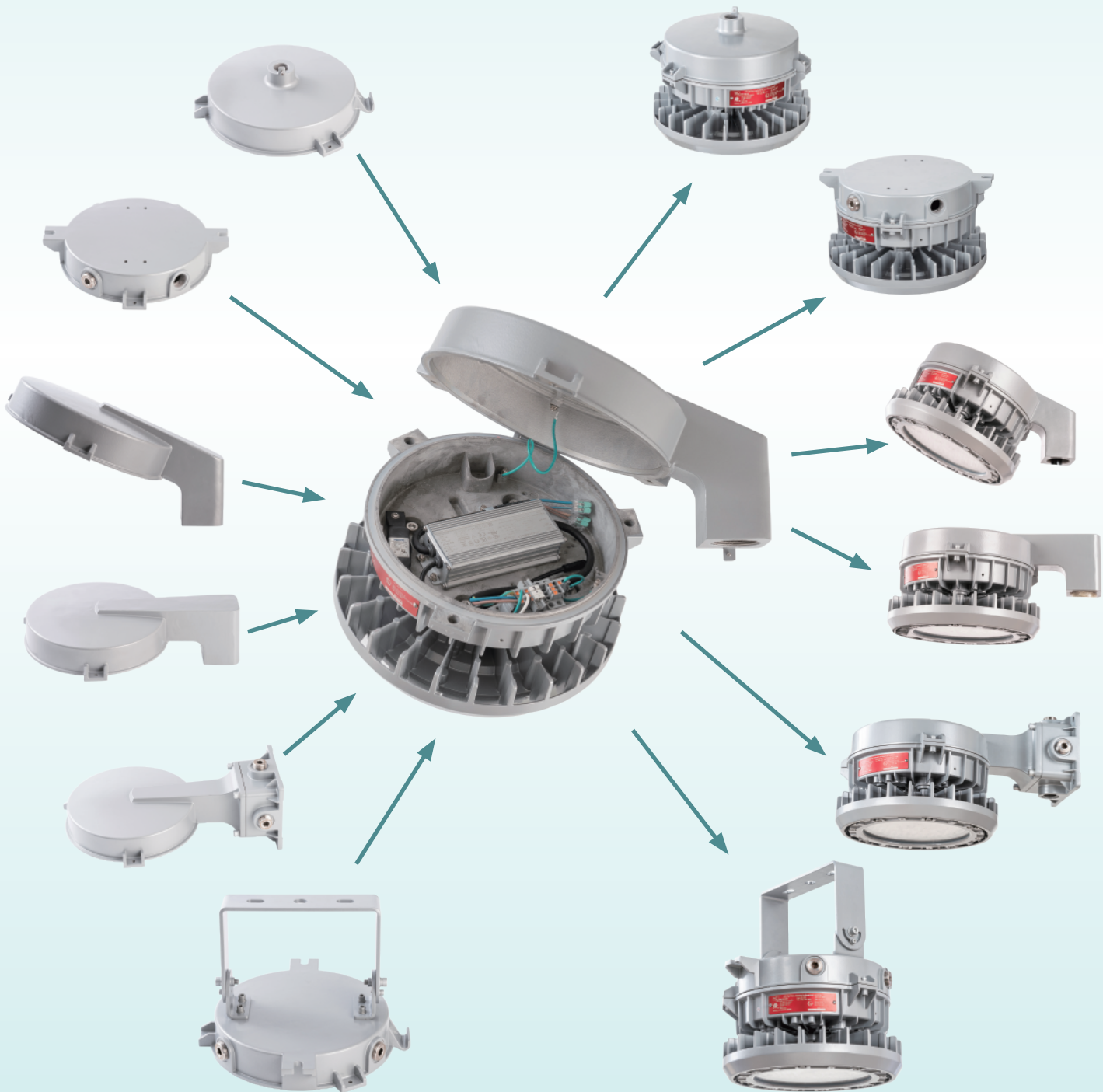
LED Driver

Input Voltage	100-277V AC 50/60Hz	
	277-480V AC 50/60Hz	
THD	<20%	
Power Factor	0.98(220V/full load)	
Protection	Short Circuit/Over Voltage/Over Heat	
	Over Heat/Surge Protection	
	Surge Protection	Line to line 4KV Line to earth10KV



Highlight-Retrofit Adaptor

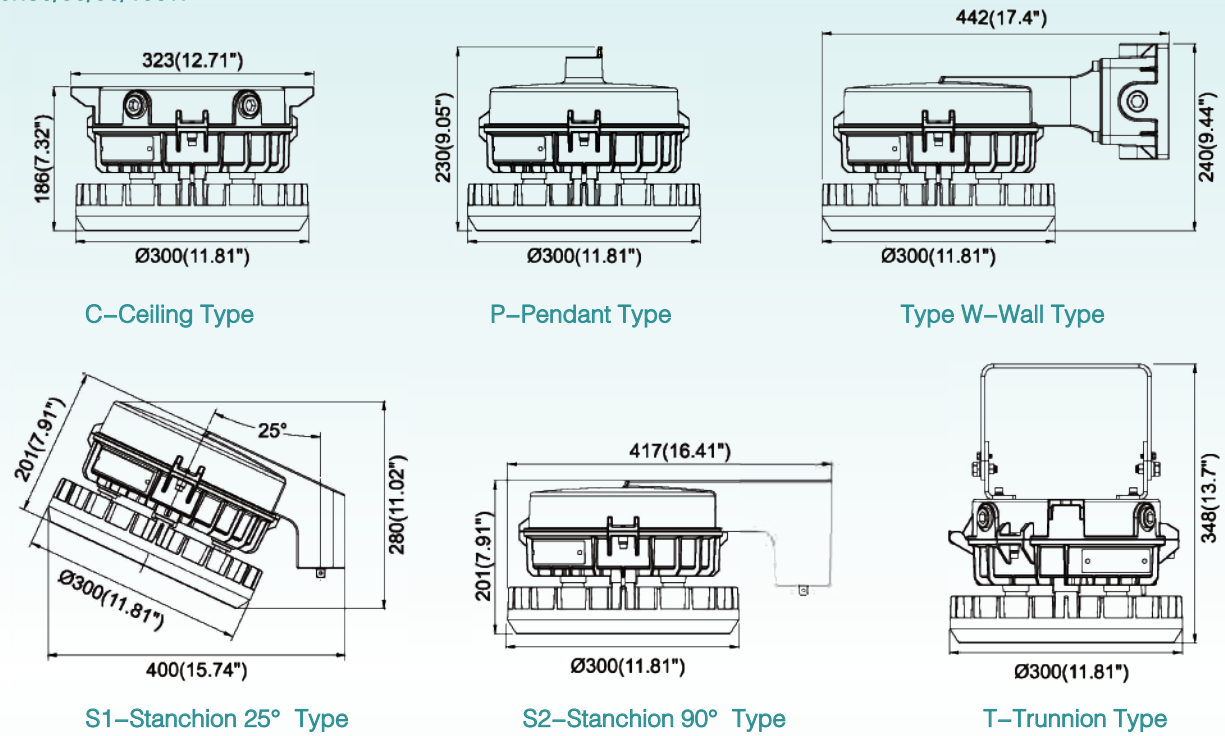
- Standard universal LED driver body to fit diversified retrofit adaptor.
- Note:Two dimensions of housing can be used in a same retrofit adaptor
- > Designed hinge between LED driver body and retrofit adaptor
 - > Rapid connection to terminal blocks for installation
 - > Electrical circuits connected and disconnected without wire layout
 - > Speed replacements for different mounting accessories
 - > Six Mounting Options



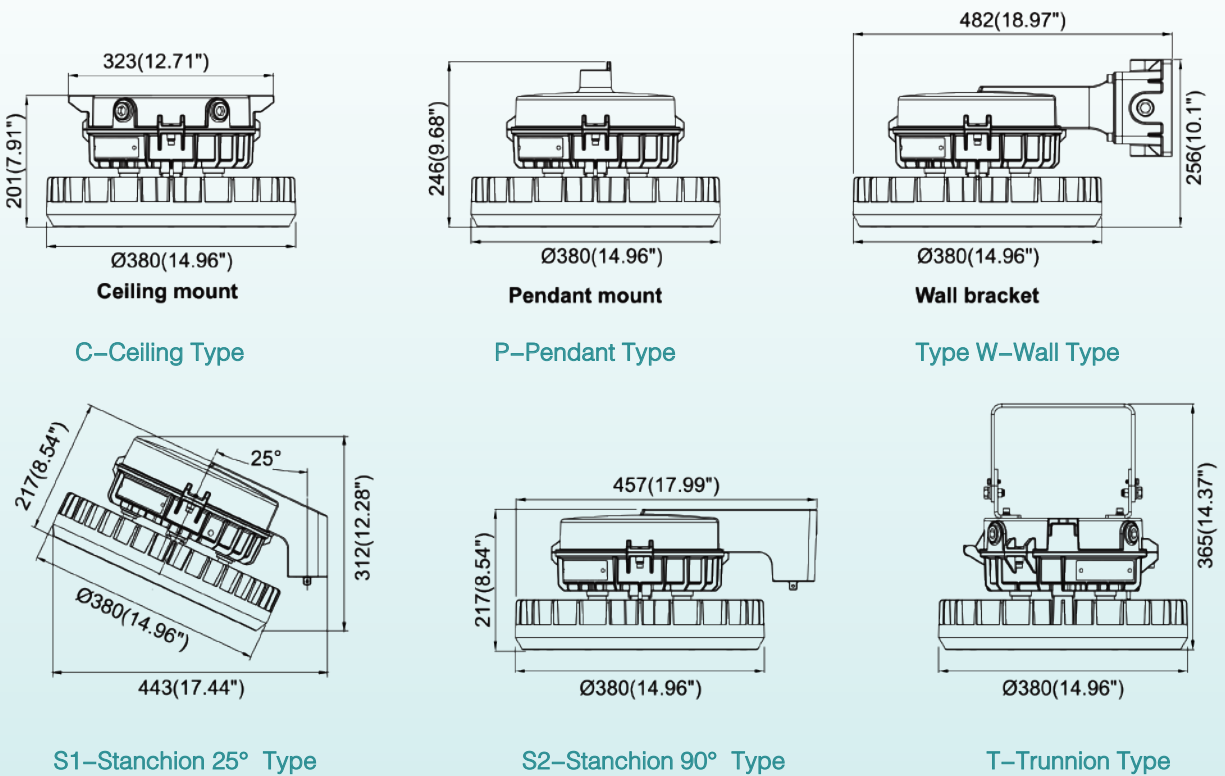
Mounting Options& Dimensions (mm/inch)

Six mounting types, which means you can hang your luminaries how and where you need them most, and available to make installing lighting around cabling, pipes and process equipment as easy as possible.

Power:30/50/80/100W

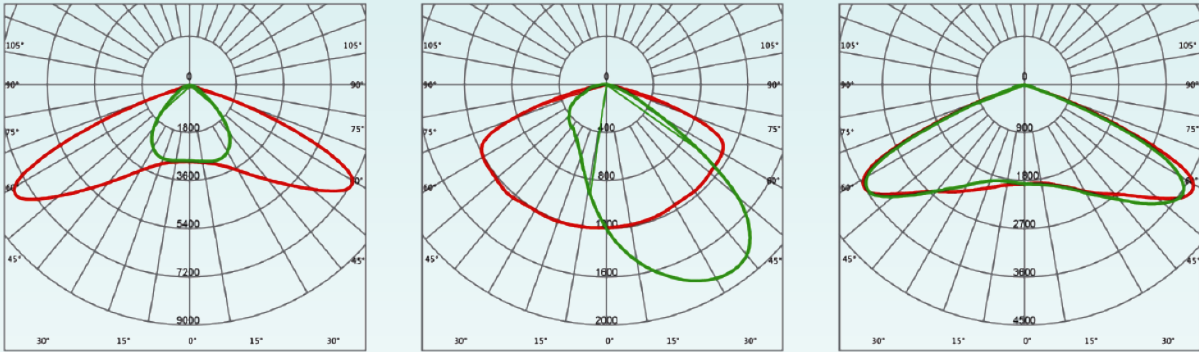


Power:120/150/180/200/240W

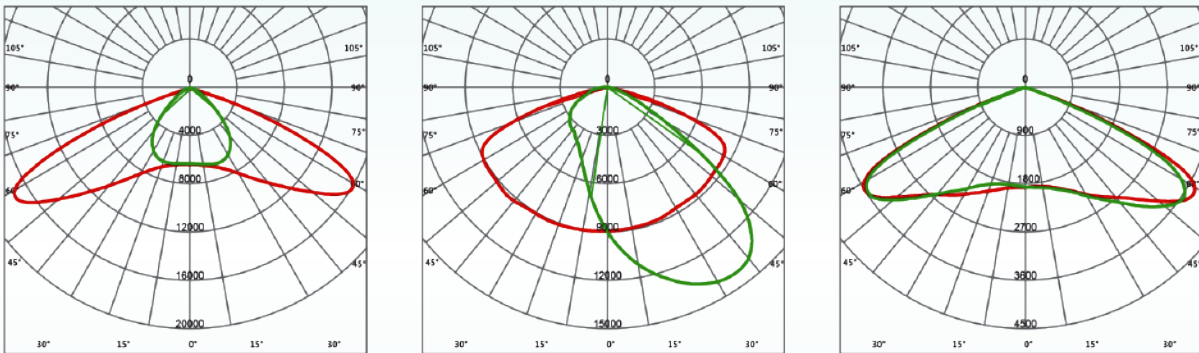


Photometric Data

Power:30/50/80/100W



Power:120/150/180/200/240W



Product Ordering Gide

SVM - 30W	C	N	W	V	1	(E)
Lamp	Mounting Type	Cable Entry	Color Temp.	Voltage	Beam Angle	Emergency
30-30W	S1-Stanchion 25°	N-NPT3/4"	C-Cool(5000K)	V1:100-277V AC	1-120°	
50-50W	S2-Stanchion 90°	M-M25x1.5	N-Nature(4000K)	V2:277V-480V AC	2-90°	
80-80W	P-Pendant		W-Warm(3000K)	V3:18-36V DC	3-60°	
100-100W	C-Ceiling				4-40°	
120-120W	W-Wall					
150-150W	T-Trunnion					
180-180W						
200-200W						
240-240W						

SHB Series LED High Bay Luminaires

Class I, Div.1, Group A, B, C, D Hazardous Locations
Class II, Div.1, Group E, F, G Wet Locations, Type 4X, IP 66
Class III, Group E, F, G
Zone 1&2; Zone 21&22



Model	Typical Lumens	Wattage	Lumen/Wattage	Equivalent HID luminaire
SHB-30W	3600	30W	120	70-100W
SHB-50W	6000	50W	120	100-150W
SHB-80W	9600	80W	120	175-250W
SHB-100W	12000	100W	120	320-400W
SHB-120W	14400	120W	120	400W
SHB-150W	18000	150W	120	400-600W
SHB-200W	24000	200W	120	600-750W
SHB-240W	28800	240W	120	750-1000W

Applications

- For areas with mounting heights of 10-66 feet/3-20m
- Oil and gas refineries, drilling rigs, petrochemical facilities, food and beverage facilities, platforms, loading docks, tunnels, indoor/outdoor spotlighting, outdoor wall and stanchion mounted general area lighting, and where flammable vapors, gases, ignitable dusts, fibers or flying are present
- Locations requiring continuous and consistent light levels in extreme ambient temperatures
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist
- Classified and hazardous locations

Features

- Instant illumination and restrike, cold temperature operation/no warm-up required
- Independent chamber for LED module, driver and wiring, high reliability and easy installation and maintenance
- Latest LED Technology: Brand-new high efficiency LED exceed 140lm/w, fixture lumen efficiency exceed 115 lm/w
- High Reliability Driver: Meanwell brand driver, high reliability, efficiency exceed 98%, design for harshest environment
- Energy-efficient technology-up to 75% energy savings over HID fixtures
- Excellent Heat Sink Dissipation Performance: Lower LED and driver temperature, longer service life
- Wireless Connection: all mounting modules are wireless connected to junction box, easy installation and maintenance
- Various Mounting Option: 7 types of mounting options, easy wiring
- Operating Ambient Temperature: -40°C ~ +55°C



Compliances

IEC Standard

IEC60079-0, IEC60079-1, IEC60079-31, IEC60598-2-1
Ex d IIC T5 Gb
Ex tb IIIC T100°C Db IP66
Zone 1, Zone 2
Zone 21, Zone 22
IP66

EU Standard

EN60079-0, EN60079-1, EN60079-31, EN60598-2-1
II 2 G Ex d IIC T5 Gb
II 2 D Ex tb IIIC T100°C Db IP66
Zone 1, Zone 2
Zone 21, Zone 22
IP66

NEC & CEC Standard

Class I, Div 1, Group A, B, C, D
Class II, Div.1, Group E, F, G
Class III
Wet Locations, Type 4X, IP66

UL Standard

UL844, UL1598, UL1598A

CSA Standard

CSA C22.2 No.137

Standard Materials

- Lamp housing and adapter – die cast aluminum with anti-corrosion powder coat
- Lens – heat-resistant and impact-resistant tempered glass
- Gaskets – silicone
- External hardware – carbon steel or stainless steel
- Factory-sealed, no external seals required

LED System

- High intensity discrete power emitters
- Standard: cool white (5000K); optional: warm white (3000K); nature white(4000K)
- Brand-new LED chips

