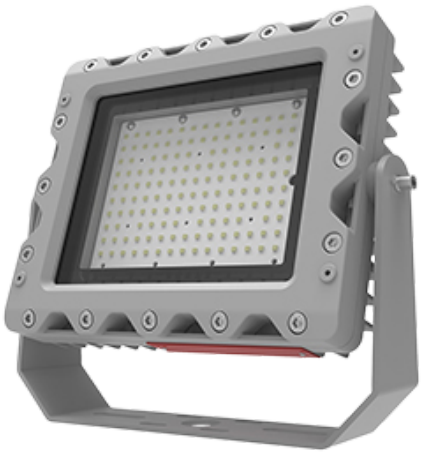
HazBrite™

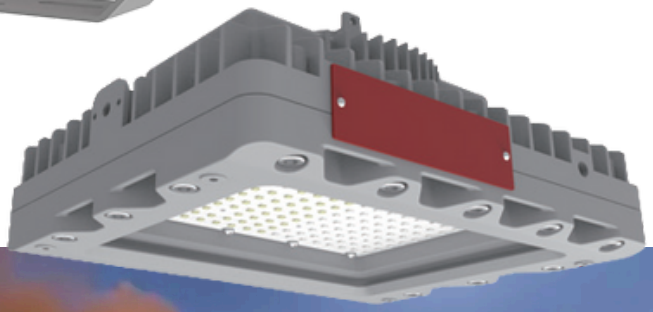
HSFL

Explosion-proof LED Low-Bay & Area Light for Hazardous Environments

Efficient lighting solutions designed for rugged and demanding spaces

3,200 TO 9,600 LUMENS





SAFE, DURABLE, UNCOMPROMISING - SAFE, DURABLE, UNCOMPROMISING -

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www.hazbrite.com

ABOUT US

- Trusted provider of robust LED lighting engineered for the most challenging industrial settings
- Supporting clients across industries like oil & gas, mining, manufacturing, and marine sectors.
- Committed to excellence, reliability, and adherence to the highest safety standards.

WHY CHOOSE HAZBRITE

⇒ SAFETY YOU CAN COUNT ON :

- Thoroughly tested by experts to meet stringent safety requirements.
- Compliant with industry-leading certifications and protocols.
- Built to deliver long-lasting performance in demanding condition.

⇒ FAST AND RELIABLE DELIVERY OF PRODUCTS :

- Majority of orders fulfilled on time delivery.
- Immediate availability of products for urgent needs.
- Real-time tracking for complete visibility and control.

⇒ EXPERTISE DRIVEN SERVICES :

- Dedicated support team with deep industry knowledge.
- Customized lighting solutions tailored to your project's need.
- Comprehensive after-sales support and maintenance.

⇒ ECO - CONSCIOUS SOLUTIONS ;

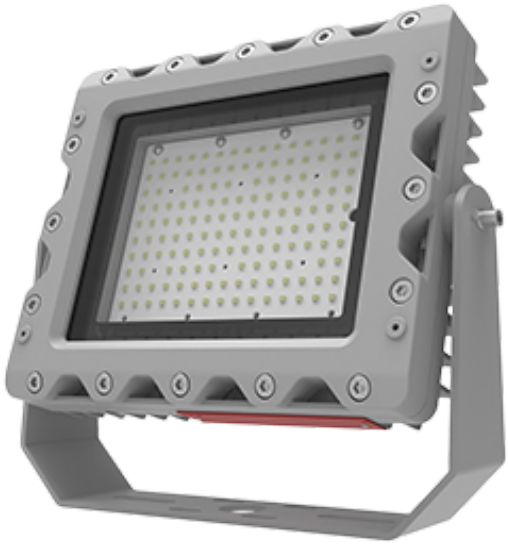
- High-efficiency lighting that cuts energy usage.
- Environmentally responsible design and packaging.
- Sustainable products that reduce waste and operational costs.

