ZLED LIGHTING
ZLEDLIGHTING.COM

Distributor for:

GRINSAFE®

SCOUT™ GHSL

LED Explosion Proof Lighting

SCOUT™ GHSL lightweight, high-performance LED explosion-proof lighting is specifically engineered for installation in environments where flammable gases, vapors, or dust are present in quantities that pose a potential risk of explosion or fire.

Compliance

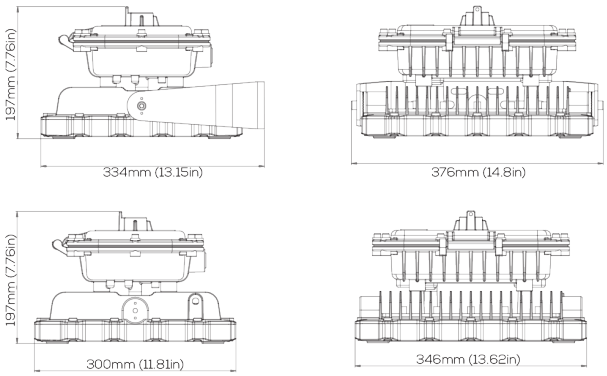
NEC/CEC Standard

UL 844 Hazardous Locations
- 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
- Class I, Zone 1, Group IIB
- Class I, Zone 2, Group IIC

CSA C22.2 No.137
CSA C22.2 No. 250.0:21
UL 1598 Wet Locations
UL 1598A Marine Outside Type (Salt Water)
UL 8750 LED Safety
Paint Spray Booth
ABS, FCC
IP66/67 | IK09 | 5G | NEMA 4X

Dimensions

unit: mm(in)



Technical Data

Electrical	
Rated Power	80W / 100W / 150W / 200W
Input Voltage	100-277, 347-480V/AC
Input Frequency	50/60Hz
Power Factor	› 0.95
Driver Efficiency	≥ 90%
DC output Ripple & Noise	‹200mVP-P

Optical	
Lumen Output	12800lm ~ 32000lm
Luminous Efficacy (Lumens per Watt)	160 - 170 lm/W
Beam Angle	30° / 60° / 90° / 110° / T2 / T3 / T4
Correlated Color Temperature (CCT)	Amber 2700K 3000K 4000K 5000K
CRI	Ra›70

Environmental	
Ambient Operating Temperature	-40°C~+65°C (80W 100W 150W) -40°C~+60°C (200W)
Ambient Operating Humidity	10%~90% RH
Atmospheric pressure	86~106KPa

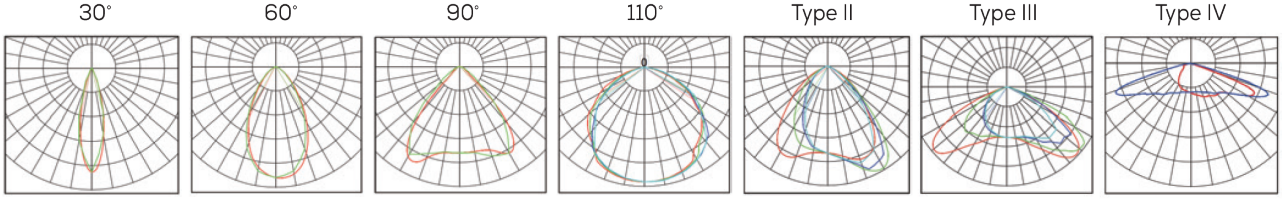
Technical	
Lens Material	Tempered glass
Mounting Options	Pendant / Ceiling / Wall mount / Stanchion / U-Bracket
Cable Entries	3/4" NPT, 1-1/4" NPT, 1-1/2" NPT
Net Weight	11.5kg (25.35 lbs)

Warranty

5-year limited system warranty
Lumen Maintenance: L70 › 150,000 hours @ 25°C

Downloadable IES Files

Beam Distribution



Ordering Information and Mounting Accessories

GHSL	24	U	1	30	NW	TG	PD	GR	XX

Model
GHSL

Power
13 – 12,800 lm (80W)
16 – 16,000 lm (100W)
24 – 24,000 lm (150W)
32 – 32,000 lm (200W)