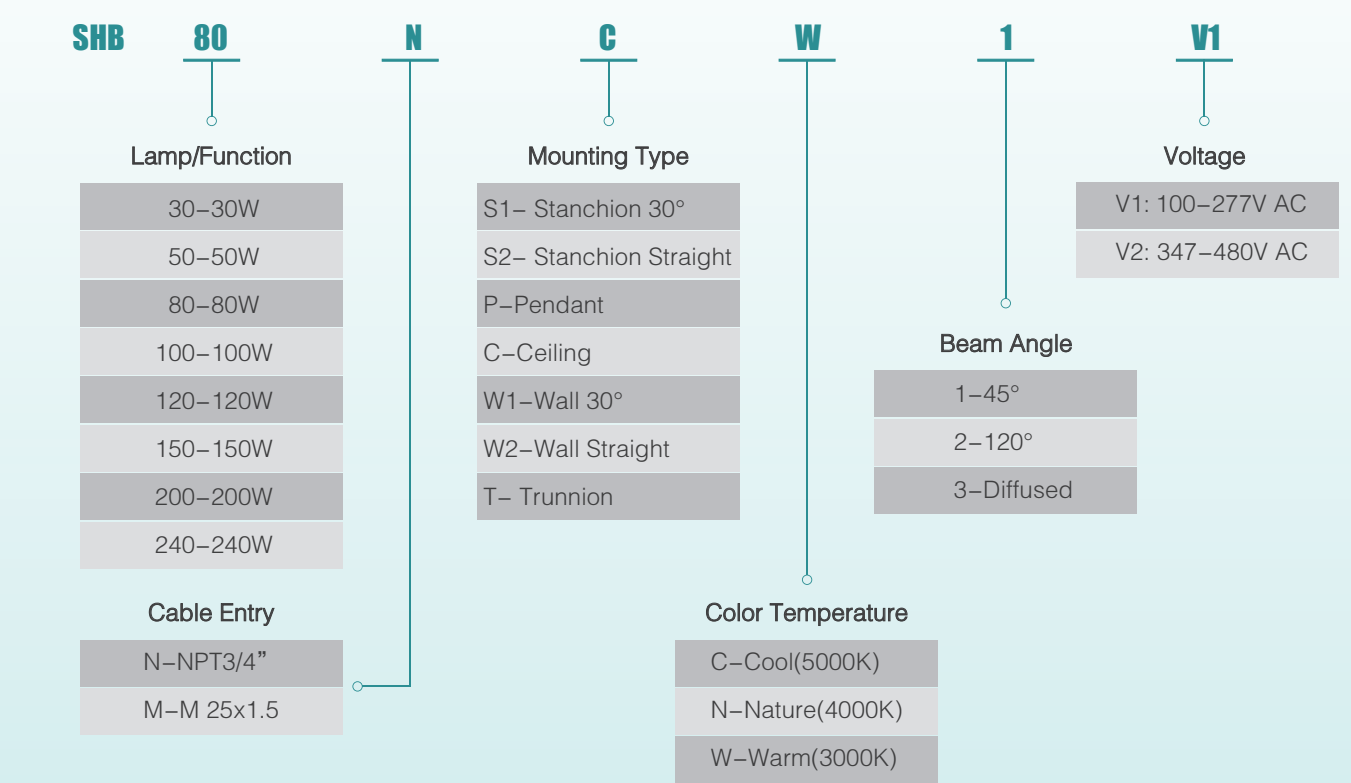
LED Driver

Input Voltage	100-277V AC 50/60Hz,	
	347-480V AC 50/60Hz	
THD	<20%	
Power Factor	0.98 (220V/full load)	
Protection	Short Circuit/Over Voltage/Over Heat	
	Over Heat/Surge Protection	
	Surge Protection	Line to line 4KV Line to earth 10KV
IP	IP66	

Technical Datasheet

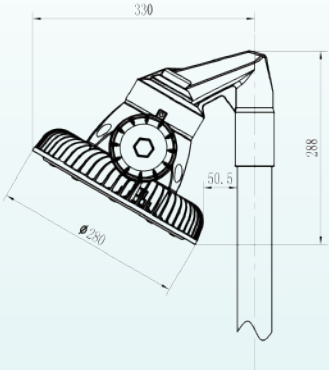
Classification	Class I,Div.1,Group A, B, C, D Class I,Div.1,Group E, F, G Class III Zone 1&2;Zone 21&22							
Standards	IEC60079-0, IEC60079-1, IEC60079-31, IEC60598-2-1 EN60079-0, EN60079-1, EN60079-31, EN60598-2-1 UL844, UL1598, UL1598A CSA C22.2 No.137							
Ex-mark	II 2 G Ex d IIC T5 Gb II 2 D Ex tb IIIC T100°C Db IP66							
Rated Voltage	100-277V AC 50/60Hz 347-480V AC 50/60Hz							
Rated Wattage(W)	30W	50W	80W	100W	120W	150W	200W	240W
Luminous Flux(LM)	3600	6000	9600	12000	14400	18000	24000	28800
Color Temperature	5000K / 4000K/ 3000K							
IP Grade	Wet Locations, Type 4X, IP66							
Ambient temperature	-40°C~ +55°C /-40° F ~ +131° F							
Cable Entry	NPT 3/4" or M25X1.5 (adaptor for M20x1.5, NPT 1" , NPT1 1/2")							
Terminals	terminal blocks≤2.5mm², cable diameter 10-14mm							
Installation	Stanchion 30° / Stanchion Straight/ Pendant/ Ceiling/ Wall 30° / Wall Straight/ Trunnion							
Beam Angle	45° /120° /Diffused							

Catalogue Numbering System

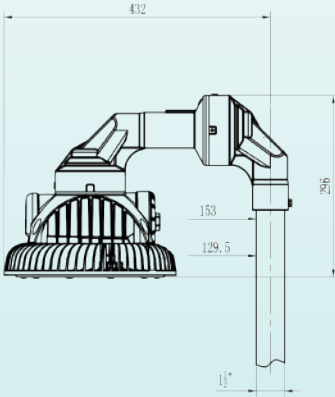


Mounting Options & Dimensions (mm/inch)

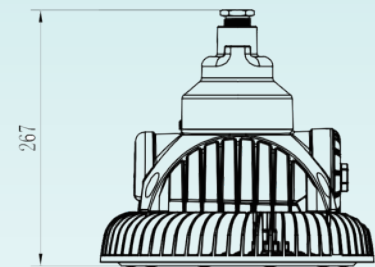
S1:Stanchion 30°



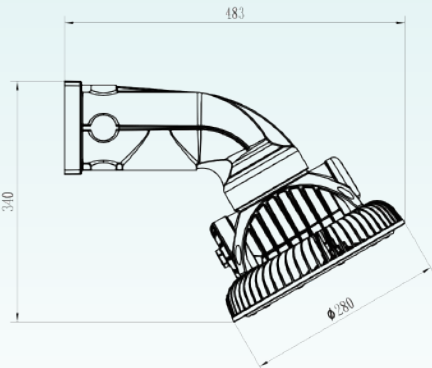
S2: Stanchion Straight



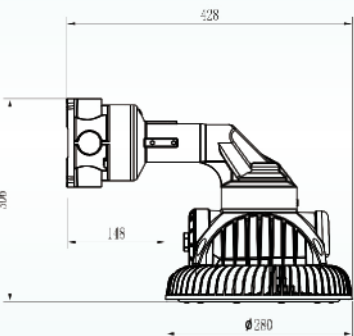
P: Pendant



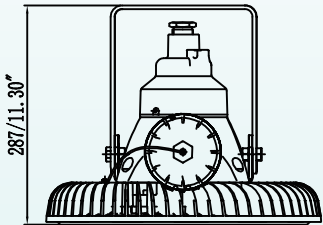
W1: Wall 30°



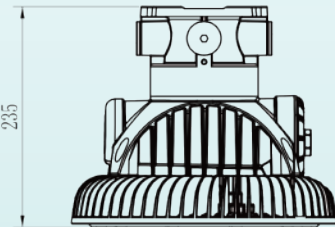
W2: Wall Straight



T: Trunnion



C: Ceiling



SHB-II Series LED High Bay Luminaires

Class I, Div.2, Group A, B, C, D Hazardous Locations
Class II, Div.1, Group E, F, G Wet Locations, Type 4X, IP 66
Class III
Zone 2; Zone 21&22



Model	Luminous Flux(LM)	Wattage	Lumen/Wattage	Equivalent HID luminaire
SHB-II-20W	2800	20W	140	70-100W
SHB-II-40W	5600	40W	140	100-150W
SHB-II-60W	8400	60W	140	175-250W
SHB-II-80W	11200	80W	140	320-400W
SHB-II-100W	14000	100W	140	400W
SHB-II-120W	16800	120W	140	400-600W
SHB-II-150W	21000	150W	140	600-750W
SHB-II-200W	28000	200W	140	750-1000W
SHB-II-250W	35000	250W	140	-
SHB-II-300W	45000	300W	140	-
SHB-II-350W	49000	350W	140	-
SHB-II-400W	56000	400W	140	-

Applications

- For areas with mounting heights of 10-50ft (3-15m)
- Oil and gas refineries, drilling rigs, petrochemical facilities, land-based and offshore rigs, mining, areas include derrick, mast, SCR house, top drive, operator's house, power and pump stations, and where flammable vapors, gases, ignitable dusts, fibers or flying are present
- Locations requiring continuous and consistent light levels in extreme ambient temperatures
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist; Type 4X, marine, wet locations and hose-down environments
- Classified and hazardous locations

Features

- Instant illumination and restrike, cold temperature operation/no warm-up required
- Independent chamber for LED module, driver and wiring, high reliability and easy installation and maintenance
- Latest LED Technology: Cree/Nichia high efficiency LED exceed 160lm/W, fixture lumen efficiency exceed 140 lm/w
- High Reliability Driver: high reliability, efficiency exceed 98%, design for harshest environment
- Energy-efficient technology: up to 75% energy savings over HID fixtures
- Excellent Heat Sink Dissipation Performance: Lower LED and driver temperature, longer service life
- Various Mounting Option: 8 types of mounting options, easy wiring.
- Operating Ambient Temperature: -40° C ~ +55° C
- Beam Angel: standard diffused, 40° , 60° , 90° , 120° for option



Compliances

IEC Standard

IEC60079–0, IEC60079–7, IEC60079–31, IEC60079–2–1

Ex mb eb IIC T4 Gb

Ex tb IIIC T120°C Db IP66

Zone 2

Zone 21, Zone 22

EU Standard

EN60079–0, EN60079–7, EN60079–31, EN60079–2–1

II 2 G Ex mb IIC T4 Gb

II 2 D Ex tb IIC T120°C Db IP66

Zone 2

Zone 21, Zone 22

NEC & CEC Standard

Class I, Div.2, Group A, B, C, D

Class II, Div. 1, Group E, F, G

Class III

Wet Locations, Type 4X, IP66

UL Standard

UL844, UL1598, UL1598A

CSA Standard

CSA C22.2 No.137

Standard Materials

- Lamp housing and adapter – die cast aluminum with anti–corrosion powder coat
- Lens – heat–resistant and impact–resistant tempered glass
- Gaskets – silicone
- External hardware – carbon steel or stainless steel
- Factory sealed, no external seals required

LED System

- High intensity discrete power emitters
- Standard: cool white (5000K); optional: warm white (3000K); nature white(4000K)
- Brand–new LED chips

LED Driver

Input Voltage	100–277V AC 50/60Hz,	
	200–480V AC 50/60Hz	
THD	<20%	
Power Factor	0.98 (220V/full load)	
Protection	Short Circuit/Over Voltage/Over Heat	
	Surge Protection	Line to line 4KV Line to earth 10KV
IP	IP66	

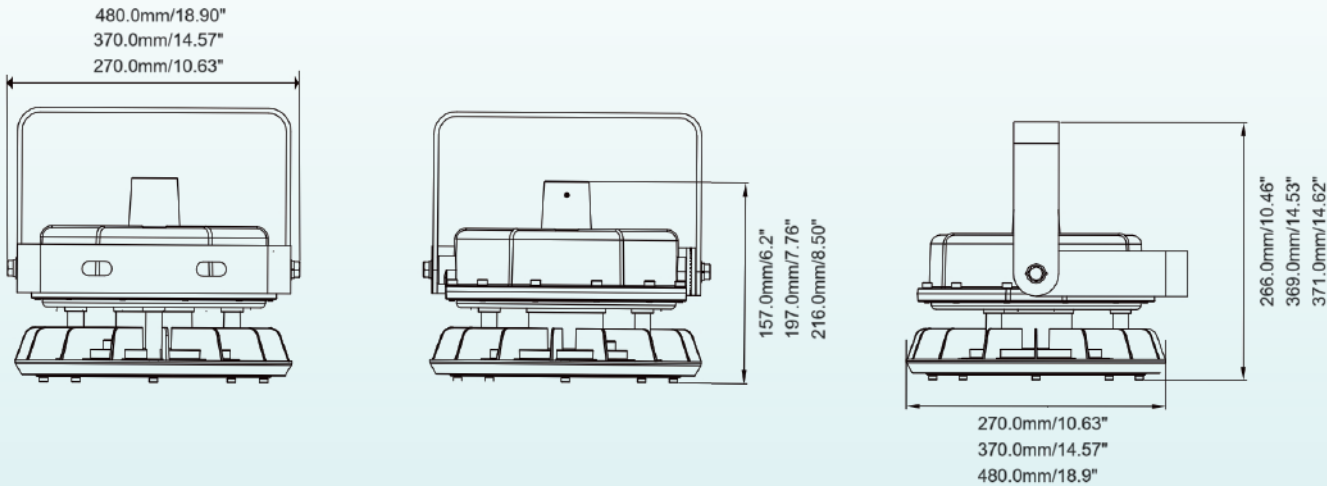
Technical Datasheet

Classification	Class I, Div.2, Group A,B,C,D Class II, Div.1, Group E,F,G Class III Zone 1&2; Zone 21&22											
Standards	IEC60079–0, IEC60079–7, IEC60079–31, IEC60598–2–1 EN60079–0, EN60079–7, EN60079–31, EN60598–2–1 UL844, UL1598, UL1598A CSA C22.2 No.137											
Ex–mark	II 2 G Ex mb IIC T4 Gb II 2 D Ex tb IIC T120°C Db IP66											
Rated Voltage	100–277V AC 50/60Hz 200–480V AC 50/60Hz											
Rated Wattage(W)	20W	40W	60W	80W	100W	120W	150W	200W	250W	300W	350W	400W
Luminous Flux(LM)	2800	5600	8400	11200	14000	16800	21000	28000	35000	45000	49000	56000
Color Temperature	2700K–5000K											
IP Grade	Wet Locations, Type 4X, IP66											
Ambient Temperature	–40° C ~ +55° C / –40° F~+131° F											
Cable Entry	M25*1.5 or NPT3/4”											
Terminals	Terminals blocks≤2.5mm², cable diameter 10–14mm											
Installation	Pendant/Trunnion/Hook/Ceiling/Wall 25° /Wall Straight/ Stanchion 25° / Stanchion Straight											
Beam Angle	40° ,60° ,90° ,120°											

Catalogue Numbering System

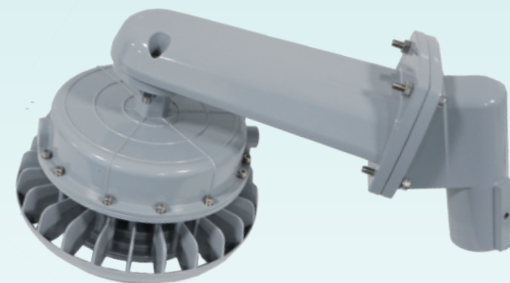
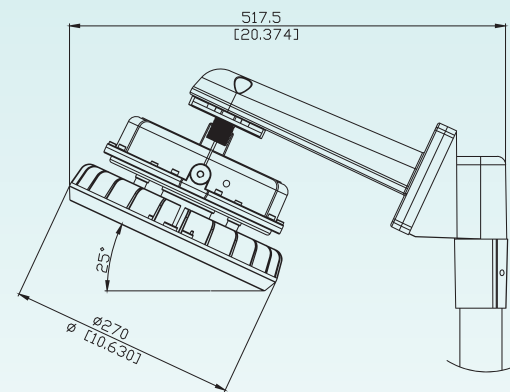
SHB-II		20	C	N	W	V	1
Lamp		Mounting Type		Cable Entry	Color Temperature	Voltage	Beam angle
20–20W	250–250w	S1: Stanchion 25°		N–NPT3/4”	C–Cool(5000K)	V1:100–277V AC	1–120°
40–40W	300–300W	S2: Stanchion Straight		M– M25x1.5	N–Nature(4000K)	V2:200–480V AC	2–90°
60–60W	350–350W	C: Ceiling			W–Warm(2700K)		3–60°
80–80W	400–400W	P: Pendant					4–40°
100–100W		T :Trunnion					
120–120W		W1:Wall 25°					
150–150W		W2:Wall Straight					
200–200W		H: Hook Type					

Mounting Options & Dimensions (mm/inch)

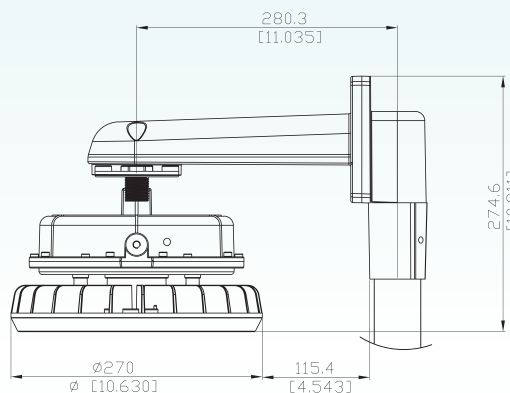


Mounting Options & Dimensions (mm/inch)

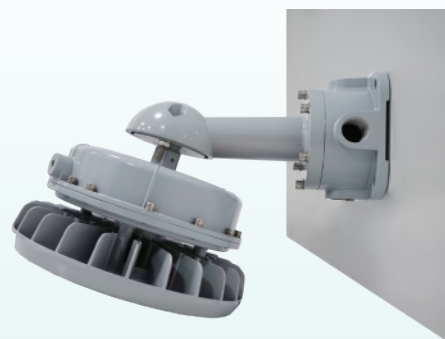
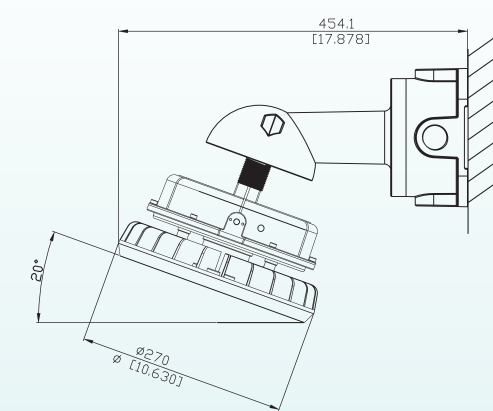
S1: Stanchion 25° Type