SETTING THE STANDARD IN SAFETY-ORIENTED LIGHTING FOR CRITICAL, HAZARDOUS & SAFE OPERATIONS ALIKE.

RATINGS AND CERTIFICATIONS

NEC/CEC STANDARD
UL 844 Hazardous Locations

- Class I Division 1, Groups B, 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
- Class I, Zone 1, Group IIB+H2
- Class I, Zone 2, Group IIC



CSA C22.2 No.
CSA C22.2 No.
UL 1598 Wet Locations
UL 1598A Marine Outside Type (Salt Water)
UL 8750 LED Safety
ABS, FCC
IP66/67
IK09
5G
NEMA 4X

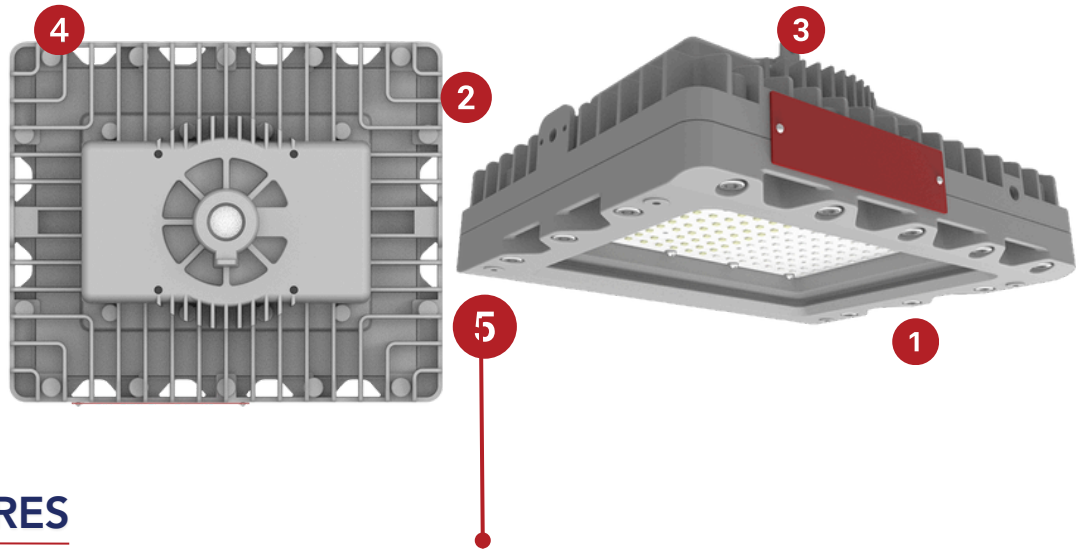
5-year product warranty

Lumen Maintenance: L70 > 150,000 hours @ 25°C

STANDARD MATERIALS

- Lamp housing, Heat sink, and adapter – die cast aluminum
- Finish – baked Powder epoxy/polyester
- Lens – heat, shock and impact resistant glass lens
- Gaskets – high temperature resistant silicone
- Hardware – stainless steel
- Lacquer-free nameplate

Note : Product Specifications and Design subject to change without notice



KEY FEATURES

1. Lightweight And Compact. Low profile & lightweight with single chamber design. 129mm height is perfect for confined or low height areas.
2. High Efficiency. Delivers up to 160 lm/W, utilizes special-treated glass for extreme application, providing high efficacy and long life.
3. Multiple Beam Angles. 30°, 60°, 90°, 110°, T2, T3, T4, different lens provide more choices for various scenarios.
4. Retrofit Friendly. Universal mounting accessories minimizes the SKUs and maximizes the flexibility.
5. Build To Last. Copper-free aluminum housing and impact resistant lens sealed from the outside environment provides ingress protection against water and dust.