Voltage
U -100-277V/AC
N -347-480V/AC

Ex. Level
1 - C1D1, C2D1
2 - C1D2, C2D1

Optics
30 - 30°
60 - 60°
90 - 90°
110 - 110°
T2 - T2
T3 - T3
T4 - T4

Color Temp
WW - 2700K (Warm white)
SW - 3000K (Soft white)
NW - 4000K (Neutral white)
CW - 5000K (Cool white)
AM - Amber
AJC - Adjustable CCT (3000K/4000K/5000K)

Lens
TG - Clear glass
FG - Frosted glass

Mount Style
PD – Pendant mount (3/4" NPT)
TB1 - 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

Color
GR - Gray

Accessories
WGS1 - Wire guard
SC1 - Safety cable
VS1 - Dark sky visor
SP10U - 10KV surge protector (100-277V) *Standard
SP10N - 10KV surge protector (347-480V) *Standard
SP20U - 20KV surge protector (100-277V)
SP20N - 20KV surge protector (347-480V)
PBC48 - Pipe Clamp (M8*48mm) for pole Ø 1-7/8" (48mm)
PBC60 - Pipe Clamp (M8*60mm) for pole Ø 2-3/8" (60mm)
CAB - 3' SEOOW-18/3 Cord
CGL - Cable Gland 3/4" NPT
PS - Pole Stanchion 2-3/8" (60mm)

Mounting Options

PD (Standrad)
Pendant Mount
3/4" NPT

TB1
Trunnion Bracket
3/4" NPT

W90
Wall mount 90°
3/4" NPT

W25
Wall mount 25°
3/4" NPT

S90A
Stanchion mount 90°,
1-1/4"NPT

S90B
Stanchion mount 90°,
1-1/2"NPT

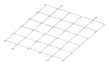
S25A
Stanchion mount 25°,
1-1/4"NPT

S25B
Stanchion mount 25°,
1-1/2"NPT

CJB
Junction Box
3/4"NPT

Accessories

TB1
Trunnion Bracket
3/4" NPT



WGS1
Stainless steel
wire guard

SC1
Stainless steel
safety cable
Φ8 (4mm)

VS1
Stainless steel
dark sky visor

PBC48
Pipe Clamp (M8*48mm)
for pole ø 1-7/8"

PBC60
Pipe Clamp (M8*60mm)
for pole ø 2-3/8"

CAB
3' SEOOW-18/3 Cord
(Factory installed)
Applicable to C1D2

CGL
Cable Gland
3/4" NPT
Suitable for C1D2

10KV Surge Protector
*Standard
SP10U
10KV (100-277V)
SP10N
10KV (347-480V)

20KV Surge Protector
SP20U
20KV (100-277V)
SP20N
20KV (347-480V)

PS
Pole Stanchion
2-3/8" (60mm)

GHSL_C1D1

Scout™ GHSL LED Explosion Proof Lighting

Important Information

This manual contains safety information, please read carefully and follow the instruction strictly.

WARNING: INSTALLATION & SECONDARY RETENTION

Improper installation and handling, including secondary safety retention/securing/netting, may cause severe injury or death. We recommend that all installations should use secondary retention and/or safety netting (appropriate to the installation environment) where applicable. It is the exclusive responsibility of the contractor, installer and/or end customer to: (a) determine the suitability of the product for its intended application; and, (b) ensure that the product is installed safely (with secondary retention and/or safety netting where appropriate) and in compliance with all applicable laws and regulations. To the extent permissible under the relevant law, we disclaims all responsibility for personal injury and/or other damage resulting from any dislodgement or other dislocation of this product.

WARNING

To avoid the risks of fire, explosion, or electric shock, this product should be installed, inspected, and maintained by a qualified electrician in accordance with all applicable electrical rules and regulations.