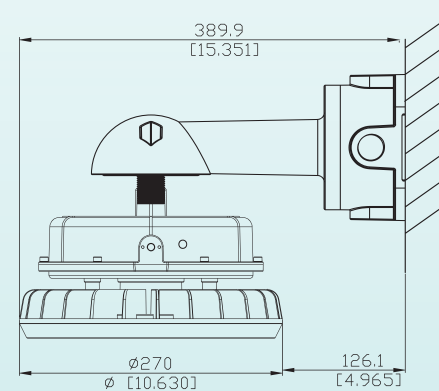
S2: Stanchion Straight Type



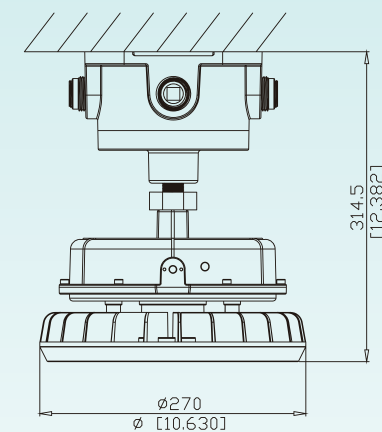
W1: Wall 25° Type



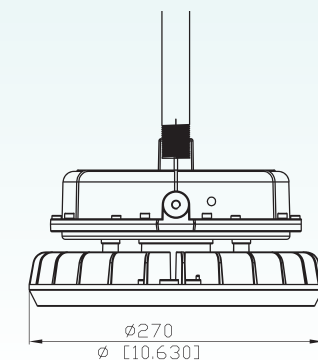
W2: Wall Straight Type



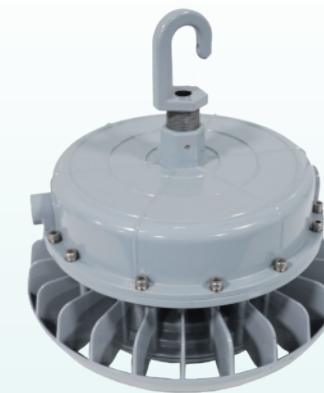
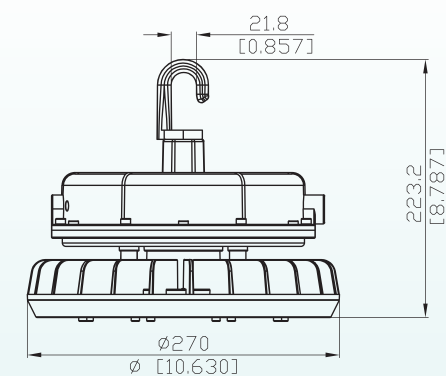
C: Ceiling Type



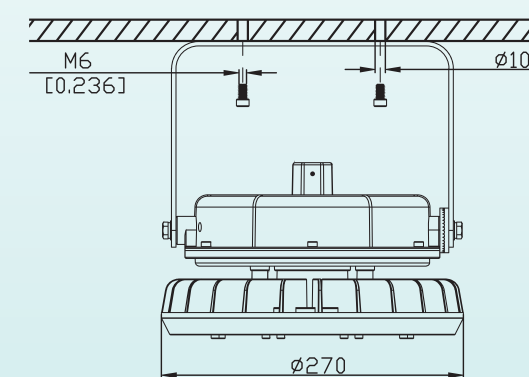
P: Pendant Type



H: Hook type



T: Trunnion Type



SO-I Series LED Bay Luminaires

Class I, Div.1, Group A, B, C, D Hazardous Locations
Class II, Div. 1, Group E, F, G Wet Locations, Type 4X, IP66
Class III
Class I, Zone1, Zone 2, Ex d



Model	Luminous Flux(LM)	Wattage	Lumen/Wattage	Equivalent HID luminaire
SO-I-LB-10W	1200	10W	120	70-100W
SO-I-LB-20W	2400	20W	120	70-100W
SO-I-LB-30W	3600	30W	120	70-100W
SO-I-LB-40W	4800	40W	120	70-100W
SO-I-MB-50W	6000	50W	120	100-150W
SO-I-MB-60W	7200	60W	120	100-150W
SO-I-MB-70W	8400	70W	120	100-150W
SO-I-MB-80W	9600	80W	120	175-250W
SO-I-HB-90W	10800	90W	120	175-250W
SO-I-HB-100W	12000	100W	120	320-400W
SO-I-HB-120W	14400	120W	120	320-400W
SO-I-HB-150W	18000	150W	120	400-600W
SO-I-HB-200W	24000	200W	120	650-750W
SO-I-HB-240W	28800	240W	120	750-1000W

Applications

- For areas with mounting heights of 10-50ft (3-15m)
- Oil and gas refineries, drilling rigs, petrochemical facilities, land-based and offshore rigs, mining, areas include derrick, mast, SCR house, top drive, operator's house, power and pump stations, and where flammable vapors, gases, ignitable dusts, fibers or flying are present
- Locations requiring continuous and consistent light levels in extreme ambient temperatures
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist; Type 4X, marine, wet locations and hose-down environments
- Classified and hazardous locations



Standard Materials

Housing: Die cast aluminum with anti-corrosion powder coat, grey
Lens: Heat-resistant and impact-resistant tempered glass
Gaskets: Silicone

Features

- Instant illumination and restrike, cold temperature operation/no warm-up required
- Independent chamber for LED module, driver and wiring, high reliability and easy installation
- Die cast aluminium housing reduce the temperature rise and optimize the heat sink performance
- To ease air flow and dust shedding, optimized vertical fins heat dissipation structure for low wattages SOLB-I, SOMB-I, unique annular fins heat dissipation structure for high wattages SOHB-I.
- To meet different needs for light distribution curve, flat type and high type glass for option.
- Latest LED Technology: high efficiency LED ranges 120-150lm/w
- Energy-efficient technology: up to 75% energy savings over HID fixtures
- Various mounting option: ceiling type, pendant type, wall type, pole type, easy wiring.
- Operating Ambient Temperature: -40°C ~ +55°C
- Beam Angel: standard diffused, 40° , 60° , 90° , 120° for option

Compliances

IEC Standard

IEC60079-0, IEC60079-1, IEC60079-31
Ex d IIC T6 Gb
Ex tb IIIC T80°C Db IP66
Zone 1, Zone2
Zone 21, Zone 22
IP66

NEC & CEC Standard

Class I, Div.1, Group A, B, C, D
Class II, Div.1, Group E, F, G
Class III
Wet Locations, Type 4X, IP66

EU Standard

EN60079-0, EN60079-1, EN60079-31
Ex II 2 G Ex d IIC T6 Gb
Ex II 2 D Ex tb IIIC T80°C Db IP66
Zone 1, Zone2
Zone 21, Zone 22
IP66

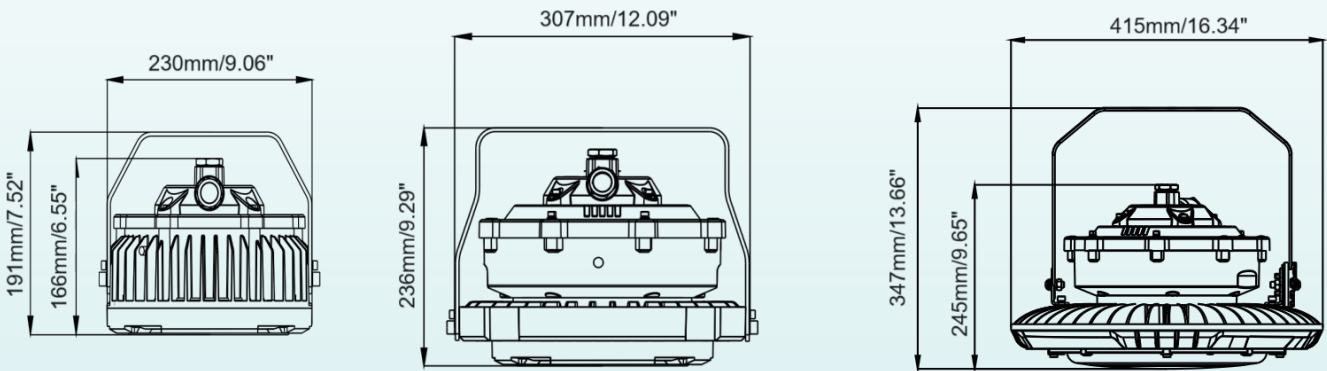
UL Standard

UL844, UL1598, UL1598A

CSA Standard

CSA C22.2 No.137

Mounting Options & Dimensions (mm/inch)



Technical Datasheet

Classification	Class I, Div 1, Group A,B, C, D Class II,Div.1, Group E F G Class III Zone 1&2;Zone 21&22													
Standards	IEC60079-0, IEC60079-1, IEC60079-31 EN60079-0, EN60079-1, EN60079-31 UL844, UL1598, UL1598A CSA C22.2 No.137													
Ex-mark	II 2 G Ex db IIC T6 Gb II 2 D Ex tb IIC T80°C Db IP66													
Rated Voltage	AC 100-277V 50/60Hz AC 277-480V 50/60Hz DC 12-24V													
Rated Wattage(W)	10W	20W	30W	40W	50W	60W	70W	80W	90W	100W	120W	150W	200W	240W
Luminous Flux(LM)	1200	2400	3600	4800	6000	7200	8400	9600	10800	12000	14400	18000	24000	28800
Color Temperature	2700K-5000K													
IP Grade	Wet Locations, Type 4X, IP66													
Ambient Temperature	-40°C~ +55°C / -40° F~+131° F													
Cable Entry	M25x1.5 or NPT 3/4"													
Terminals	Terminals blocks≤2.5mm², cable diameter 10-14mm													
Installation	Ceiling / Bracket / Wall / Pendant / S1 Stanchion / S2 Stanchion													
Beam Angle	40° , 60° , 90° , 120°													

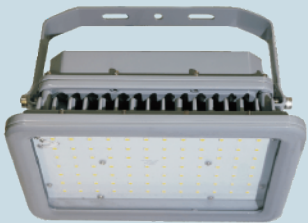
Catalogue Numbering System

S0 - I - LB	10	B	N	W	V	1	F	R
Type	Power	Mounting	Cable Entry	Color Temp	Beam Angle	Glass		
LB-Low bay	10-10W;	B-Bracket	N-NPT 3/4"	C-Cool(5000K)	1-120°	F-Flat		
MB-Middle bay	20-20W;	C-Ceiling	M-M25x1.5	N-Nature(4000K)	2-90°	H-High		
HB-High bay	30-30W;	P-Pendant		W-Warm(3000K)	3-60°			
	40-40W;	W-Wall			4-40°			
	50-50W;	S1- Flange stanchion						
	60-60W;	S2-Fence stanchion						
	70-70W;							
	80-80W;			Voltage		Reflector		
	90-90W;			V1:100-277V AC		R-With reflector		
	100-100W;			V2:277-480V AC		O-Without reflector		
	120-120W;			V3:12-24V DC				
	150-150W;							
	200-200W;							
	240-240W							



SHF-IIA Series LED Floodlight

Class I, Div.2, Group A, B, C, D Hazardous Locations
Class II, Div.1, Group E, F, G Wet Locations, Type 4X, IP66
Class III
Zone 2; Zone 21&22



Model	Luminous Flux(LM)	Wattage	Lumen/Wattage	Equivalent HID luminaire
SHF-IIA-20W	2800	20W	140	70-100W
SHF-IIA-40W	5600	40W	140	100-150W
SHF-IIA-60W	8400	60W	140	175-250W
SHF-IIA-80W	11200	80W	140	320-400W
SHF-IIA-100W	14000	100W	140	400W
SHF-IIA-120W	16800	120W	140	400-600W
SHF-IIA-150W	21000	150W	140	600-750W
SHF-IIA-200W	28000	200W	140	750-1000W
SHF-IIA-250W	35000	250W	140	1000W
SHF-IIA-300W	45000	300W	140	-
SHF-IIA-350W	49000	350W	140	-
SHF-IIA-400W	56000	400W	140	-



Applications

- For areas with mounting heights of 10-50ft (3-15m)
- Oil and gas refineries, drilling rigs, petrochemical facilities, land-based and offshore rigs, mining, areas include derrick, mast, SCR house, top drive, operator's house, power and pump stations, and where flammable vapors, gases, ignitable dusts, fibers or flying are present
- Locations requiring continuous and consistent light levels in extreme ambient temperatures
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist; Type 4X, marine, wet locations and hose-down environments
- Classified and hazardous locations

Features

- Instant illumination and restrike, cold temperature operation/no warm-up required
- Independent chamber for LED module, driver and wiring, high reliability and easy installation and maintenance
- Latest LED Technology: Cree/Nichia high efficiency LED exceed 160lm/w, fixture lumen efficiency exceed 140 lm/w
- High Reliability Driver: high reliability, efficiency exceed 98%, design for harshest environment
- Energy-efficient technology: up to 75% energy savings over HID fixtures
- Excellent Heat Sink Dissipation Performance: Lower LED and driver temperature, longer service life
- Operating Ambient Temperature: -40° C ~ +55° C
- Beam Angel: standard diffused, 40° , 60° ,90° , 120° for option





Compliances

IEC Standard

IEC60079-0, IEC60079-1, IEC60079-31, IEC60079-2-1
Ex ec IIC T6/T3 Gc
Ex tb IIIC T85°C/T103°C Db IP66
Zone 2; Zone21, Zone 22
IP66

EU Standard

EN60079-0, EN60079-1, EN60079-31, EN60079-2-1
 II 3G Ex ec IIC T6/T3 Gc
 II 2D Ex tb IIIC T85°C/T103°C Db IP66
Zone 2; Zone 21, Zone 22
IP66

NEC & CEC Standard

Class I, Div.2, Group A, B, C, D
Class II, Div.1, Group E, F, G
Class III
Wet Locations, Type 4X, IP66

UL Standard

UL844, UL1598, UL1598A

CSA Standard

CSA C22.2 No.137

Standard Materials

- Lamp housing and adapter – die cast aluminum with anti-corrosion powder coat
- Lens – heat-resistant and impact-resistant tempered glass
- Gaskets – silicone
- External hardware – carbon steel or stainless steel
- Factory sealed, no external seals required

LED System

- High intensity discrete power emitters
- Standard: cool white (5000K); optional: warm white (3000K); nature white(4000K)
- Brand-new LED chips








LED Driver

Input Voltage	100–277V AC 50/60Hz,	
	200–480V AC 50/60Hz	
THD	<20%	
Power Factor	0.98 (220V/full load)	
Protection	Short Circuit/Over Voltage/Over Heat	
	Surge Protection	Line to line 4KV
		Line to earth 10KV
IP	IP66	

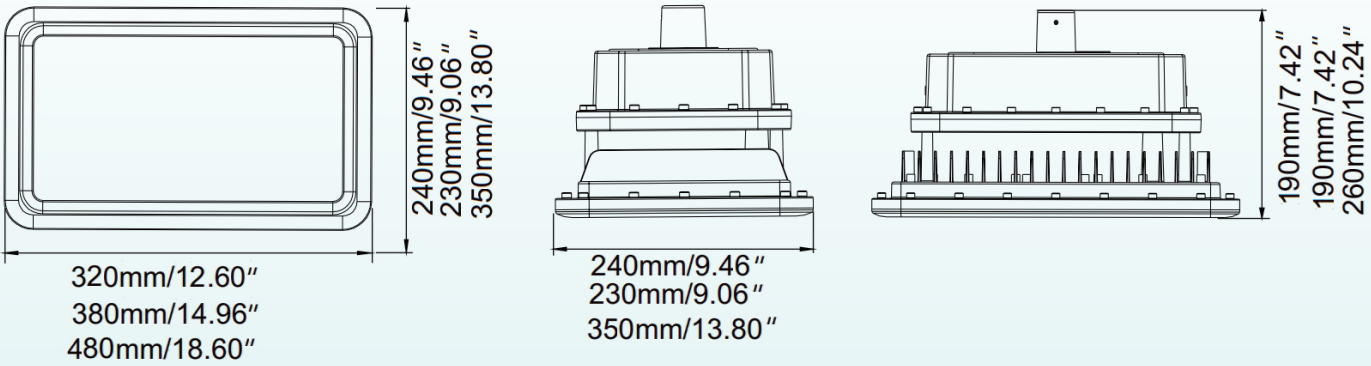
Technical Datasheet

Classification	Class I,Div.2,Group A,B,C,D Class II,Div.1,Group E,F,G Class III Zone 2;Zone 21&22											
Standards	IEC60079-0, IEC60079-1, IEC60079-31, IEC60598-2-1 EN60079-0, EN60079-1, EN60079-31, EN60598-2-1 UL844, UL1598, UL1598A CSA C22.2 No.137											
Ex-mark	II 3G Ex ec IIC T6/T3 Gc II 2D Ex tb IIIC T85°C/T103°C Db IP66											
Rated Voltage	AC 100–277V 50/60Hz AC 200–480V 50/60Hz											
Rated Wattage(W)	20W	40W	60W	80W	100W	120W	150W	200W	250W	300W	350W	400W
Luminous Flux(LM)	2800	5600	8400	11200	14000	16800	21000	28000	35000	45000	49000	56000
Color Temperature	2900K–5000K											
IP Grade	Wet Locations, Type 4X, IP66											
Ambient Temperature	–40° C ~ +55° C / –40° F~+131° F											
Cable Entry	M25*1.5 or NPT3/4”											
Terminals	Terminals blocks≤2.5mm², cable diameter 10–14mm											
Installation	Bracket											

Catalogue Numbering System

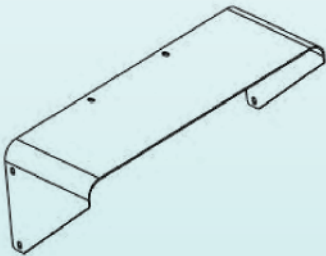
SHF-IIA	20	B	N	W	V	1	E
							
	Lamp	Mounting Type	Cable Entry	Color Temperature	Voltage	Beam angle	Emergency
	20–20W	B–Bracket	N–NPT3/4”	C–Cool(5000K)	V1:100–277V AC	1–120°	
	40–40W		M–M25x1.5	N–Nature(4000K)	V2: 200–480V AC	2–90°	
	60–60W		W–Warm(3000K)			3–60°	
	80–80W					4–40°	
	100–100W						
	120–120W						
	150–150W						
	200–200W						
	250–250W						
	300–300W						
	350–350W						
	400–400W						

Mounting Options & Dimensions (mm/inch)