ADDITIONAL FEATURES

- Universal Voltage: AC120-277, 347-480V (50/60Hz)
- High efficacy 160 lm/W,
- 7 different optics: 30° / 60° / 90° / 110° / T2 / T3 / T4
- 10kV surge protector is standard, 20kV is optional
- Dimming: Standard 1 – 10VDC
- Offering a T-rating of T6 , Ambient temperatures -40°C to +65°C
- IP67 / IK09 / 5G / NEMA 4X
- Tested 1000hrs salt spray to standard ASTM"B117-11"
- Lumen Maintenance 150,000hours @L70
- 5-year limited system warranty

APPLICATIONS

Chemical

Oil and Gas

Foundries

Pulp & Paper

Power Generation

Waste & Sewage Treatment

Land Rigs

Offshore Rigs

Manufacturing

TECHNICAL DATA

ELECTRICAL DATA

Rated Power	20W / 40W / 60W
Input Voltage	100-277, 347-480V/AC
Input Frequency	50/60Hz
Power Factory	> 0.95
Driver Efficiency	≥ 90%
DC output Ripple & Noise	< 200mVP-P

OPTICAL DATA

Lumen Output	3200 lumens = 9600 lumens
Luminious Efficacy (Lumens per Watt)	160 lumens/W
Beam Angle	30° / 60° / 90° / 110° / T2 / T3 / T4
Correlated Color Temperature (CCT)	Amber 2700K 3000K 4000K 5000K
CRI	Ra>70

ENVIRONMENTAL DATA

Ambient Operating Temperature	-40°C~+65°C
Ambient Operating Humidty	10%~90% RH
Atmospheric Pressurel	86~106KPa

TECHNICAL DATA

Lens Material	Tempered Glass
Mounting Options	Pendant / Ceiling / Wall Mount / Stanchion/ U-bracet
Cable Entries	3/4" NPT, 1-1/4" NPT, 1-1/2" NPT
Net Weight	5.2kg (11.5 lbs)

ORDERING INFORMATION

HSFL 03-U-1-110 - NW- TG - PD1- GR - XX

MODEL
- HSFL

POWER
- 03 = 3,200 Lumens / 20W
- 06 = 6,400 Lumens / 40W
- 10 = 9,600 Lumens / 60W

VOLTAGE
- U = 100-277V 50/60HZ
- N = 347-480V 60HZ*

EX-LEVEL
- 1 = C1D1, C2D1
- 2 = C1D2, C2D1

OPTICS
- 30 = 30° Beam Angle
- 60 = 60° Beam Angle
- 90 = 90° Beam Angle
- 110 = 110° Beam Angle
- T2 = Type II
- T3 = Type III
- T4 = Type IV

COLOR TEMP
- SW = 3000K (Soft white)
- NW = 4000K (Neutral white)
- CW = 5000K (Cool white)

LENS
- TG = Clear glass
- FG = Frosted glass

MOUNT STYLE
- PD = Pendant mount (3/4" NPT)
- TB2 = Trunnion bracket (3/4" NPT)
- W90 = Wall mount 90°
- W25 = Wall mount 25°
- S90A = Stanchion-90° (1-1/4" NPT)
- S90B = Stanchion-90° (1-1/2" NPT)
- S25A = Stanchion-25° (1-1/4" NPT)
- S25B = Stanchion-25° (1-1/2" NPT)
- CJB = Ceiling Junction Box
- PS = Pole Stanchion

ACCESSORIES
- WGS1 - Wire guard
- SC2 - Safety cable
- VS2 - Dark sky visor
- PBC48 - Pipe Clamp (M8*48mm) for pole Ø 1-7/8'' (48mm)
- PBC60 - Pipe Clamp (M8*60mm) for pole Ø 2-3/8'' (60mm)
- PS - Pole Stanchion 2-3/8" (60mm)

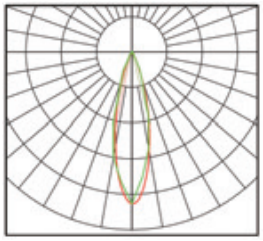
COLOR
- GR - Gray

**ONLY AVAILABLE FOR 60W*

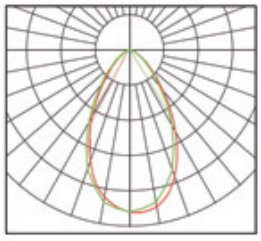
Note : Surge Protector is already included.