Safety Instructions:

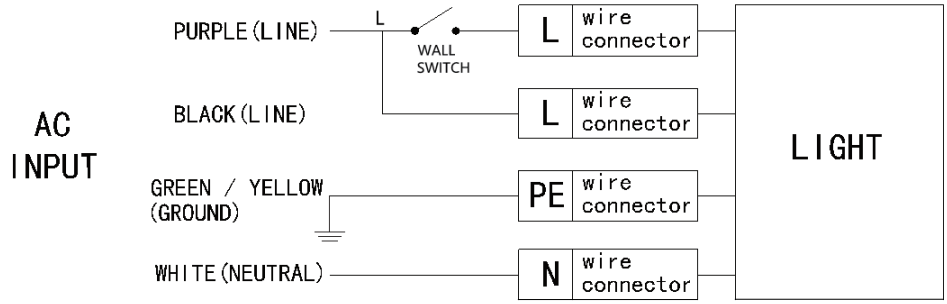
- Be certain, the electrical power is OFF before and during installation and maintenance.
- Make sure the supply voltage is the same as the rated luminaire voltage.
- The technical data indicated on the LED luminaires are to be observed.
- Any change on the design and modifications to the LED luminaire are not permitted.
- Observe the national/regional electrical safety rules and regulations during installation.
- LED beads are NOT replaceable. Replacement of whole set of light fixture is strongely recommended.
- All wiring connections should be capped with UL approved wire connectors.
- Luminaire MUST be well grounded.
- Any combustible materials MUST be kept away from the luminaire.
- Min 90°C supply conductors.
- Do not open the cover after installing the luminaire.

Maintenance:

1. To avoid personal injury, before maintaining, disconnect the light first, and then wait for the luminaire temperature dropping into the safe range.
2. All parts must be checked by mechanical means to ensure they are properly assembled.
3. The external glass should be cleaned regularly to ensure continued luminaire performance. Wipe the glass with a clean, wet, non-abrasive, and lint-free cloth. If this is not sufficient, use mild soap or liquid cleaner. Do NOT use an abrasive, strong alkaline or acid detergent which might damage the luminaire.
4. Check the cooling fins of the luminaire and remove the dust or other sorts of things which accumulated on the luminaire.
5. Visual, electrical and mechanical inspections on the luminaire should be on a regular basis. We highly suggest that this routine inspection should be done at least once a year. The environment condition, where the luminaire installed, determines the frequency of inspection.
6. All electric connections MUST be checked and ensured that they are clean and firm.

Electrical Connections:

WARNING:
Cut off the electric power supply from the circuit breaker or the fuse before wiring luminaire to the circuit.
The connections are marked on the terminal block or on a label and are presented figure below.



Installation & Operations:

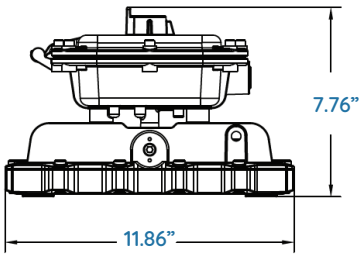
1. Loosen the M6 Socket head cap screws on the Driver Cover.
2. Attach the Driver Housing to the 3/4" NPT conduit.
3. Thread the wire through conduit, and connect to the terminal.
4. Connect the wires to the branch circuit. (If series connection is needed.)
5. Re-attach the Driver cover and tight it by M6 Socket head cap screws with torque value 7 N-m.
6. Check the tightness of conduit and Driver Housing.

Install the Remote Test Switch in Ordinary or Non-Hazardous Location:

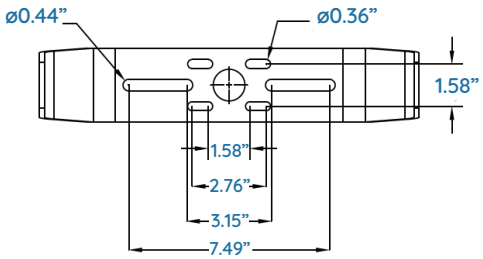
This luminaire has provision to install a remote mounted test switch for the battery.
The remote test switch shall comply with the following:

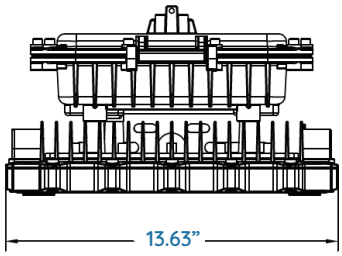
1. The remote test switch shall be certified for the area where it is to be installed (ordinary or non hazardous locations).
2. The remote test switch shall be a manually operated type.
3. The remote test switch shall be of:
    a. Operated type and of momentary-contact type ,or
    b. Maintained-break type that opens all ungrounded conductors and be accessible to authorized person.
4. The remote test switch shall be installed using acceptable wiring methods for the areas involved in accordance with the NEC.
5. The remote test switch shall be identified as to its function (i.e. – marked "Emergency Luminaire Test Switch").
6. When the remote test switch is installed, it has be connected such that when it is depressed it provides a transfer function, disconnects and isolates the normal input from the emergency input.

Technical Diagrams:

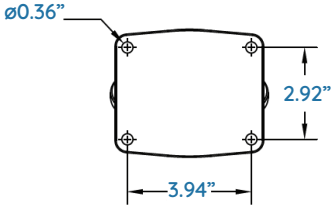


U-bracket

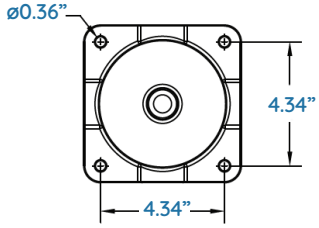




Slip Fitter (Wall)

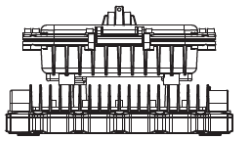


Slip Fitter (Ceiling)

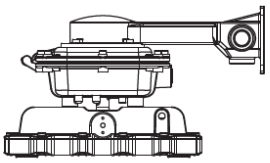


Installation:

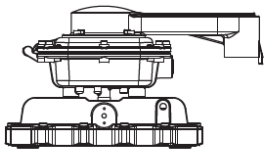
Pendant



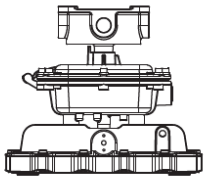
Wall 90°



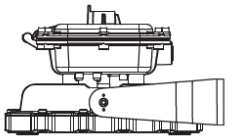
Stanchion 90°



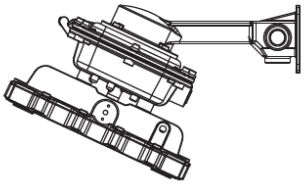
Ceiling



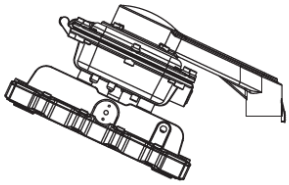
U-Bracket



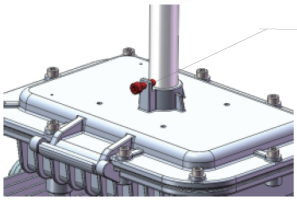
Wall 25°



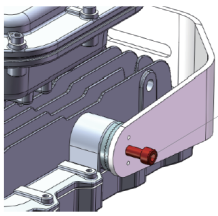
Stanchion 25°



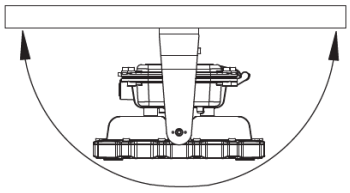
Pendant:
Fix the light with screws after installation and wiring. Torque: 7 N-m.

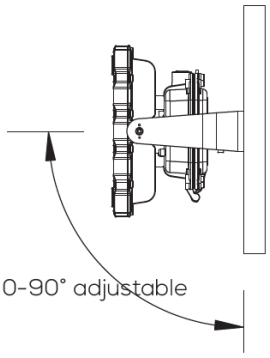


U-bracket:
Once mounted, the angle of the luminaire can be adjusted by loosening the M8 socket head cap screw on each side of the bracket. When loosening, do not back bolt out more than 5 full rotations. When the desired angle has been achieved, the bolts can be tightened to lock in the angle. Torque: 20 N-m.