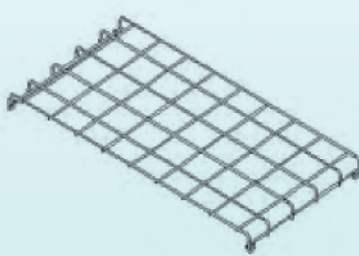


Optional Accessories

Glare Shield Visor



Wire Guard



SHF-IA Series LED Floodlight

Class I, Div.1, Group A, B, C, D

Class II, Div.1, Group E, F, G

Class III

Zone 1&2; Zone 21&22

Hazardous Locations

Wet Locations, Type 4X, IP 66

Model	Luminous Flux(LM)	Wattage	Lumen/Wattage	Equivalent HID luminaire
SHF-IA-20W	2600	20W	130	70-100W
SHF-IA-40W	5200	40W	130	100-150W
SHF-IA-60W	7800	60W	130	175-250W
SHF-IA-80W	10400	80W	130	320-400W
SHF-IA-100W	13000	100W	130	400W
SHF-IA-120W	15600	120W	130	400-600W
SHF-IA-150W	19500	150W	130	600-750W
SHF-IA-200W	26000	200W	130	750-1000W



Applications

- For areas with mounting heights of 10-50ft (3-15m)
- Oil and gas refineries, drilling rigs, petrochemical facilities, land-based and offshore rigs, mining, areas include derrick, mast, SCR house, top drive, operator’ s house, power and pump stations, and where flammable vapors, gases, ignitable dusts, fibers or flying are present
- Locations requiring continuous and consistent light levels in extreme ambient temperatures
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist; Type 4X, marine, wet locations and hose-down environments
- Classified and hazardous locations

Features

- Instant illumination and restrike, cold temperature operation/no warm-up required
- Independent chamber for LED module, driver and wiring, high reliability and easy installation and maintenance
- Latest LED Technology: Cree/Nichia high efficiency LED exceed 130lm/w, fixture lumen efficiency exceed 140 lm/w
- High Reliability Driver: high reliability, efficiency exceed 98%, design for harshest environment
- Energy-efficient technology: up to 75% energy savings over HID fixtures
- Excellent Heat Sink Dissipation Performance: Lower LED and driver temperature, longer service life
- Operating Ambient Temperature: -40° C ~ +55° C
- Beam Angel: standard diffused, 40° , 60° ,90° , 120° for option
- With stainless steel safety rope

Compliances

IEC Standard

IEC60079-0, IEC60079-1, IEC60079-31, IEC60079-2-1
Ex d IIC T6 Gb
Ex tb IIIC T80°C Db IP66
Zone 1,Zone 2;Zone21, Zone 22
IP66

EU Standard

EN60079-0, EN60079-1, EN60079-31, EN60079-2-1
II 2 G Ex d IIC T6 Gb
II 2 G Ex tb IIC T80°C Db IP66
Zone 1, Zone 22; Zone 21, Zone 22
IP66

NEC & CEC Standard

Class I, Div.1, Group A, B, C, D
Class II, Div. 1, Group E, F, G
Class III
Wet Locations, Type 4X, IP66

UL Standard

UL844, UL1598, UL1598A

CSA Standard

CSA C22.2 No.137

Standard Materials

- Lamp housing and adapter – die cast aluminum with anti-corrosion powder coat
- Lens – heat-resistant and impact-resistant tempered glass
- Gaskets – silicone
- External hardware – carbon steel or stainless steel
- Factory sealed, no external seals required

LED System

- High intensity discrete power emitters
- Standard: cool white (5000K); optional: warm white (3000K); nature white(4000K)
- Brand-new LED chips

LED Driver

Input Voltage	100-277V AC 50/60Hz,	
	277-480V AC 50/60Hz	
THD	<20%	
Power Factor	0.98 (220V/full load)	
Protection	Short Circuit/Over Voltage/Over Heat	
	Surge Protection	Line to line 4KV
		Line to earth 10KV
IP	IP66	

Catalogue Numbering System

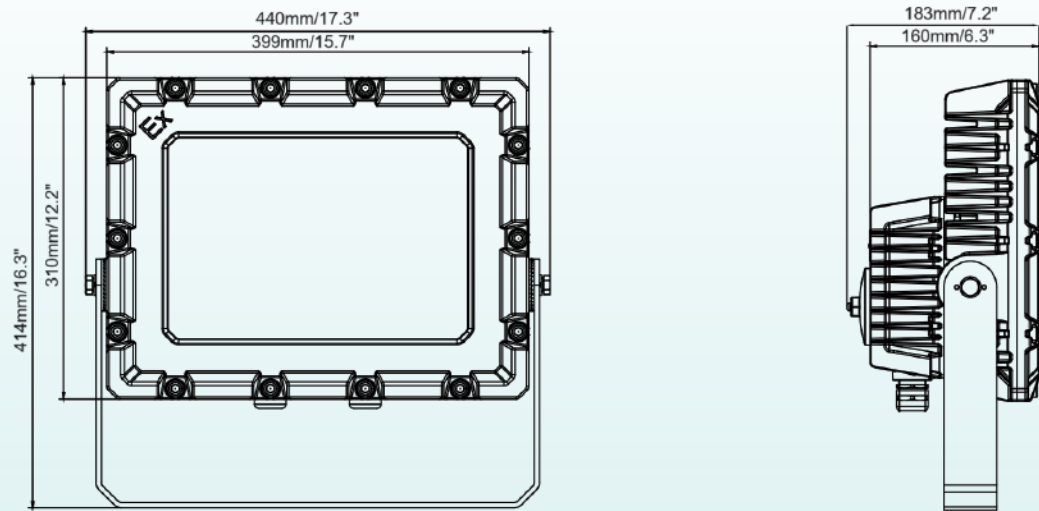
SHF-IA	20	B	N	W	V	1
	Lamp	Mounting Type	Cable Entry	Color Temperature	Voltage	Beam angle
	20-20W	B-Bracket	N-NPT3/4"	C-Cool(5000K)	V1:100-277V AC	1-120°
	40-40W		M-M25x1.5	N-Nature(4000K)	V2:277-480V AC	2-90°
	60-60W			W-Warm(2700K)		3-60°
	80-80W					4-40°
	100-100W					
	120-120W					
	150-150W					
	200-200W					



Technical Datasheet

Classification	Class I,Div.1,Group A,B,C,D Class II,Div.1,Group E,F,G Class III Zone 1&2;Zone 21&22							
Standards	IEC60079-0, IEC60079-1, IEC60079-31, IEC60598-2-1 EN60079-0, EN60079-1, EN60079-31, EN60598-2-1 UL844, UL1598, UL1598A CSA C22.2 No.137							
Ex-mark	II 2 G Ex d IIC T6 Gb II 2 G Ex tb IIC T80°C Db IP66							
Rated Voltage	100-277V AC 50/60Hz 277-480V AC 50/60Hz							
Rated Wattage(W)	20W	40W	60W	80W	100W	120W	150W	200W
Luminous Flux(LM)	2600	5200	7800	10400	13000	15600	19500	26000
Color Temperature	2900K-5000K							
IP Grade	Wet Locations, Type 4X, IP66							
Ambient Temperature	-40° C ~ +55° C / -40° F ~ +131° F							
Cable Entry	M25*1.5 or NPT3/4"							
Terminals	Terminals blocks ≤2.5mm², cable diameter 10-14mm							
Installation	Bracket							

Mounting Options & Dimensions (mm/inch)



SHF-II Series LED Floodlight

Class I, Div.2, Group A, B, C, D Hazardous Locations
Class II, Div.1, Group E, F, G Wet Locations, Type 4X, IP 66
Class III
Zone2; Zone 21&22



Model	Typical Lumens	Wattage	Lumen/Wattage	Equivalent HID luminaire
SHF-II-150W	22500	150W	150	750W
SHF-II-200W	30000	200W	150	750-1000W
SHF-II-240W	36000	240W	150	1000W

Applications

- For areas with mounting heights of 50 feet/15m
- Oil and gas refineries, drilling rigs, petrochemical facilities, food and beverage facilities, platforms, loading docks, tunnels, indoor/outdoor spotlighting, outdoor wall and stanchion mounted general area lighting, and where flammable vapors, gases, ignitable dusts, fibers or flying are present
- Locations requiring continuous and consistent light levels in extreme ambient temperatures
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist
Classified and hazardous locations

Features

- Instant illumination and restrike, cold temperature operation/no warm-up required
- Independent chamber for LED module, driver and wiring, high reliability and easy installation and maintenance
- Latest LED Technology: High efficiency LED exceed 150 lm/w, fixture lumen efficiency exceed 160 lm/w
- High Reliability Driver: Meanwell brand driver, high reliability, efficiency exceed 98%, design for harshest environment
- Energy-efficient technology: up to 75% energy savings over HID fixtures
- Excellent Heat Sink Dissipation Performance: Lower LED and driver temperature, longer service life
- Operating Ambient Temperature: -40° C ~ +65° C
- Beam Angel: 120° for option



Compliances

IEC Standard

IEC60079–0, IEC60079–15, IEC60079–31
Ex nR IIC T6/T5 Gc
Ex tb IIIC T80°C/T95°C Db IP66
Zone 2
Zone 21, Zone 22
IP66

EU Standard

EN60079–0, EN60079–15, EN60079–31
Ex II 3 G Ex nR IIC T6/T5 Gb
Ex II 2 D Ex tb IIIC T80°C/T95°C Db IP66
Zone 2
Zone 21, Zone 22
IP66

NEC & CEC Standard

Class I, Div 2, Group A, B, C, D
Class II, Div 1, Group E, F, G
Class III
Wet Locations, Type 4X, IP66

UL Standard

UL844, UL1598, UL1598A

CSA Standard

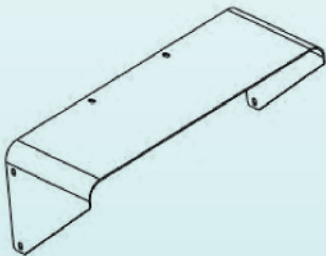
CSA C22.2 No.137

Catalogue Numbering System

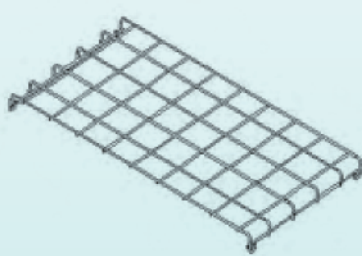
SHF-II	20	B	C	W	V	1
Lamp/Function		Mounting Type	Cable Entry	Color Temperature	Voltage	Beam Angle
150–150W	Bracket		N–NPT3/4"	C–Cool(5000K)	V1:100–277V AC	120°
200–200W			M–M25x1.5	N–Nature(4000K)	V2:277–480V AC	
240–240W				W–Warm(3000K)		

Optional Accessories

Glare Shield Visor



Wire Guard



Standard Materials

- Lamp housing and adapter – die cast aluminum with anti–corrosion powder coat
- Lens – heat–resistant and impact–resistant tempered glass
- Gaskets – silicone
- External hardware – carbon steel or stainless steel
- Factory sealed, no external seals required

LED System

- High intensity discrete power emitters
- Standard: cool white (5700K); optional: warm white (2700K); nature white(4000K)
- Brand–new LED chips

LED Driver

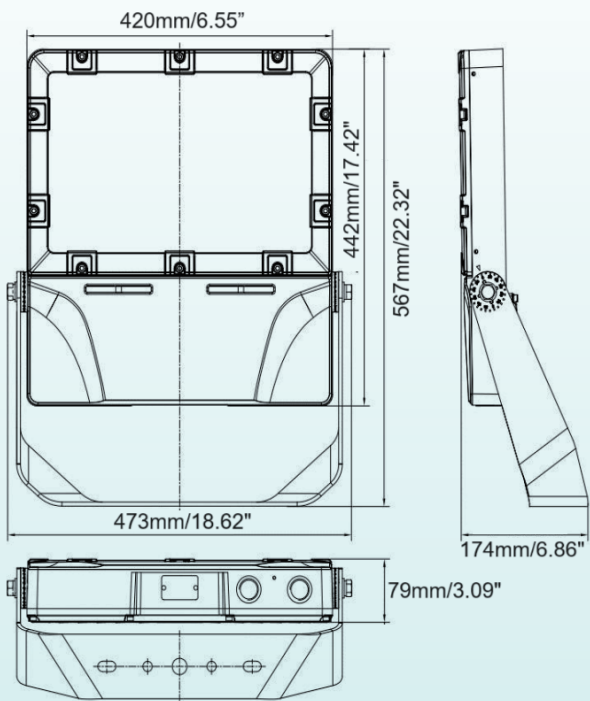
Input Voltage	100–277V AC 50/60Hz 277–480V AC 50/60Hz	
THD	<10%	
Power Factor	0.98 (220V/full load)	
Protection	Short Circuit/Over Voltage/Over Heat	
	Surge Protection	Line to line 4KV Line to earth 10KV
IP	IP66	

Technical Datasheet

Classification	Class I,Div.2,Group A,B,C,D Class II,Div.1,Group E,F,G Class III Zone2;Zone 21&22		
Standards	IEC60079–0, IEC60079–15, IEC60079–31 EN60079–0, EN60079–15, EN60079–31 UL844, UL1598, UL1598A CSA C22.2 No.137		
Ex–mark	II 3 G Ex nR IIC T6/T5 Gb II 2 D Ex tb IIIC T80°C/T95°C Db IP66		
Rated Voltage	100–277V AC 50/60Hz 277–480V AC 50/60Hz		
Rated Wattage(W)	150W	200W	240W
Luminous Flux(LM)	22500	30000	36000
Color Temperature	5000K / 4000K / 3000K		
IP Grade	Wet Locations, Type 4X, IP66		
Ambient temperature	–40° C~ +65° C /–40° F ~ +149° F		
Cable Entry	NPT 3/4" or M25*1.5		
Terminals	terminal blocks≤2.5mm², cable diameter 10–14mm		
Installation	Bracket		
Beam Angle	120°		

Mounting Options & Dimensions (mm/inch)

Bracket



SHF-I Series LED Floodlight

Class I, Div.1, Group A, B, C, D


Class II, Div.1, Group E, F, G

Class III

Zone 1&2; Zone21&22

Hazardous Locations

Wet Locations, Type 4X, IP 66



Model	Lumens (lm)	Wattag	Lumens per Watt (lm/W)	Equivalent HID Luminaire
SHF-I-30W	3600	30W	120	70W
SHF-I-40W	4800	40W	120	100W
SHF-I-60W	7200	60W	120	150W
SHF-I-80W	9600	80W	120	175-250W
SHF-I-100W	12000	100W	120	320-400W
SHF-I-120W	14400	120W	120	400W
SHF-I-150W	18000	150W	120	400W-600W
SHF-I-200W	24000	200W	120	1000W
SHF-I-240W	28800	240W	120	-



Applications

- High lumen output for installation in high mounting heights of 10–44 feet/3–13m
- Oil and gas refineries, drilling rigs, petrochemical facilities, food and beverage facilities, platforms, loading docks, tunnels, outdoor wall and stanchion mounted general area lighting, and where flammable vapors, gases, ignitable dusts, fibers or flying are present
- Locations requiring continuous and consistent light levels in extreme ambient temperatures
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist; Type 4X, marine, wet location and hose–down environments
- Classified and hazardous locations

Features

With well–constructed aluminum housing, SHF–I series explosion proof led flood light, as a prevalent model of explosion proof led lights, are rigid demand for refinery lighting and paint booth lights to brighten the large space for hazardous lighting solutions. In order to serve lighting solutions for upstream oil and gas and downstream gas station lights, lighting zone are designed for class 1 div 1, class 1 div 2, class 2 division 1 and class 2 division 2, ATEX zone can be also zone 1 and zone 2 as ATEX led floodlight.

- Adjustable lighting angle to direct to any requested points
- Wide–spread and large–area heat dissipation structure for stable working
- Separate small lens for every led chips unit to reduce light waste
- Isolated high intensive flame proof aluminum housing for led driver

Features

- Housing: Die cast aluminum with anti–corrosion powder coat, grey
- Lens: Heat–resistant and impact–resistant tempered glass
- Gaskets: Silicone

Compliances

IEC Standard IEC60079–0, IEC60079–1, IEC60079–31, IEC60598–2–1 Ex d e mb IIC T6 Gb Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	EU Standard EN60079–0, EN60079–1, EN60079–31, EN60598–2–1 Ex II 2 G Ex d e mb IIC T6 Gb Ex II 2 D Ex tb IIIC T80°C Db IP66 Zone 1, Zone 2 Zone 21, Zone 22	NEC & CEC Standard Class I, Div 1, Group A, B, C, D Class II, Div.1, Group E, F, G Class III
UL Standard UL844, UL1598, UL1598A	CSA Standard CSA C22.2 No.137	

Catalogue Numbering System

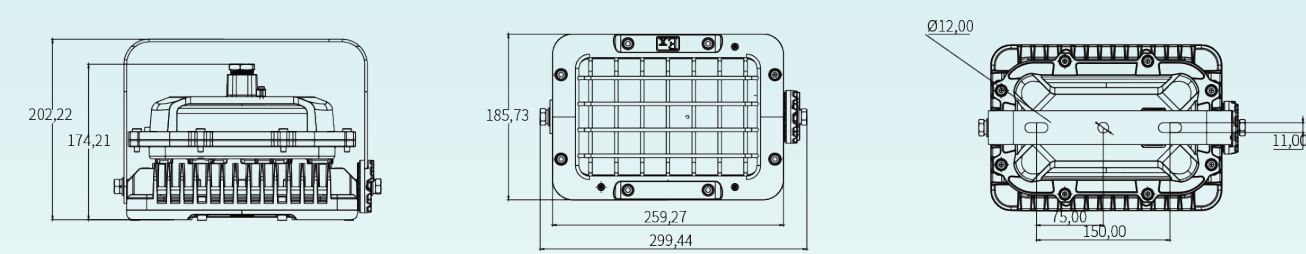
Rated Voltage	100–277V AC 50/60Hz					277–480V AC 50/60Hz			
Wattage(W)	30W	40W	60W	80W	100W	120W	150W	200W	240W
Lumens(lm)	3600	4800	7200	9600	12000	14400	18000	24000	28800
Color Temperature	5000K/4000K/3000K								
IP Grade	Wet Locations, Type 4X, IP66								
Ambient Temperature	–40°C~ +55°C /–40°F ~ +131°F								
Cable Entry	NPT 3/4” or M25X1.5 (adaptor for M20x1.5, NPT 1” , NPT1 1/2”)								
Terminals	Terminal blocks ≤ 2.5mm , cable diameter 10–14mm								
Mounting Type	Bracket (Possible wall, ceiling, and block mounting with adjustable angle)								
Beam Angle	120° / 60° / 45° / 30°								