BEAM DISTRIBUTION DATA

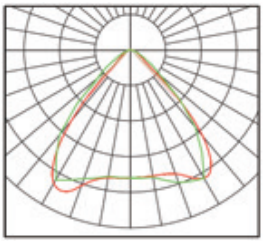
30°



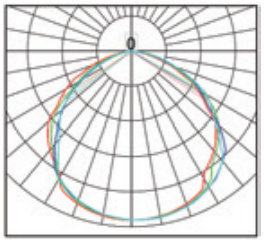
60°



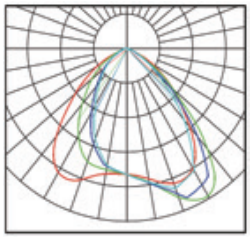
90°



110°



Type II



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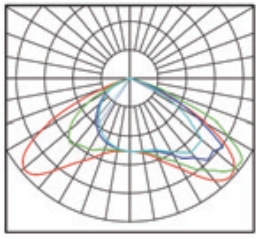
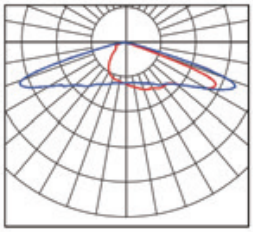
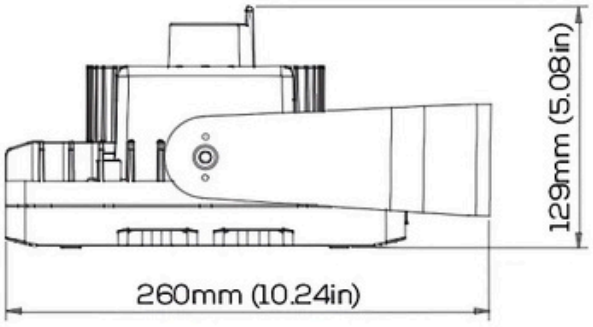


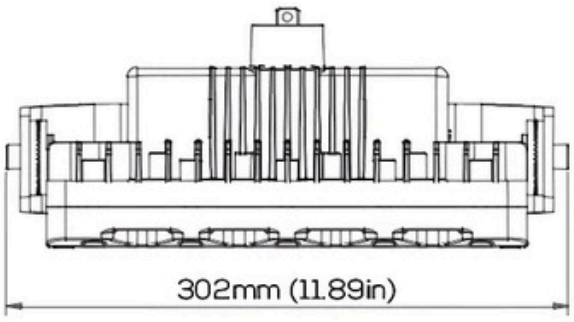
Type IV

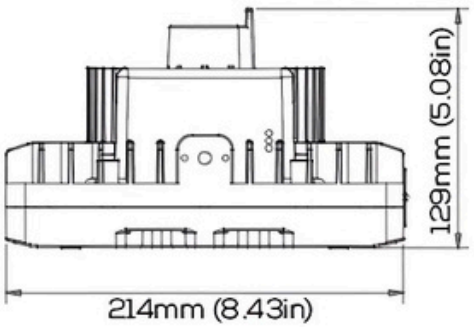


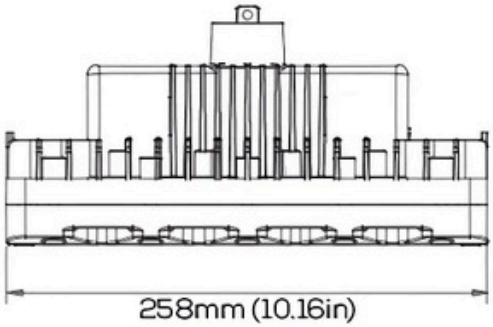
DIMENSIONS

UNIT: MM(IN)