Installation diagram :





The statement for Class II only:
"Mounting Orientation – Lens Facing Down 0°~90° From Vertical Only"

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		Zone1 / Zone 21	A place in which an explosive atmosphere is likely to occurin normal operation
Hazard Under Abnormal Conditions	Division 2	Zone2 / Zone 22	A place in which an explosive atmosphereis not likely to occur in normal operation. but may occur for short periods

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

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

IK Codes

IK Code	Impact energy, J
IK01	0.14
IK02	0.2
IK03	0.35
IK04	0.5
IK05	0.7
IK06	1
IK07	2
IK08	5
IK09	10
IK10	20
IK11	50

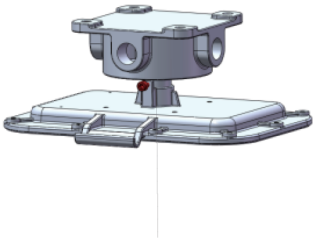
Temperature Classification

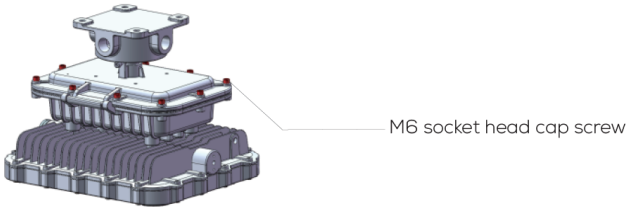
Marking	NEC500 CEC	NEC 505 IEC-GROUP II
450°C	T1	T1
300°C 280°C 260°C 230°C 215°C	T2 T2A T2B T2C T2D	T2
200°C 180°C 165°C 160°C	T3 T3A T3B T3C	T3
135°C 120°C	T4 T4A	T4
100°C	T5	T5
85°C	T6	T6

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 nor-mal 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, occasionally	2D	Db	One Fault
Zone 22	Explosive atmosphere is unlikely to occur under normal conditions, short periods	3D	Dc	Normal Operation

Slip Fitter (Ceiling):
1. Fix Slip Fitter (Ceiling) to Driver Cover.
2. Then tighten the screw. Torque: 7 N-m.
3. Mount the luminaire.
4. Connect wires to the terminal block.
5. Re-attach the Driver cover and tight it by M6 Socket head cap screws with torque value 7 N-m.





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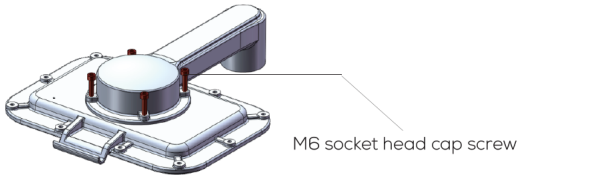

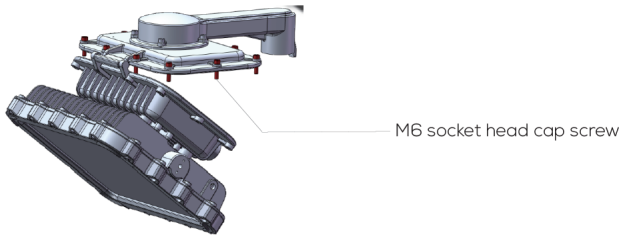

Models:

Models GHSL; followed by E; followed by -32, –24, -16 or -13;followed by U or N

Models	Power	Rated voltage	Ambient Temp(Emergency)
GHSL-32-U	200W	100-277V	0°(32°F)~+50°C(122°F)
GHSL-24-U	150W	100-277V	
GHSL-16-U	100W	100-277V	
GHSL-13-U	80W	100-277V	

GHSL_C1D2

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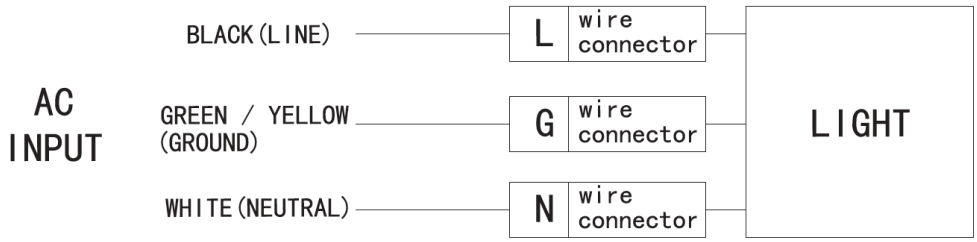
6. All electric connections MUST be checked and ensured that they are clean and firm.