Catalogue Numbering System

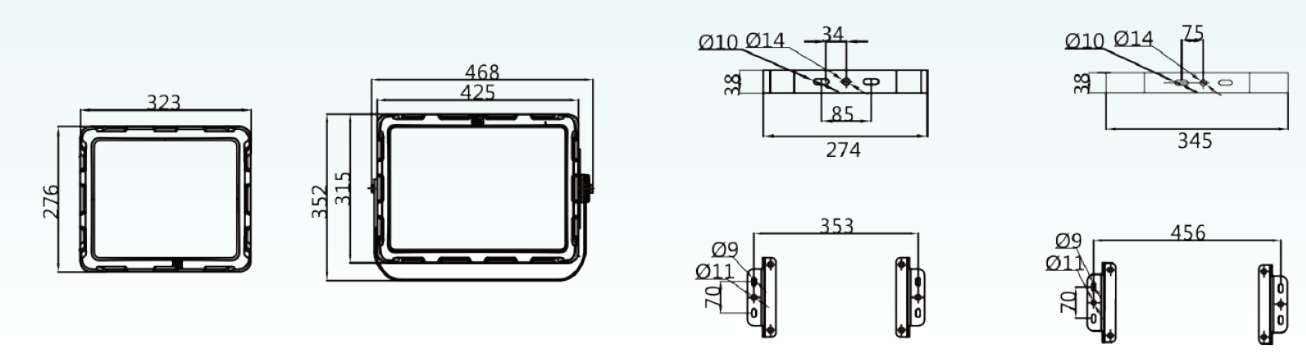
SHF-I-	20	N	C	W	V1	1
	Lamp	Cable Entry	Mounting Type	Color Temperature	Voltage	Beam Angle
	30–30W	N–NPT 3/4"	B–Bracket	C–Cool(5000K)	V1:100–277V AC	1–120°
	40–40W	M–M25x1.5		N–Nature(4000K)	V2:277–480V AC	2–60°
	60–60W			W–Warm(3000K)		3–45°
	80–80W					4–30°
	100–100W					
	120–120W					
	150–150W					
	200–200W					
	240–240W					



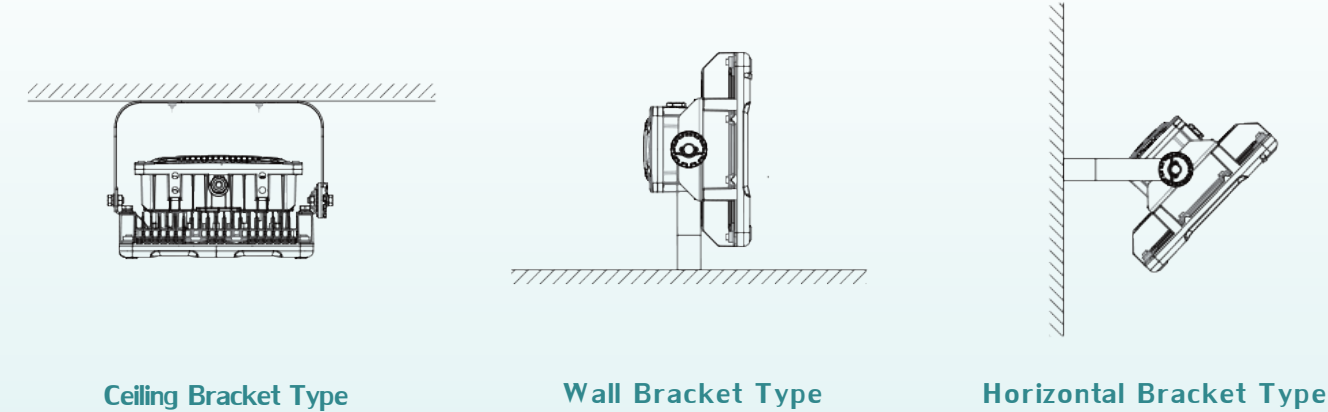
Mounting Options & Dimensions (mm/inch)



SHF-I (30W-80W)



SHF-I (80W-200W)



Ceiling Bracket Type

Wall Bracket Type

Horizontal Bracket Type

SSL Series LED Street Lights

Class I, Div.1, Group A, B, C, D Hazardous Locations
Class II, Div.1, Group E, F, G Wet Locations, Type 4X, IP 66
Class III
Zone 1&2; Zone21&22



Model	Lumens (lm)	Wattag	Lumens per Watt (lm/W)	Equivalent HID Luminaire
SSL-80W	11200	80W	120	320-400W
SSL-100W	14000	100W	120	400W
SSL-120W	16800	120W	120	400-600W
SSL-150W	21000	150W	120	600-750W
SSL-200W	24000	200W	120	750-1000W
SSL-250W	30000	250W	120	-
SSL-300W	36000	300W	120	-

Applications

- High lumen output for installation in high mounting heights of 10-44 feet/3-13m
- Oil and gas refineries, drilling rigs, petrochemical facilities, food and beverage facilities, platforms, loading docks, tunnels, outdoor wall and stanchion mounted general area lighting, and where flammable vapors, gases, ignitable dusts, fibers or flying are present
- Used in internal street, road, access and exit in heavy industry plant especially in wet, corrosive condition, street lights ISL series is made of high impact resistance aluminum alloy housing with high lumen led lamp. It also can be used in outdoor warehouse, loading dock, seaport as street lighting where high temperature, corrosion, moisture, dust exist frequently. It also can be used as cobra head street lights, led streetlights, sodium light to replace HPS street light in general usage application.
- Locations requiring continuous and consistent light levels in extreme ambient temperatures
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist; Type 4X, marine, wet location and hose-down environments
- Classified and hazardous locations

Features

Looked as a shoebox and street light shape with a fitted connection module for lighting pole to install on the inner and outer road of hazardous locations, SSL series explosion proof street light, also called flame proof street light, is a particular kind to fill in the market need blanks for road lighting in refinery plants areas to be able for quick connection to any kinds of lighting pole with different heights.

- One-time die-cast aluminum molding for the housing structure
- Professional overall arrangement for led chips for utmost lumens efficiency
- Considerate connection head to fit in lighting pole
- High resistance Ex d flame proof housing for led driver



Standard Materials

- Housing: Die cast aluminum with anti-corrosion powder coat, grey
- Lens: Heat-resistant and impact-resistant tempered glass
- Gaskets: Silicone

Compliances

IEC Standard

IEC60079-0, IEC60079-1,
IEC60079-31, IEC60598-2-1
Ex d e mb IIC T6 Gb
Ex t IIIC T85°C Db IP66
Zone 1, Zone 2
Zone 21, Zone 22

EU Standard

EN60079-0, EN60079-1,
EN60079-31, EN60598-2-1
Ex II 2 G Ex d e mb IIC T6 Gb
Ex II 2 D Ex t IIIC T85°C Db IP66
Zone 1, Zone 2
Zone 21, Zone 22

NEC & CEC Standard

Class I, Div.1, Group A, B, C, D
Class II, Div.1, Group E, F, G
Class III
UL Standard
UL844, UL1598, UL1598A
CSA Standard
CSA C22.2 No.137

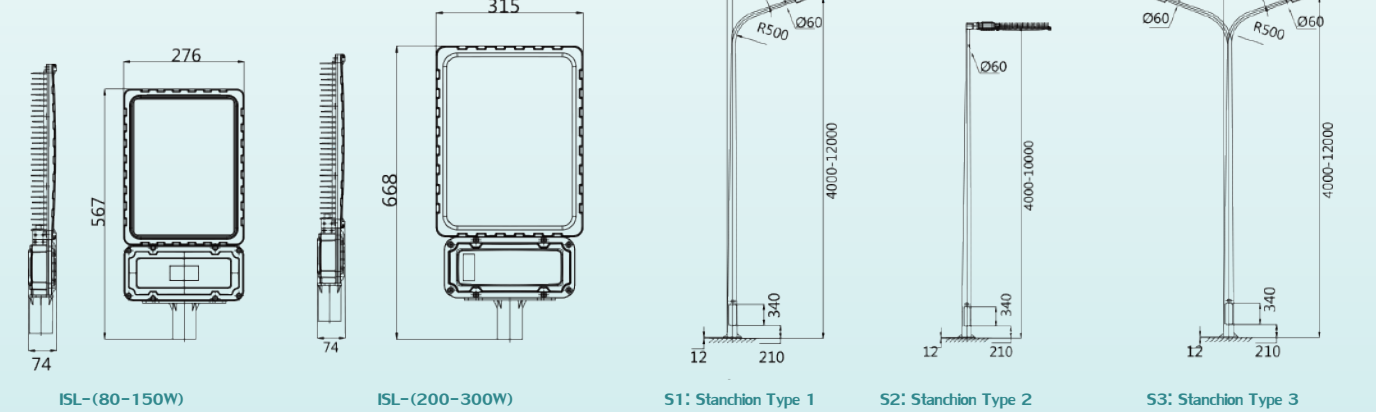
Technical Datasheet

Rated Voltage	100-277V AC 50/60Hz				277-480V AC 50/60Hz		
Wattage(W)	80W	100W	120W	150W	200W	250W	300W
Lumens(lm)	9600	12000	14400	18000	24000	30000	36000
Color Temperature	5000K/4000K/3000K						
IP Grade	Wet Locations, Type 4X, IP66						
Ambient Temperature	-40°C~ +55°C /-40° F ~ +131° F						
Cable Entry	NPT 3/4" or M25X1.5 (adaptor for M20x1.5, NPT 1" , NPT1 1/2")						
Terminals	Terminal blocks ≤ 2.5mm², cable diameter 10- 14mm						
Mounting Type	Stanchion						
Beam Angle	120° / 60° / 45° / 30°						

Catalogue Numbering System

SSL-	80	N	C	W	V1	1
	Lamp	Cable Entry	Mounting Type	Color Temperature	Voltage	Beam Angle
	80-80W	N-NPT 3/4"	S- Stanchion	C-Cool(5000K)	V1:100-277V AC	1-120°
	100-100W	M-M25x1.5		N-Nature(4000K)	V2:277-480V AC	2-60°
	120-120W			W-Warm(3000K)		3-45°
	150-150W					4-30°

Mounting Options & Dimensions (mm/inch)

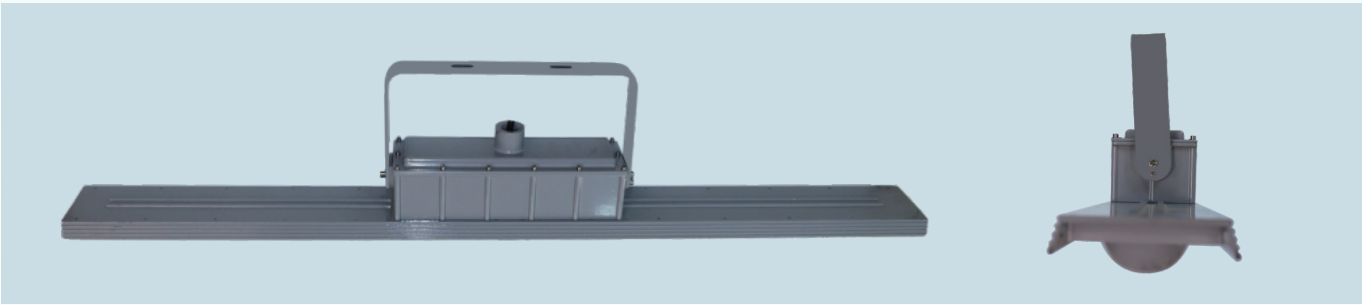


SLL-II Series LED Linear Luminaires

Class I, Div.2, Group A, B, C, D Hazardous Locations
Class II, Div.1, Group E, F, G Wet Locations, Type 4X, IP66
Class III
Zone2; Zone 21&22



Model	Luminous Flux(LM)	Wattage	Lumen/Wattage	Equivalent Fluorescent luminaire
SLL-II-20W	2800	20W	140	2x36W
SLL-II-40W	5600	40W	140	3x36W
SLL-II-60W	8400	60W	140	2x58W
SLL-II-80W	11200	80W	140	-



Applications

- For areas with mounting heights of 10-33ft (3-10m)
- Oil and gas refineries, drilling rigs, petrochemical facilities, land-based and offshore rigs, mining, areas include derrick, mast, SCR house, top drive, operator' s house, power and pump stations, and where flammable vapors, gases, ignitable dusts, fibers or flying are present
- Locations requiring continuous and consistent light levels in extreme ambient temperatures
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist; Type 4X, marine, wet locations and hose-down environments
- Classified and hazardous locations

Features

- The enclosure is made of high strength Fiberglass Reinforced Polyester, which has fine lighting properties with high transmittance and impact resistance.
- Unique seal structure and gasketed housing ensures the great functions of water proof and dust proof in the harshest and corrosive environment.
- Inner explosion-proof electronic ballast and built-in LED driver , short circuit protection.
- Designed standby circuit for the phenomenon of lamp tube aging effect and air leakage.
- The power factor is more than 0.98.Wide range of input voltage.
- LED linear lamp tube,T8 fluorescent lamp tube for option.
- Low cost for maintenance, inner electronic ballast for T8 fluorescent lamp tube, built-in LED driver for LED lamp tube.
- Back-up emergency battery for emergency lighting when necessary. Rugged, long life, maintenance-free, Ni-MH battery, last for emergency operation time at 10W or 20W LED for 120 minutes or 180 minutes.
- Lightweight, compact size and mounting feet ease installation and allow placement in confined area.





Compliances

IEC Standard

IEC60079-0, IEC60079-7, IEC60079-31, IEC60079-2-1
Ex ec IIC T6/T5 Gc
Ex tb IIIC T80/T100°C Db IP66
Zone 2, Zone21, Zone 22
IP66

EU Standard

EN60079-0, EN60079-7, EN60079-31, EN60079-2-1
 II 3 G Ex ec IIC T6/T5 Gb
 II 2 D Ex tb IIIC T80/T100°C Db IP66
Zone 2, Zone21, Zone 22
IP66

NEC & CEC Standard

Class I, Div.2, Group A, B, C, D
Class II, Div.2, Group E, F, G
Class III
Wet Locations, Type 4X, IP66

UL Standardwarm

UL844, UL1598, UL1598A

CSA Standard

CSA C22.2 No.137

Standard Materials

- Lamp housing and adapter – die cast aluminum with anti-corrosion powder coat
- Lens – heat-resistant and impact-resistant tempered glass
- Gaskets – silicone
- External hardware – carbon steel or stainless steel
- Factory sealed, no external seals required

LED System

- High intensity discrete power emitters
- Standard: cool white(5000K); Optional:warm white(3000K); nature white(4000K)
- Brand-new LED chips

LED Driver

Input Voltage	100–277V AC 50/60Hz	
	277–480V AC 50/60Hz	
THD	<20%	
Power Factor	0.98 (220V/full load)	
Protection	Short Circuit/Over Voltage/Over Heat	
	Surge Protection	Line to line 4KV Line to earth 10KV
IP	IP66	

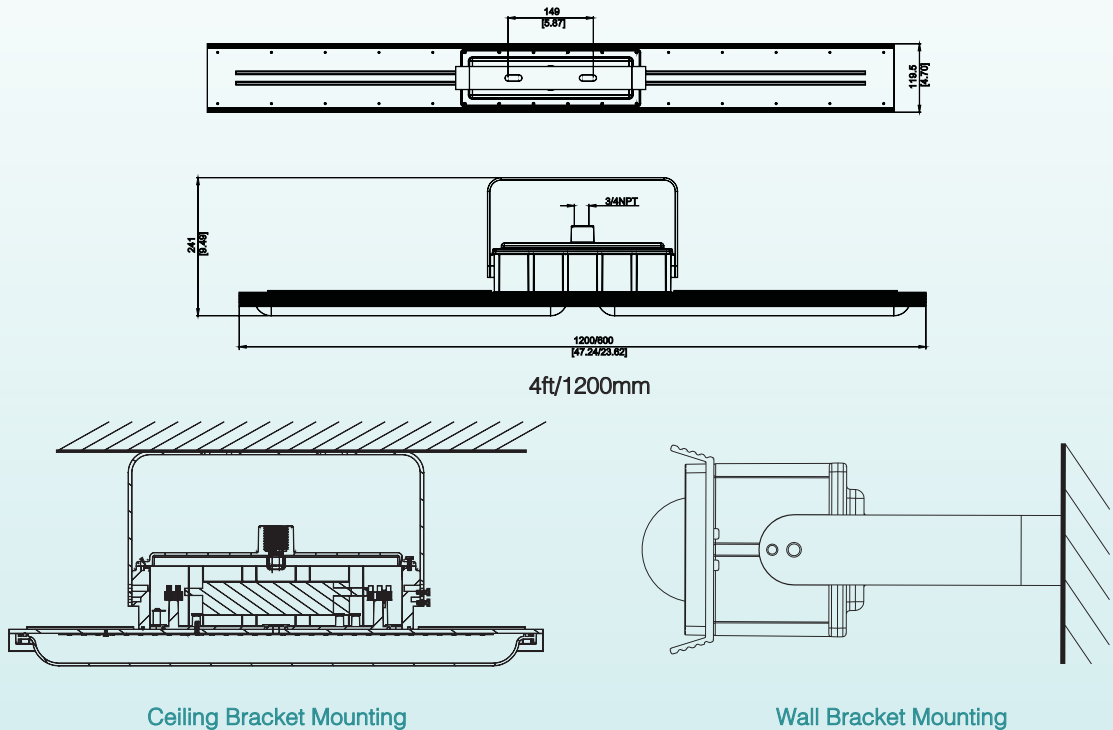
Technical Datasheet

Classification	Class I,Div.2,Group A,B,C,D Class II,Div.1,Group E,F,G Class III Zone2;Zone 21&22			
Standards	IEC60079-0, IEC60079-7, IEC60079-31, IEC60598-2-1 EN60079-0, EN60079-7, EN60079-31, EN60598-2-1 UL844, UL1598, UL1598A CSA C22.2 No.137			
Ex-mark	II 3 G Ex ec IIC T6/T5 Gb II 2 D Ex tb IIIC T80/T100°C Db IP66			
Rated Voltage	AC 100–277V 50/60Hz AC 200–480V 50/60Hz			
Rated Wattage(W)	20W	40W	60W	80W
Luminous Flux(LM)	2800	5600	8400	11200
Emergency Duration	120min or 180min			
Battery Specification	Ni-MH battery			
Color Temperature	3000K–5000K			
IP Grade	Wet Locations, Type 4X, IP66			
Ambient Temperature	–40° C ~ +55° C / –40° F~+131° F			
Cable Entry	M25*1.5 or NPT3/4” (adaptor for M20x1.5,NPT1” ,NPT1 1/2”)			
Terminals	Terminals blocks≤2.5mm², cable diameter 10–14mm			
Installation	Ceiling Bracket /Wall Bracket			