LIGHTING BASICS FOR HAZARDOUS LOCATIONS

CLASSIFICATION OF DIVISIONS AND ZONES

Hazard Level	Division Scheme	Zone Scheme	Definitions
Continuous Hazard	Division 1	Zone 0 / Zone 20	A place in which an explosive atmosphere is continually present
Intermittent Hazard		Zone 1 / Zone 21	A place in which an explosive atmosphere is likely to occurin normal operation
Hazard Under Abnormal Conditions	Division 2	Zone 2 / Zone 22	A place in which an explosive atmosphereis not likely to occur in normal operation. but may occur for short periods

IP CODES

Solid Objects	Liquids
0 - No protection	0 - No Special protection
1- Objects > 50mm diameter	1 - Vertically dripping Water
2 - Objects > 12.5mm diameter	2 - Vertically dripping water when enclosure tilted by 15°
3 - Objects > 2.5mm diameter	3 - Sprayed water up to 60°
4 - Objects > 1.0mm diameter	4 - Sprayed water from all directions
5 - Dust protected	5 - Water Jets
6 - Dust Tight	6 - Powerful water jets
	7 - Temporary submersion to a depth of 1m
	8 - Extended submersion to a depth of >1m

LIGHTING BASICS FOR HAZARDOUS LOCATIONS

HAZARDOUS ATMOSPHERE CATEGORY

Explosive Atmosphere	Typical Hazard Material	Hazard Class	Division Group	NEC 505 / CEC 18
Gases, vapors, and liquids	A: Acetylene B: Hydrogen, etc. C: Ether, etc. D: Hydrocarbons, fuels, solvents, etc.	Class I	Group A Group B Group C Group D	IIC IIC or IIB+H2 IIB IIA
Dusts	E: Metal dusts (conductive and explosive) F: Carbon dusts (some are conductive, and all are explosive) G: Flour, starch, grain, combustible plastic or chemical dust (explosive)	Class II	Group E Group F Group G	IIIC IIIC IIIB
Fibers and flyings	Textiles, wood-working, etc. (easily ignitable, but not likely to be explosive)	Class III	Not Applicable	IIIA

IK CODES

IK CODE	IK01	IK02	IK03	IK04	IK05	IK06	IK07	IK08	IK09	IK10	IK11
IMPACT ENERGY J	0.14	0.2	0.35	0.5	0.7	1	2	5	10	20	50

LIGHTING BASICS FOR HAZARDOUS LOCATIONS

TEMPERATURE CLASSIFICATION

MARKING	NEC 500 / CEC	NEC 505 / IEC GROUP II
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

LIGHTING BASICS FOR HAZARDOUS LOCATIONS

ZONE CLASSIFICATION AND EQUIPMENT PROTECTION LEVEL (EPL)

GAS ZONES	DEFINITION	ATEX CATEGORY	EPL	REQUIRED PROTECTION
Methane	Mines with methane and dust. Equipment remains energised in explosive atmosphere	M1	Ma	Two Faults
Methane	Mines with methane and dust. Equipment is de-energised in explosive atmosphere	M2	Mb	Severe Normal Operation
Zone 0	Explosive atmosphere present continuously or for long periods, frequently	1G	Ga	Two Faults
Zone 1	Explosive atmosphere is likely to occur under normal conditions, occasionally	2G	Gb	One Fault
Zone 2	Explosive atmosphere is unlikely to occur under normal conditions, short periods	3G	Gc	Normal Operation
DUST ZONES	**DEFINITION**	**ATEX CATEGORY**	**EPL**	**REQUIRED PROTECTION**
Zone 20	Explosive atmosphere present continuously or for long periods, frequently	1D	Da	Two Faults
Zone 21	Explosive atmosphere is likely to occur under normal conditions, occassionally	2D	Db	One Fault
Zone 22	Explosive atmosphere is unlikely to occur under normal conditions, short periods	3D	Dc	Normal Operation

CONTACT THE HAZBRITE TEAM FOR MORE ENQUIRIES.

HAZBRITE

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