Electrical Connections:

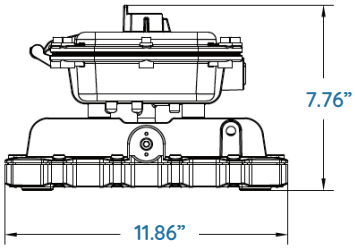
WARNING:
Cut off the electric power supply from the circuit breaker or the fuse before wiring luminaire to the circuit.
The connections are marked on the terminal block or on a label and are presented figure below.

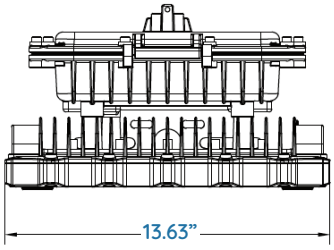


Installation & Operations:

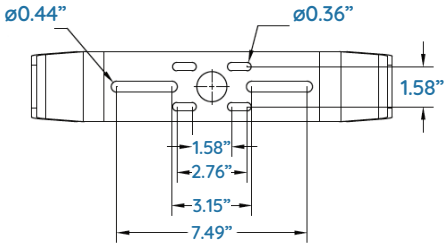
1. Loosen the M6 Socket head cap screws on the Driver Cover.
2. Attach the Driver Housing to the 3/4" NPT conduit.
3. Thread the wire through conduit, and connect to the terminal.
4. Connect the wires to the branch circuit. (If series connection is needed.)
5. Re-attach the Driver cover and tight it by M6 Socket head cap screws with torque value 7 N-m.
6. Check the tightness of conduit and Driver Housing.

Technical Diagrams:

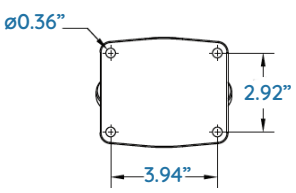




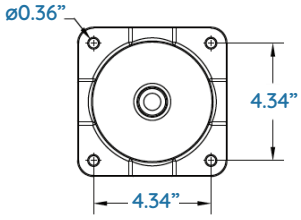
U-bracket



Slip Fitter (Wall)

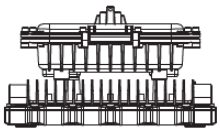


Slip Fitter (Ceiling)

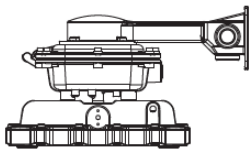


Installation:

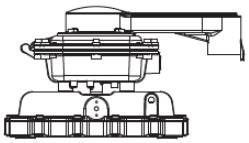
Pendant



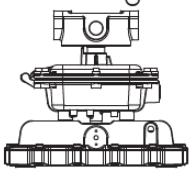
Wall 90°



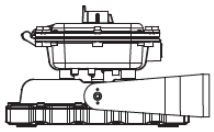
Stanchion 90°



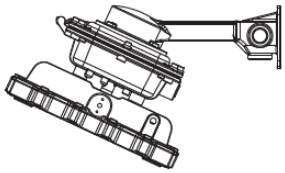
Ceiling



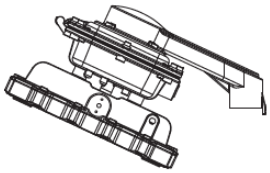
U-Bracket



Wall 25°

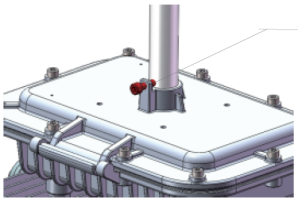


Stanchion 25°

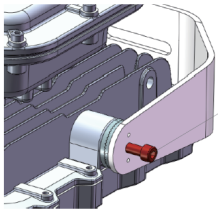


*Slip Fitter (Wall/Stanchion/Ceiling) Is not suitable for Class 1 Div1

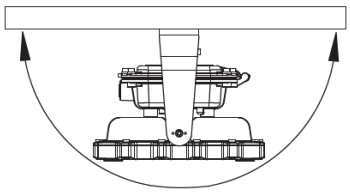
Pendant:
Fix the light with screws after installation and wiring. Torque: 7 N-m.