Catalogue Numbering System

SLL-II	20	C	N	C	V1	V1
Lamp	Mounting Type	Cable Entry	Color Temperature	Voltage	Emergency	
20–20W	C–Ceiling Bracket	N–NPT3/4”	C–Cool(5000K)	V1:100–277V AC	EM1:120min	
40–40W	W–Wall Bracket	M–M25x1.5	N–Nature(4000K)	V2:277–480V AC	EM2:180min	
60–60W			W–Warm(3000K)			
80–80W						

Mounting Options & Dimensions (mm/inch)



SLn Series LED Linear Luminaires

Class I, Div.2, Group A, B, C, D Hazardous Locations

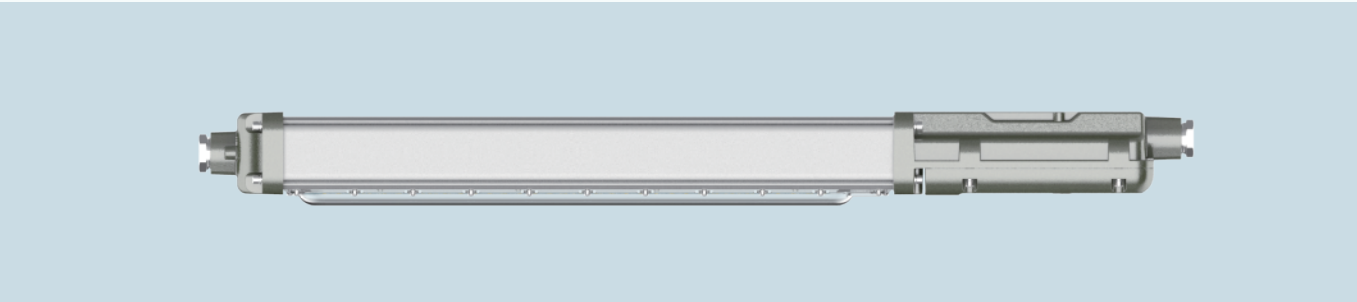
Class II, Div.1, Group E, F, G Wet Locations, Type 4X, IP 66

Class III

Zone 2; Zone21&22



Model	Luminous Flux(LM)	Wattage	Lumen/Wattage	Equivalent Fluorescent luminaire
SLn-40W	5600	40W	140	3x36W
SLn-60W	8400	60W	140	2X58W
SLn-80W	11200	80W	140	–
SLn-120W	16800	120W	140	–



Applications

- For areas with mounting heights of 10–33ft (3–10m)
- Oil and gas refineries, drilling rigs, petrochemical facilities, land–based and offshore rigs, mining, areas include derrick, mast, SCR house, top drive, operator’ s house, power and pump stations, and where flammable vapors, gases, ignitable dusts, fibers or flying are present
- Locations requiring continuous and consistent light levels in extreme ambient temperatures
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist; Type 4X, marine, wet locations and hose–down envi–ronments
- Classified and hazardous locations

Features

- The enclosure is made of high strength die cast aluminum with anti–corrosion powder coat .
Unique seal structure and gasketed housing ensures the great functions of water proof and dust proof in the harshest and
- corrosive environment.
- Built–in LED driver , short circuit protection.
- The power factor is more than 0.98.Wide range of input voltage.
- Low cost for maintenance, built–in LED driver for LED lamp tube.
- Back–up emergency battery for emergency lighting when necessary. Rugged, long life, maintenance–free, Ni–MH battery,
- last for emergency operation time at 10W or 20W LED for 120 minutes or 180 minutes.
- Lightweight, compact size and mounting feet ease installation and allow placement in confined area.

Compliances

IEC Standard

IEC60079–0, IEC60079– 15, IEC60079–31
Ex nR IIC T6/T5 Gb
Ex tb IIIC T80°C/T95°C Db IP66
Zone 2, Zone21, Zone 22
IP66

EU Standard

EN60079–0, EN60079– 15, EN60079–31
II 3 G Ex nR IIC T6/T5 Gb
II 2 D Ex tb IIIC T80°C/T95°C Db IP66
Zone 2, Zone21, Zone 22
IP66

NEC & CEC Standard

Class I, Div.2, Group A, B, C, D
Class II, Div.2, Group E, F, G
Class III
Wet Locations, Type 4X, IP66

UL Standardwarm white (3000K)

UL844, UL1598, UL1598A

CSA Standard

CSA C22.2 No.137

Standard Materials

- Lamp housing and adapter – die cast aluminum with anti–corrosion powder coat
- Lens – heat–resistant and impact–resistant tempered glass
- Gaskets – silicone
- External hardware – carbon steel or stainless steel
- Factory sealed, no external seals required

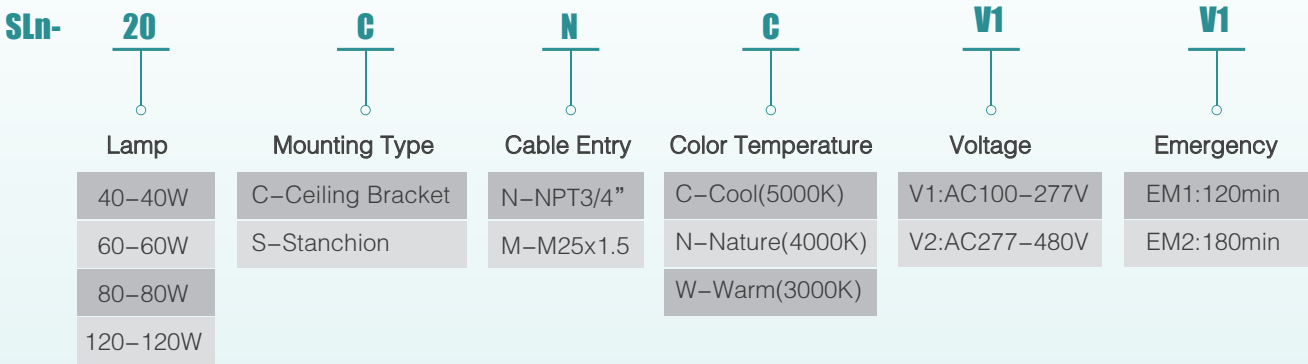
LED System

- High intensity discrete power emitters
- Standard: cool white(5000K); Optional:warm white(3000K); nature white(4000K)
- Brand–new LED chips

LED Driver

Input Voltage	100–277V AC 50/60Hz	
	277–480V AC 50/60Hz	
THD	<20%	
Power Factor	0.98 (220V/full load)	
Protection	Short Circuit/Over Voltage/Over Heat	
	Surge Protection	Line to line 4KV
		Line to earth 10KV
IP	IP66	

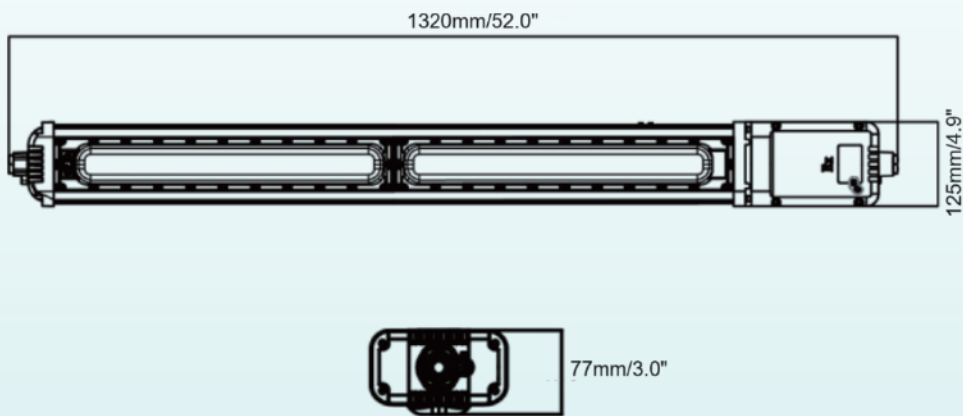
Catalogue Numbering System



Technical Datasheet

Classification	Class I,Div.2,Group A,B,C,D Class II,Div.1,Group E,F,G Class III Zone2;Zone 21&22			
Standards	IEC60079–0, IEC60079–15, IEC60079–31 EN60079–0, EN60079–15, EN60079–31 UL844, UL1598, UL1598A CSA C22.2 No.137			
Ex–mark	II 3 G Ex nR IIC T6/T5 Gb II 2 D Ex tb IIIC T80°C/T95°C Db IP66			
Rated Voltage	AC 100–277V 50/60Hz AC 277–480V 50/60Hz			
Rated Wattage(W)	40W	60W	80W	120W
Luminous Flux(LM)	5600	8400	11200	16800
Emergency Duration	120min or 180min			
Battery Specification	Ni–MH battery			
Color Temperature	3000K–5000K			
IP Grade	Wet Locations, Type 4X, IP66			
Ambient Temperature	–40° C ~ +55° C / –40° F~+131° F			
Cable Entry	M25*1.5 or NPT3/4” (adaptor for M20x1.5,NPT1” ,NPT1 1/2”)			
Terminals	Terminals blocks≤2.5mm², cable diameter 10–14mm			
Installation	Ceiling Bracket /Wall Bracket			

Mounting Options & Dimensions (mm/inch)



SLe Series Linear Fluorescent Plastic Lights

Class I, Div.2, Group A, B, C, D Hazardous Locations
Class II, Div.1, Group E, F, G Wet Locations, Type 4X, IP 66
Class III
Zone 1&2; Zone21&22



Model	Lumens (lm)	Wattag	Lumens per Watt (lm/W)	Equivalent HID Luminaire
SLe–T–1x18W	1530	T8 1x18W	85	70W
SLe–T–2x18W	3060	T8 2x18W	85	70–100W
SLe–T–1x36W	3060	T8 1x36W	85	70–100W
SLe–T–2x36W	6120	T8 2x36W	85	100–150W
SLe–L–1x9W	1170	LED 1x9W	130	70W
SLe–L–2x9W	2340	LED 2x9W	130	70–100W
SLe–L–1x18W	2340	LED 1x18W	130	70–100W
SLe–L–2x18W	4680	LED 2x18W	140	100–150W
SLe–S–1x20W	2800	LED 20W	140	70–100W
SLe–S–1x30W	4200	LED 30W	140	100W
SLe–S–2x15W	4200	LED 30W	140	100W
SLe–S–1x40W	5600	LED 40W	140	100–150W
SLe–S–2x20W	5600	LED 40W	140	100–150W
SLe–S–2x30W	8400	LED 60W	140	175–250W
SLe–S–2x40W	11200	LED 80W	140	320–400W

Applications

- Hazard class division: can be used for different class and division replying on the classification standard, hazard class division can be class 1 div 1 and class div 2, class 2 division 1 and class 2 division 2, zone 1 and zone 2, zone 21 and zone 22, you can check the hazardous area classifications chart as below.
- Usage by application: Based on the application field, explosion proof fluorescent lighting can be used in refinery plant, petrochemical plant, gas station plant, oil tankers, fuel tank, chemical factory, pesticide factory, anywhere there is flammable gas, vapor, mist and dust.
- Usage by mounting places: can be used in master control room, power distribution room, fuel processing areas, cabinet of tankers, underground, test center for petrochemical and chemical production areas and other areas requesting middle lumen lighting for hazardous locations.

Features

Being the biggest market needs products for explosion proof lighting, SLe series is a traditional explosion proof fluorescent lighting with GRP housing and T8 explosion lamp which is a proper solution for paint booth lights and gas station canopy lights, SUREALL introduce the latest led strips explosion lamp to develop a class 1 div 2 fluorescent fixture to innovate the



energy-saving explosion proof lighting, explosion proof led lights and explosion proof string lights for project of oil and gas lighting. ATEX rating zone 1, its hazard class division can be class 1 div 2, class 2 division 1 and class 2 division 2.

- The enclosure is made of high strength Fiberglass Reinforced Polyester, which has fine lighting properties with high transmittance and impact resistance.
- Unique seal structure and gasketed housing ensures the great functions of water proof and dust proof in the harshest and corrosive environment.
- Inner explosion-proof electronic ballast and built-in LED driver, short circuit protection.
- Designed standby circuit for the phenomenon of lamp tube aging effect and air leakage.
- The power factor is more than 0.98.Wide range of input voltage.
- LED linear lamp tube,T8 fluorescent lamp tube for option.
- Low cost for maintenance, inner electronic ballast for T8 fluorescent lamp tube, built-in LED driver for LED lamp tube.
- Back-up emergency battery for emergency lighting when necessary. Rugged, long life, maintenance-free, Ni-MH battery, last for emergency operation time at 10W or 20W LED for 120 minutes or 180 minutes.
- Lightweight, compact size and mounting feet ease installation and allow placement in confined area.

Standard Materials

- Housing: Fiberglass reinforced polyester
- Lens: Poly-carbonate
- Gaskets: Latch assembly and elastomer gasket seals against water and dust ingress

International Certifications

IEC Standard

IEC60079-0, IEC60079-1,IEC60079-7,

IEC60079-18, IEC60079-31

Ex eb mb db IIC T5/T6 Gb

Ex tb IIIC T95°C/T85°C Db IP66

Zone1, Zone 2

Zone 21, Zone 22

EU Standard

EN60079-0, EN60079-1, EN60079-7,

EN60079-18, EN60079-31

II 2 G Ex eb mb db IIC T5/T6 Gb

II 2 D Ex tb IIIC T95°C/T85°C Db IP66

Zone1, Zone 2

Zone 21, Zone 22

NEC & CEC Standard

Class , Division 2, Groups A, B, C, D

Class II , Division 2, Groups F, G

Class III

UL Standard

UL844, UL1598, UL1598A

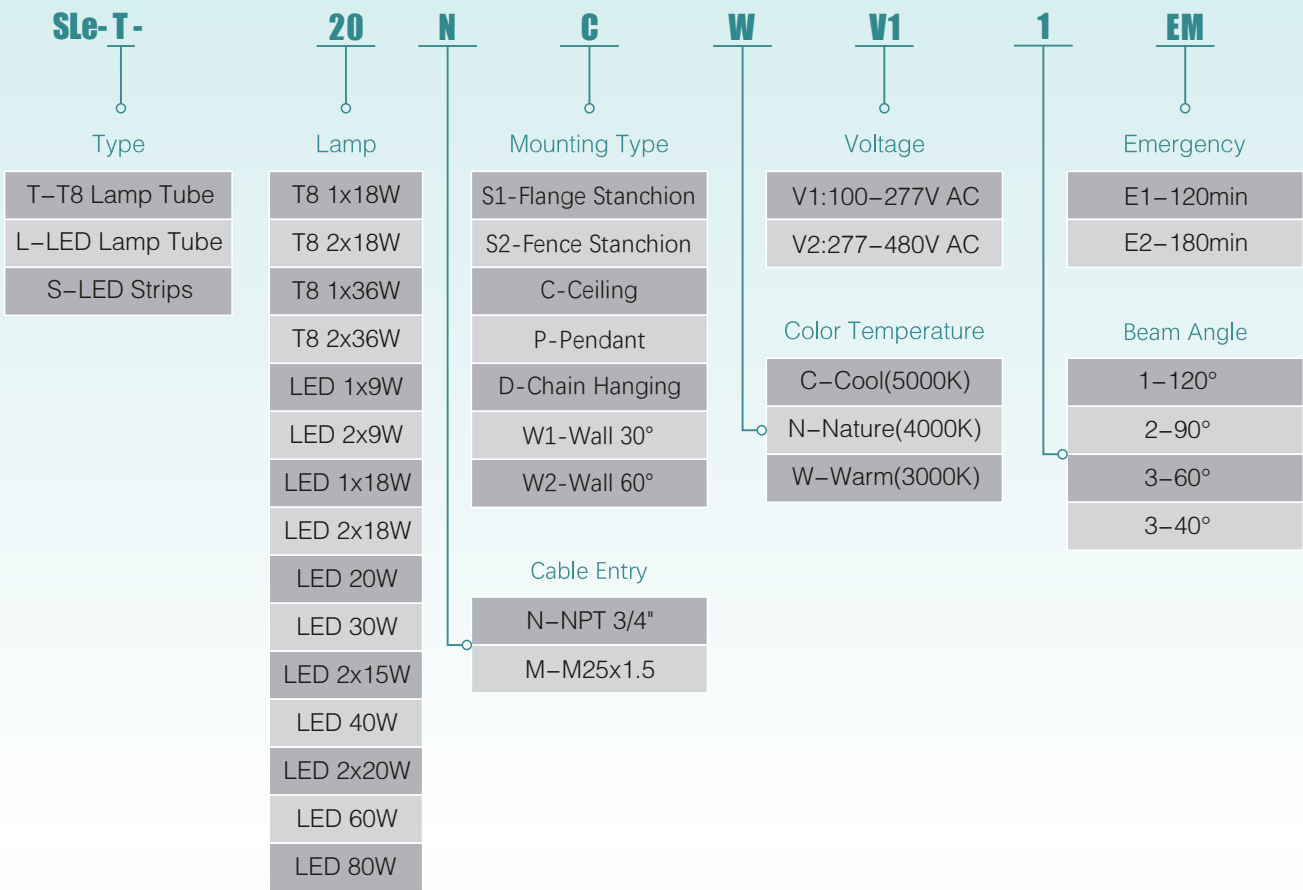
CSA Standard

CSA C22.2 No.137

Technical Datasheet

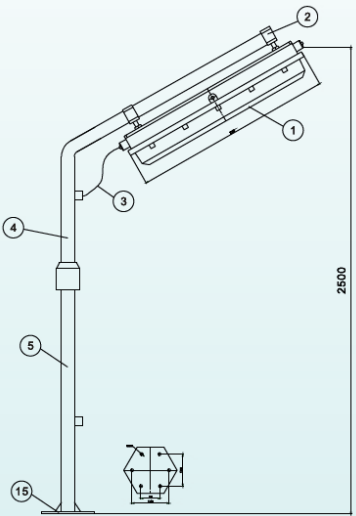
Rated Voltage	100-277V AC 50/60Hz				277-480V AC 50/60Hz			
Wattage(W)	T8 1x18W	T8 2x18W	T8 1x36W	T8 2x36W	LED 1x9W	LED 2x9W	LED 1x18W	LED 2x18W
Lumens(lm)	1530	3060	3060	6120	1170	2340	2340	4680
Wattage(W)	LED 1x20W	LED 30W	LED 2x15W	LED 40W	LED 2x20W	LED 2x30W	LED 2x40W	
Lumens(lm)	2800	4200	4200	5600	5600	5400	11200	
Color Temperature	5000K/4000K/2700K							
IP Grade	Wet Locations, Type 4X, IP66							
Ambient Temperature	-40°C~ +55°C /-40° F ~ +131° F							
Cable Entry	NPT 3/4" or M25X1.5							
Terminals	Terminal blocks ≤ 2.5mm², cable diameter 10- 14mm							
Mounting Type	Flange Stanchion / Fence Stanchion / Ceiling / Pendant / Chain Hanging / Wall 30° / Wall 60°							
Beam Angle	120° / 90° / 60° / 40°							

Catalogue Numbering System

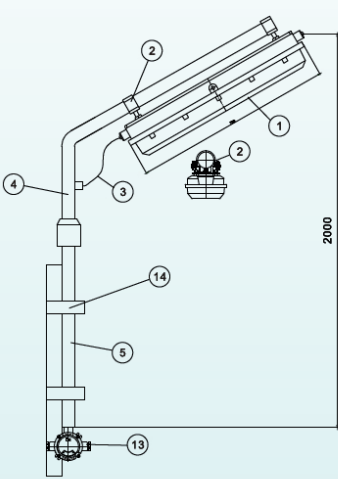


Mounting Options & Dimensions (mm)

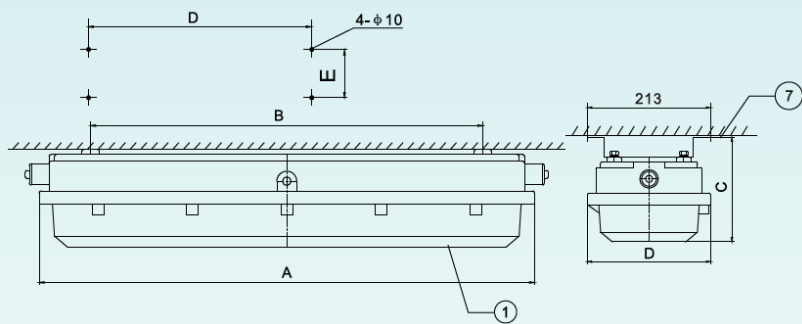
S1: Flange Stanchion Type



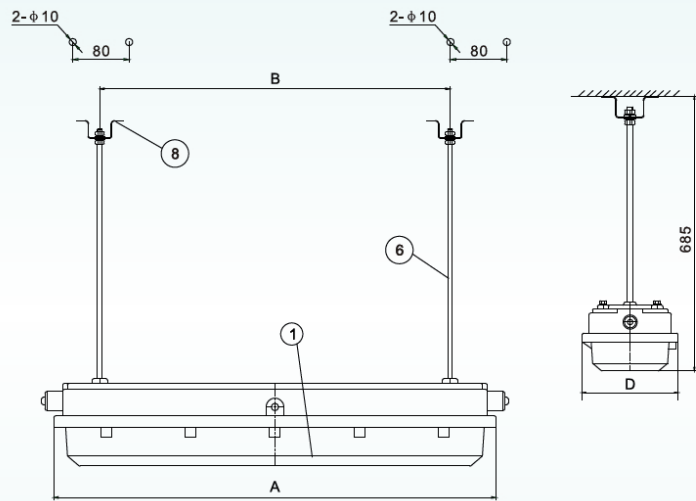
S2: Fence Stanchion Type



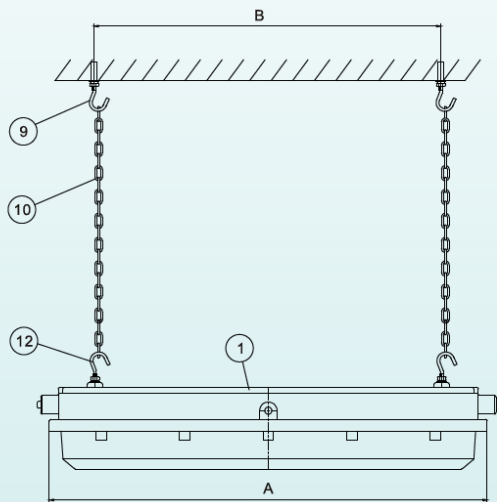
C: Ceiling Type



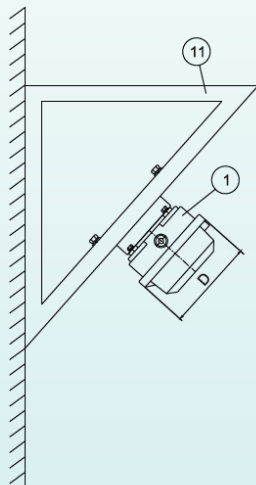
P: Pendant Type



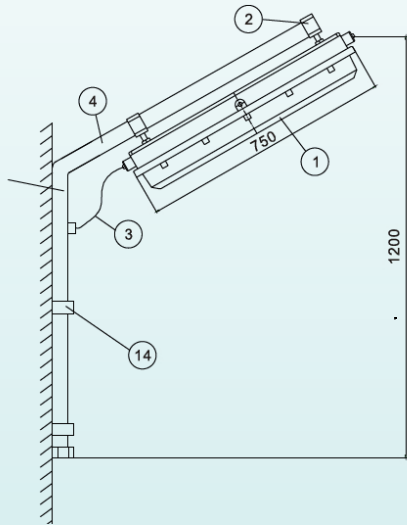
D: Chain Hanging Type



W1: Wall 30° Type

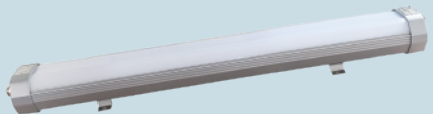


W2: Wall 60° Type



SLL-IIA Series LED Linear Luminaires

Class I, Div.2, Group A, B, C, D Hazardous Locations
Class II, Div.2, Group E, F, G Wet Locations, Type 4X, IP66
Class III
Zone 2; Zone 21&22



Model	Luminous Flux(LM)	Wattage	Lumen/Wattage	Equivalent Fluorescent luminaire
SLL-IIA-36W	4680	36W	130	3x36W
SLL-IIA-56W	7280	36W	130	2x58W



Applications

- For areas with mounting heights of 10–33ft (3–10m)
- Oil and gas refineries, drilling rigs, petrochemical facilities, land-based and offshore rigs, mining, areas include derrick, mast, SCR house, top drive, operator' s house, power and pump stations, and where flammable vapors, gases, ignitable dusts, fibers or flying are present
- Locations requiring continuous and consistent light levels in extreme ambient temperatures
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist; Type 4X, marine, wet locations and hose-down environments
- Classified and hazardous locations

Features

- The enclosure is die cast aluminum with anti-corrosion powder coat.
- Unique seal structure and gasketed housing ensures the great functions of water proof and dust proof in the harshest and corrosive environment.
- Built-in LED driver, short circuit protection.
- The power factor is more than 0.98.Wide range of input voltage.
- Low cost for maintenance, built-in LED driver for LED lamp tube.
- Back-up emergency battery for emergency lighting when necessary. Rugged, long life, maintenance-free, Ni-MH battery, last for emergency operation time at 18W LED for 120 minutes or 180 minutes.
- Lightweight, compact size and mounting feet ease installation and allow placement in confined area.

Compliances

IEC Standard

IEC60079–0, IEC60079–15, IEC60079–31
Ex nR IIC T6/T5 Gc
Ex tb IIIC T80°C/T95°C Db IP66
Zone 2
Zone 21, Zone 22
IP66

EU Standard

EN60079–0, EN60079–15, EN60079–31
Ex II 3 G Ex nR IIC T6/T5 Gb
Ex II 2 D Ex tb IIIC T80°C/T95°C Db IP66
Zone 1, Zone 2
Zone 21, Zone 22
IP66

NEC & CEC Standard

Class I, Div.2, Group A, B, C, D
Class II, Div.2, Group E, F, G
Class III
Wet Locations, Type 4X, IP66

UL Standardwarm white (3000K)

UL844, UL1598, UL1598A

CSA Standard

CSA C22.2 No.137

Standard Materials

- Lamp housing and adapter – die cast aluminum with anti–corrosion powder coat
- Lens – Polycarbonate
- Gaskets – silicone
- External hardware – carbon steel or stainless steel
- Factory sealed, no external seals required

LED System

- High intensity discrete power emitters
- Standard: cool white(5000K); Optional:warm white(3000K); nature white(4000K)
- Brand–new LED chips

LED Driver

Input Voltage	100–277V AC 50/60Hz	
	277–480V AC 50/60Hz	
THD	<20%	
Power Factor	0.98 (220V/full load)	
Protection	Short Circuit/Over Voltage/Over Heat	
	Surge Protection	Line to line 4KV Line to earth 10KV
IP	IP66	

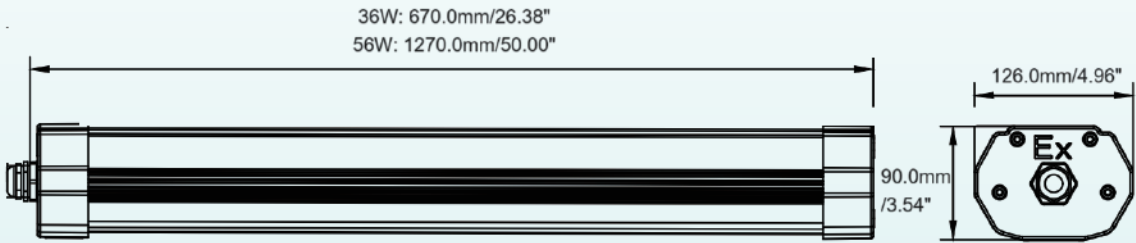
Technical Datasheet

Classification	Class I,Div.2,Group A,B,C,D Class II,Div.1,Group E,F,G Class III Zone2;Zone 21&22	
Standards	IEC60079–0, IEC60079–15, IEC60079–31 EN60079–0, EN60079–15, EN60079–31 UL844, UL1598, UL1598A CSA C22.2 No.137	
Ex–mark	II 3 G Ex nR IIC T6/T5 Gb II 2 D Ex tb IIIC T80°C/T95°C Db IP66	
Rated Voltage	AC 100–277V 50/60Hz AC 277–480V 50/60Hz	
Rated Wattage(W)	36W	56W
Luminous Flux(LM)	4680	7280
Emergency Duration	120min or 180min	
Battery Specification	Ni–MH battery	
Color Temperature	3000K–5000K	
IP Grade	Wet Locations, Type 4X, IP66	
Ambient Temperature	–40° C ~ +55° C / –40° F~+131° F	
Cable Entry	M25*1.5 or NPT3/4” (adaptor for M20x1.5,NPT1” ,NPT1 1/2”)	
Terminals	Terminals blocks≤2.5mm², cable diameter 10–14mm	
Installation	Ceiling Bracket /Wall Bracket	

Catalogue Numbering System

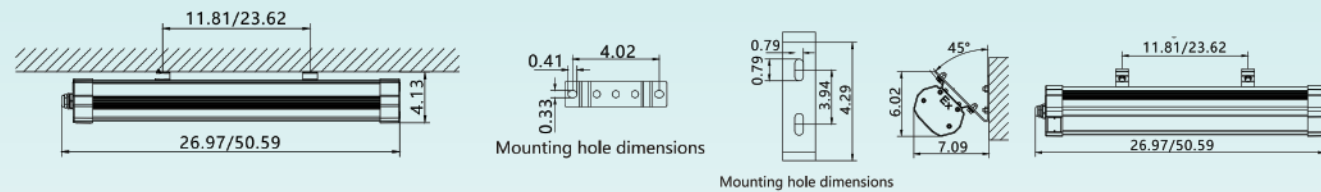
SLL-IIA -	20	C	N	C	V1	V1
	Lamp	Mounting Type	Cable Entry	Color Temperature	Voltage	Emergency
	36–36W	C–Ceiling Bracket	N–NPT3/4”	C–Cool(5000K)	V1:100–277V AC	EM1:120min
	56–56W	W–Wall Bracket	M–M25x1.5	N–Nature(4000K)	V2:277–480V AC	EM2:180min
		L–Clamp		W–Warm(3000K)		
		P–Pendant				
		S1–Guard Stanchion				
		S2–Flange Stanchion				

Mounting Options & Dimensions (mm/inch)



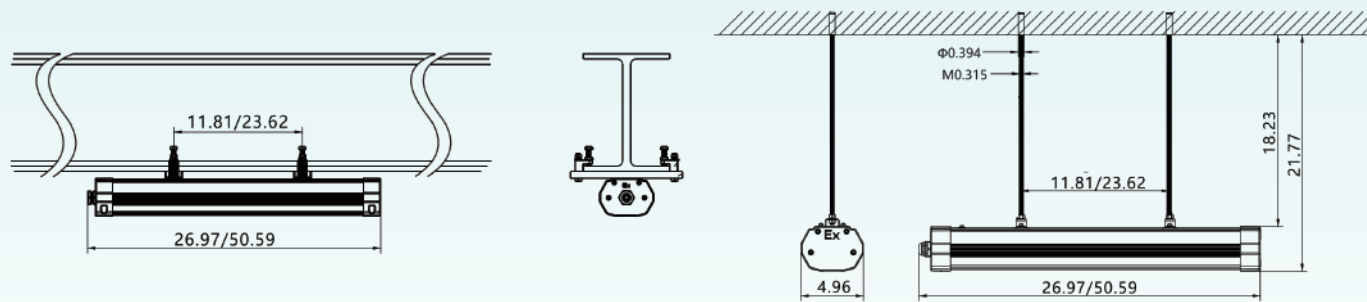
SLL–IIA





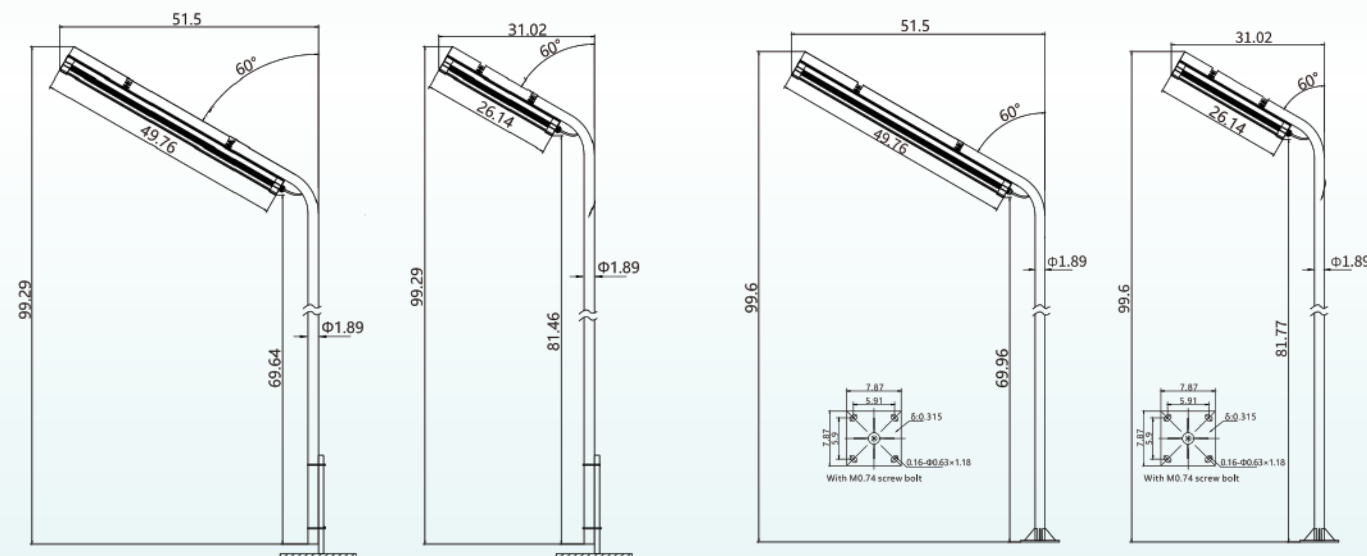
1.C-Ceiling Type

2.W-Wall Type



3.L-Clamp Type

4.P-Pendant Type



5.S1-Guard Stanchion Type

6.S2-Flange Stanchion Type

SEG Series LED Emergency Luminaires

Class I, Div.1, Group A, B, C, D Hazardous Locations

Class II, Div.1, Group E, F, G Wet Locations, Type 4X, IP 66

Class III

Zone 1&2; Zone21&22



Applications

- In area requiring emergency illumination during failure or interruption of power
- Oil and gas plants, oil terminals, refineries, petrochemical and chemical plants, waste and sewage treatment facilities, food processing facilities, breweries and other industrial manufacturing facilities
- In area where corrosion, vibration, moisture, dirt and fibers
- Classified and hazardous locations where flammable gases or vapors may present due to abnormal, unusual or accidental conditions

Features

- Metallic and gasketed housing to endure harshest and corrosion environment
- Two assembled LED lamp heads, adjustable to focus light where you need it, resistant to corrosion, impact and water
- Lightweight, compact size and mounting feet ease installation and allow placement in confined area
- Two NPT3/4 drilled hubs and blind plugs to right and left feed
- Rugged, long life, maintenance-free, nickel cadmium battery or Ni-MH battery, last for emergency operation time at 10W LED for 120 minutes or 180 minutes
- Factory-installed self-test, monitoring and diagnostics device to reduce the costly maintenance checks
- Solid battery charger, long-life and reliable, prevent deep discharge by disconnecting luminaires from battery automatically
- Wall mounting and pendant mounting for option

Technical Datasheet

Ex-mark	Ex d IIB T6 Gb Ex tD A21 T80°C Db IP66
Rated Voltage	AC 220V 50/60Hz, DC 12/24/36V
Rated Wattage(W)	2x5W LED
Emergency Duration	120min or 180min
Battery Specification	Nickel Cadmium battery or Ni-MH battery
Luminous Flux(Lm)	1400Lm
IP Grade	IP66
Ambient Temperature	-20° C ~ +40° C / -4° F ~ +104° F
Cable Entry	NPT1/2" or NPT3/4" or M25 × 1.5
Terminals	Terminal blocks ≤ 2.5mm ² , cable diameter 10-14mm
Installation	Wall / Pendant
Weight	3.2Kg