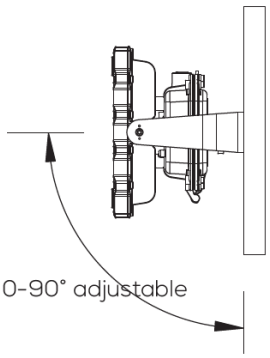


U-bracket:
Once mounted, the angle of the luminaire can be adjusted by loosening the M8 socket head cap screw on each side of the bracket. When loosening, do not back bolt out more than 5 full rotations. When the desired angle has been achieved, the bolts can be tightened to lock in the angle. Torque: 20 N-m.



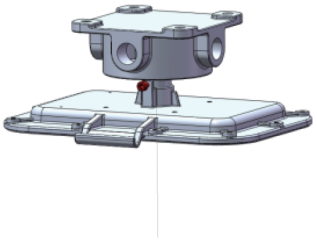
Installation diagram :

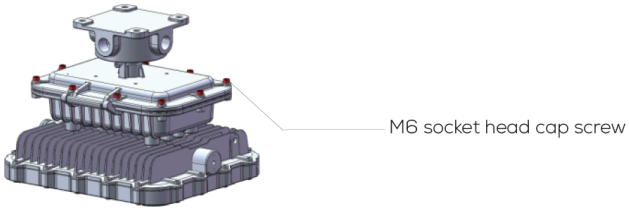




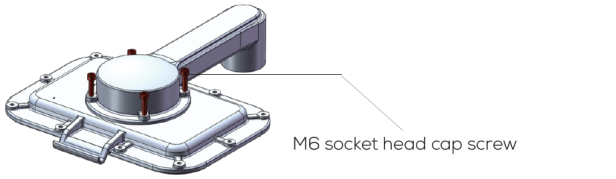
The statement for Class II only:
"Mounting Orientation – Lens Facing Down 0°~90° From Vertical Only"

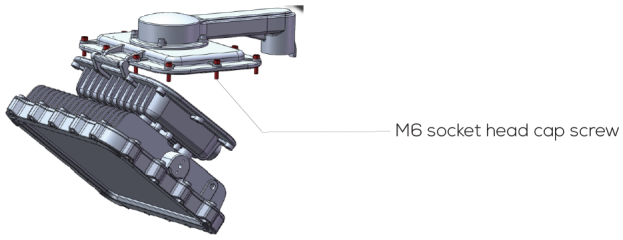
Slip Fitter (Ceiling):
1. Fix Slip Fitter (Ceiling) to Driver Cover.
2. Then tighten the screw. Torque: 7 N-m.
3. Mount the luminaire.
4. Connect wires to the terminal block.
5. Re-attach the Driver cover and tight it by M6 Socket head cap screws with torque value 7 N-m.





Slip Fitter (Ceiling):
1. Fix Slip Fitter to Driver Cover.
2. Then tighten the screw. Torque: 7 N-m.
3. Mount the luminaire.
4. Connect wires to the terminal block.
5. Re-attach the Driver cover and tight it by M6 Socket head cap screws with torque value 7 N-m.





Models:

Models GHSL; followed by -32, -24, or -13; followed by U or N

Models	Power	Rated voltage	Ambient Temp	
			Class I,Division1 Class I,Division2	Class II,Division 1 Class II,Division 2 Class III
GHSL-32-U	200W	100-277V	-40°(-40°F)~+60°C(140°F)	60°C (140°F)
GHSL-32-N		347-480V		
GHSL-24-U	150W	100-277V	-40°(-40°F)~+65°C(149°F)	65°C (149°F)
GHSL-24-N		347-480V		
GHSL-16-U	100W	100-277V		
GHSL-16-N		347-480V		
GHSL-13-U	80W	100-277V		
GHSL-13-N		347-480V		