Compliances

IEC Standard

IEC60079-0, IEC60079-1, IEC60079-11
Ex d IIB T6 Gb
Ex tD A21 T80°C Db IP66
Zone 1, Zone 2; Zone 21, Zone 22
IP66

EU Standard

EN60079-0, EN60079-1, EN60079-11
II 2 G Ex d IIB T6 Gb
II 2 D Ex tD IIIB A21 T80°C Db IP66
Zone 1, Zone 2; Zone 21, Zone 22
IP66

NEC & CEC Standard

Clase I, Div 1, Grupo A, B, C, D
Clase II, Div 1, Grupo E, E, G
Class III
Wet Locations, Type 4X, IP66

UL Standard

UL844, UL1598, UL1598A

CSA Standard

CSA C22.2 No.137

SES Series LED Exit Signs Luminaires

Class I, Div.1, Group A, B, C, D Hazardous Locations
Class II, Div.1, Group E, F, G Wet Locations, Type 4X, IP 66
Class III
Zone 1&2; Zone21&22



Applications

- In area requiring illumination for directional exit signs and distinct, highly visible exit marking
- Classified and hazardous locations where flammable gases, vapors or combustible dust and fibers present

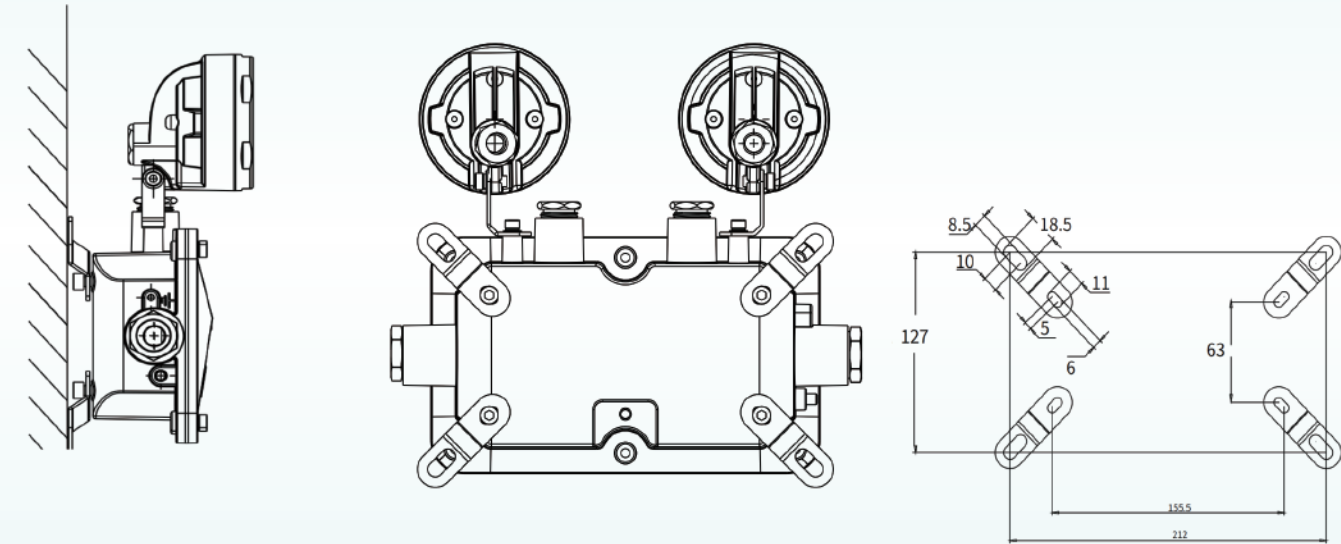
Features

- Factory-sealed die-cast aluminum housing, to resist to corrosion, impact
- Long life LED lamp with high brightness light for exit direction
- Edge lighting of exit sign panel, made of impact-resistant acrylic, excellent visibility with no guard, easing the cleaning
- “EXIT” legend with alternative wings, right, left, left and right, stand out boldly and clearly, simple modification for any letters and images
- Heavy-duty nickel cadmium battery or Ni-MH battery, emergency lighting at 5W LED for 120min 180min
- Self-test, monitoring and diagnostics device to ease the maintenance
- Ceiling mounting , wall mounting and pendant mounting for option

Technical Datasheet

Ex-mark	Ex d e IIC T6 Gb Ex tD IIIB A21 T80°C Db IP66
Rated Voltage	AC 90-265V 50/60Hz, DC 12/24/36V
Rated Wattage(W)	5W LED
Emergency Duration	120min or 180min
Battery Specification	Nickel Cadmium battery or Ni-MH battery
IP Grade	IP66
Ambient Temperature	-20° C~ +40° C / -4° F~+104° F
Cable Entry	NPT1/2” or NPT3/4” or M25 × 1.5
Terminals	Wires ≤2.5mm 2
Installation	Wall/Pendant
Weight	2Kg

Mounting Options & Dimensions (mm)



Compliances

IEC Standard

IEC60079-0, IEC60079-1
Ex d e IIC T6 Gb
Ex tD A21 T80°C Db IP66
Zone 1, Zone 2; Zone 21, Zone 22
IP66

EU Standard

EN60079-0, EN60079-1
II 2 G Ex d e IIC T6 Gb
II 2 D Ex tD A21 T80°C Db IP66
Zone 1, Zone 2; Zone 21, Zone 22
IP66

NEC & CEC Standard

Class I, Div 1, Group A, B, C, D
Class II, Div 1, Group E, F, G
Class III
Wet Locations, Type 4X
IP66

UL Standard

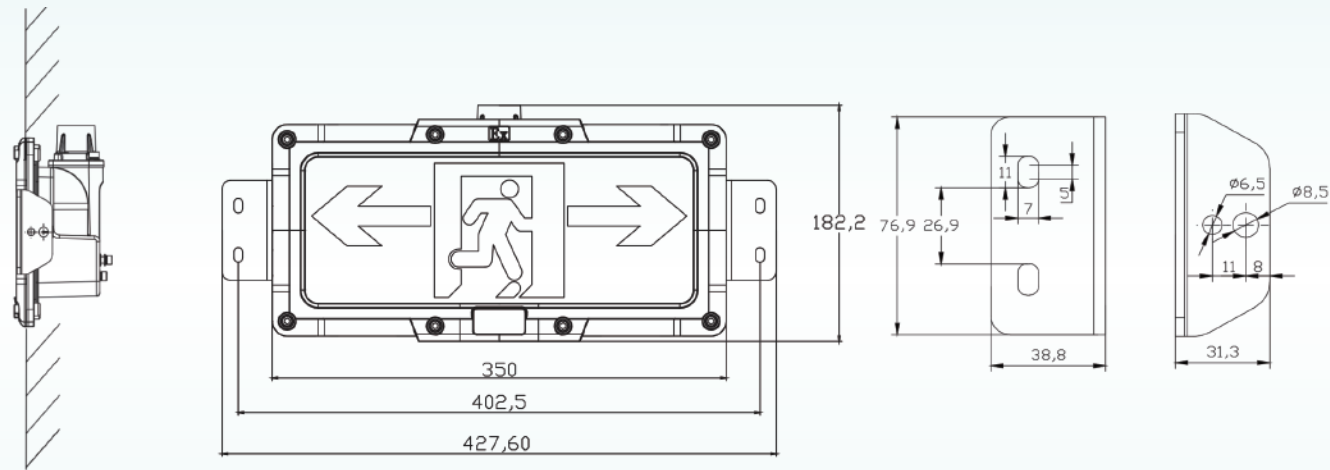
UL844, UL1598, UL1598A

CSA Standard

CSA C22.2 No.137



Mounting Options & Dimensions (mm)



Panel Designing



A Type



B Type



C Type



D Type



E Type



F Type

SAV Series Audio and Visual Luminaires

Class I, Div.1, Group A, B, C, D Hazardous Locations
Class II, Div.1, Group E, F, G Wet Locations, Type 4X, IP 66
Class III
Zone 1&2; Zone21&22



Applications

- In area requiring audio and visual warning when emergency
- Oil and gas plants, oil terminals, refineries, petrochemical and chemical plants, waste and sewage treatment facilities, food processing facilities, breweries and other industrial manufacturing facilities
- In area where corrosion, vibration ,moisture, dirt and fibers
- Classified and hazardous locations where flammable gases or vapors may present due to abnormal, unusual or accidental conditions.

Features

- Audio function with 110–120dB sound intensity,visual function with 45 or 136 times/mins in Red,Green,Yellow colors.
- Audio and visual type,only visual type for option(flash type)
- Customized photocell for option when necessary
- Horizontal mounting type,pendant mounting type for option
- Body: Die–cast aluminum,epoxy coating (grey)
- Len: Shock and temperature resistant borosilicate glass
- Bolts and screws: Stainless steel

Technical Datasheet

Ex–mark	Ex d ib IIC T6 Gb			
	Ex td IIIC T80°C Db IP66			
Rated Voltage	AC 110/220–240/380V 50/60Hz DC/AC 12/24/36V			
Rated Wattage(W)	5W LED			
Flash Frequency(times/min)	A–Audio and Visual type	F–Flash type	L–Low Luminous Intensity type	P–Photocell Low Luminous Intensity type
	136	136	45	45
Sound Intensity	110–120dB			
Ambient Temperature	–20° C~ +40° C / –4° F~+104° F			
Cable Entry	NPT3/4” or M25*1.5			
Terminals	Terminal blocks≤2.5mm²,cable diameter 10–14mm			
Installation	Horizontal Type/Ceiling Type / Pendant Type			

Compliances

IEC Standard

IEC60079-0, IEC60079-1, IEC60079-11
Ex d ib IIC T6 Gb
Ex tb IIIC T80°C Db IP66
Zone 1, Zone 2; Zone 21, Zone 22
IP66

EU Standard

EN60079-0, EN60079-1, EN60079-11
II 2 G Ex d ib IIC T6 Gb
II 2 D Ex tb IIIC T80°C Db IP66
Zone 1, Zone 2; Zone 21, Zone 22
IP66

NEC & CEC Standard

Clase I, Div 1, Grupo A, B, C, D
Class II, Div 1, Group E, F, G
Class III
Wet Locations, Type 4X
IP66

UL Standard

UL844, UL1598, UL1598A

CSA Standard

CSA C22.2 No.137

SPL-A Series LED Flashlight

Class I, Div.1, Group C, D	Ex d ib IIC T6 Gb
Class I, Division 2, Groups A, B, C, D	Ex tb IIIC T80, Db IP67
Class II, Division 1, Groups E, F, G	Zone 1, Zone 2
Class II, Division 2, Groups F, G	Zone 21, Zone 22
Class III	Type 4X, IP67
LED 3W	



Applications

Explosion proof flashlight can be applied: Based on the application industry, explosion proof flashlight can be used as temporary lighting in oil and gas processing plant, petrochemical plant, pharmaceutical plant, power generation plant, waste water treatment plant, anywhere there is flammable gas, vapor, mist and dust.

Features

Classified as class 1 division 1 and class 1 division 2 flashlight, SPL-A series explosion proof flashlight features light-weight compact size to be a portable usage of explosion proof rechargeable torch. Built-in 3w led explosion lamp with high brightness make it to be a excellent explosion proof led flashlight. Hazard class division can be class 1 div 1, class 1 div 2, class 2 division 1 and class 2 division 2 as hazardous location light, lighting zone can be ATEX rating zone 1, zone 21.
>One-button on and off for easy and fast lighting
>3W led lamp for basic checking brightness for maintenance

Technical Datasheet

IEC Standard

IEC60079-0, IEC60079-1, IEC60079-11
Ex d ib IIC T6 Gb
Ex tb IIIC T80°C Db IP67
Zone 1, Zone 2
Zone 21, Zone 22

EU Standard

EN60079-0, EN60079-1, EN60079-11
II 2 G Ex d ib IIC T6 Gb
II 2 D Ex tb IIIC T80°C Db IP67
Zone 1, Zone 2
Zone 21, Zone 22

UL Standard

UL844, UL1598, UL1598A

CSA Standard

CSA C22.2 No.137

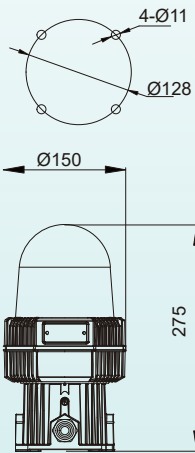
NEC & CEC Standard

Class I, Division 1, Groups C, D
Class I, Division 2, Groups A, B, C, D
Class II, Division 1, Groups E, F, G
Class II, Division 2, Groups F, G
Class III

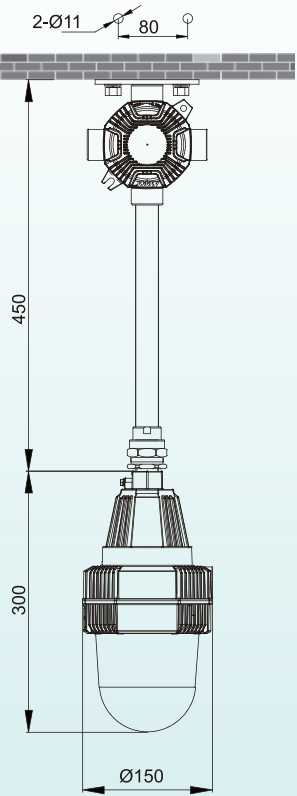
Catalogue Numbering System

SAV	H	R	C	O
Alarm Type	Lamp Color	Mounting Type		
A–Audio and Visual type	R–Red	C–Horizontal /Ceiling Type	0–Without protected guard	
F–Flash type	G–Green	P–Pendant Type	1–With protected guard	
L–Low Luminous Intensity type	Y–Yellow			
P–Photocell Low Luminous Intensity type				

Mounting Options & Dimensions (mm)



Horizontal Type/Ceiling Type



Pendant Type



SPL–C Series LED Flashlight

Class I, Division 1, Groups C, D	Ex d ia IIC T6 Gb
Class I, Division 2, Groups A, B, C, D	Ex tb IIIC T80, Db IP68
Class II, Division 1, Groups E, F, G	Zone 1, Zone 2
Class II, Division 2, Groups F, G	Zone 21, Zone 22
Class III	Type 4X, IP68
LED 9W/12W	



Applications

Explosion proof flashlight can be applied: Based on the application industry, explosion proof flashlight can be used as temporary lighting in oil and gas processing plant, petrochemical plant, pharmaceutical plant, power generation plant, waste water treatment plant, anywhere there is flammable gas, vapor, mist and dust.

Features

Born for highest lumens output, with 9w or 12w led explosion lamp and high strength flame proof body, different from intrinsically safe flashlight, SPL–C series explosion proof flashlight can be used in the most hazardous locations as explosion proof lighting and explosion led lights compares with big size explosion proof high bay lighting and explosion proof flood lighting in lighting projects for upstream oil and gas no matter in areas class 1 div 1 and class 2 division 1 or zone 1 and zone 21.

> High purity and high strength aluminum flame proof housing

> Switchable low lumens and high lumens models for option

> User–friendly handle in hazardous locations

Compliances

IEC Standard	EU Standard	NEC & CEC Standard
IEC60079–0, IEC60079–1, IEC60079–11	EN60079–0, EN60079–1, EN60079–11	Class I, Division 1, Groups C, D
Ex d ia IIC T6 Gb	Ex II 2 G Ex d ia IIC T6 Gb	Class I, Division 2, Groups A, B, C, D
Ex tb IIIC T80°C Db IP68	Ex II 2 D Ex tb IIIC T80°C Db IP68	Class II, Division 1, Groups E, F, G
Zone 1, Zone 2	Zone 1, Zone 2	Class II, Division 2, Groups F, G
Zone 21, Zone 22	Zone 21, Zone 22	Class III
UL Standard	CSA Standard	
UL844, UL1598, UL1598A	CSA C22.2 No.137	

Technical Datasheet

Rated Voltage	DC 12V
Charging Voltage	100–240V AC,50/60Hz
Wattage(W)	9W/12W
Battery Capacity	4400mAh
Working Time	6–8h
Function	Working Light / Intense Light / Signal Light
IP Grade	Wet Locations, Type 4X, IP68
Ambient Temperature	–40°C~ +55°C /–40° F ~ +131° F
Size & Weight	φ 69X161mm, 0.87Kg

SPL–E Series LED Work Light

Class I, Division 1, Groups C, D	Ex d e IIC T6 Gc
Class I, Division 2, Groups A, B, C, D	Ex tb IIIC T80, Db IP65
Class II, Division 1, Groups E, F, G	Zone 1, Zone 2
Class II, Division 2, Groups F, G	Zone 21, Zone 22
Class III	Type 4X, IP65
LED 30W/35W	



Applications

Explosion proof work light can be applied: Based on the application industry, explosion proof flashlight can be used as temporary lighting in oil and gas processing plant, petrochemical plant, pharmaceutical plant, power generation plant, waste water treatment plant, anywhere there is flammable gas, vapor, mist and dust.

Features

If you request a high wattage up to led 30w division 2 flashlight, constructed by die–cast aluminum housing and shaped just like an explosion proof flood lighting, SPL–E series explosion proof flashlight is your best choice for portable explosion proof lighting in hazardous working locations. When you do not need, you can take it to other working areas freely as a c1d1 flashlight and explosion proof led flashlight.

> Up to led 35w for high lumen output

> Adjustable angle and portable feature for any direction

Compliances

IEC Standard	EU Standard	NEC & CEC Standard
IEC60079–0, IEC60079–1, IEC60079–7	EN60079–0, EN60079–1, EN60079–7	Class I, Division 1, Groups C, D
Ex d e IIC T6 Gc	Ex II 2 G Ex d e IIC T6 Gc	Class I, Division 2, Groups A, B, C, D
Ex tb IIIC T80°C Db IP65	Ex II 2 D Ex tb IIIC T80°C Db IP65	Class II, Division 1, Groups E, F, G
Zone 1, Zone 2	Zone 1, Zone 2	Class II, Division 2, Groups F, G
Zone 21, Zone 22	Zone 21, Zone 22	Class III
UL Standard	CSA Standard	
UL844, UL1598, UL1598A	CSA C22.2 No.137	

Technical Datasheet

Rated Voltage	DC 24V
Charging Voltage	100–240V AC,50/60Hz
Wattage(W)	30W/35W
Battery Capacity	20Ah
Working Time	10–20h
Function	Working Light / Strong Light
IP Grade	Wet Locations, Type 4X, IP65
Ambient Temperature	–40°C~ +55°C /–40° F ~ +131° F
Size & Weight	271x227x568, 20Kg

