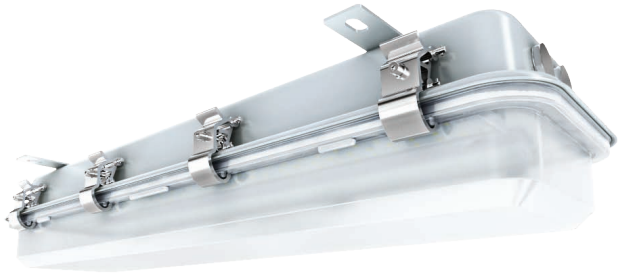
Hazardous Lighting

Product Portfolio

SUNLED INDUSTRIES

Class 1. Division 2



HARSH LOCATION SUITABLE

Hazardous Location
Classification

Hazardous locations of work are required to be made safe according to NEC/CEC electrical codes according to the area classification, substances used and likehood of an ignition producing explosion

Class I Gases, Vapors and Liquids

A Class I Location is created by the presence of flammable gases or vapors in the air in sufficient quantities to be explosive or ignitable. When these materials are found in the atmosphere, a potential for explosion exists if an electrical or other source of ignition is present

Typical Class I Locations
Petroleum refineries, and gasoline storage and dispensing areas;
Dry cleaning plants where vapors from cleaning fluids can be present;
Spray finishing areas;
Aircraft hangars and fuel servicing areas;
Utility gas plants
Operations involving storage and handling of liquified petroleum or natural gas
Locations where inhalation anesthetics are used

Class II Combustible Dust

This classification is created by the presence of combustible dust in the air in sufficient quantities to be explosive or ignitable

Typical Class II Locations
Grain elevators
Flour and feed mills;
Plants that manufacture, use or store magnesium or aluminum powders;
Producers of plastics, medicines and fireworks
Producers of starch or candies;
Fireworks manufacture and storage
Flour and feed mills

Class III Fibers and Flyings

This classification is created by the presence of easily ignitable fibers or flyings. Typically these fibers and flyings are not suspended in the air, but can collect around machinery or on lighting fixtures and where heat, a spark or hot metal can ignite them

Typical Class III Locations
Textile mills, cotton gins;
Petroleum refineries and gasoline storage and dispensing areas
Plants that shape, pulverize or cut wood and create sawdust or flyings.

Flyers are not required to be airborne, they can be explosive substances which collect around machinery or light fixtures where a spark or fire can ignite and explosion

Division 1 Hazard Likely

In which ignitable concentrations of hazards exists under normal operation conditions and where hazard is caused by frequent maintenance or repair work or frequent equipment failure.

Division 2 Hazard Unlikely

In which ignitable concentrations of hazards are handled, processed or used, but which are normally in closed containers or closed systems from which they can only escape through accidental rupture or breakdown of such containers or systems.

Area Classification / By Divisions and Zones		
Continuous Hazard	Intermittent Hazard	Hazard Under Abnormal Conditions
Zone 0	Zone 1	Zone 0
	Division 1	Division 2

Groups A, B, C, D

Class I gas and vapors locations are further separated into 4 groups of materials A, B, C and D which graded by ignition temperature of the substance, explosion severity and other flammable parameters

Groups E, F, G

Class II dust locations are further separated into 3 groups, graded by the ignition temperature and conductivity of the hazardous material

Hazardous Lighting Product Portfolio

HiEye-Ex Series

Product Highlights

Wide Ranging Distributions
With 4 optical distributions availablle from 30° to 120° enabling greater application versatility and ease of design

More Lumen Packages
Ranging from 5,600 to 28,000 lumens for a multitude of indoor and outdoor applications providing superior field beam ratios to maximise uniformity and reduce total fixture counts

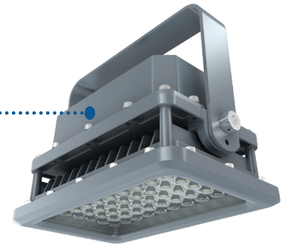
Flood or Highbay Housing
Available in either HiEye Ex for large area illumination or Gamma on floodlight applications maximising fixture output optimization

Toolbox of Mounting Options
A versatile range of mounting options, including ceiling, pendant, yoke, stanchion, 25-90° arm support or UL junction box further customizing the use of this line for petrochemical, heavy industrial, chemical or wasterwater facilities

Industry Leading Construction
Copper-free die cast aluminum housing and a marine grade high temperature polyester powder coat optimizes heat dissipation whilst withstanding harsh and hazardous environments

Listings:
UL1598/UL1598A Marine Marking 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

Gamma Ex variation of Sunled's Class I/Div 2 products is available with same accessories and options, built for both floodlighting and large area hazardous applications



The whole of the optical assembly secured by high tensile TOR-X T20 bolts on front of lens and back frame of fixture

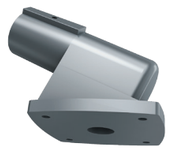
Fully sealed high impact tempered glass lens ideal for the harshest of industrial applications where dirt or dust may be present. Built to preserve colour and transperancy it will not brown or discolor maintaining light levels and appearance over time

Multiple Mounting Options

90° arm with junction box, also available in 25°

Ships standard with 180° adjustable yoke attachment

Direct mount for surface, wall and pole applications



25° pole support also available in 90°

UL Class 1/Div 2 direct or surface mount junction box with pendant adaptor

Exceptional Durability In a Familiar Design

Constructed with a high grade steel body and a durable polycarbonate lens cover the Challenger Ex Series provides extreme reliability in Class I Division 2 areas

Ultimate Performance in Harsh Applications

+ **IP66 STAINLESS STEEL HOUSING** provides excellent corrosion resistance suitable for wash down areas
+ **HAZARDOUS LOCATION LED LUMINAIRE** vapor tight contained in Class 1, Div 2 groups A/B/C/D
+ **IK10 IMPACT RESISTANCE PC LENS** secures to housing with TOR-20 tamperproof bolt assembly and cam latches
+ **DUAL 3/4" NPT** steel cable entries at each side with single 1/2" reducer for maximum compatibility
+ **2,800 to 8,400L** range of lumen packages

OPTICAL

+ 2ft: 2,800 - 4,200 lumens
+ 4ft: 5,600 - 8,400 lumens
+ CCT: 3000K, 4000K, 5000K, 6000K
+ Clear or frosted lens options 110° wide beam distribution

ELECTRICAL

+ 120-277VAC or 200-480VAC
+ L80 >60,000hrs
+ 0-10v dimming standard
+ Operating Temperature: -40°F to 140°F

Reliable Hazardous Area Solutions from Sunled

CHALLENGER EX
Steel Body Vapor Batten

GAMMA EX
Floodlight Luminaire

HIEYE EX
Highbay Luminaire

Product Selection Guidelines

Select the correct fixture every time

A

Choose a fixture that has the correct hazardous classification for the project requirement

Usually comprised of a Class, Division and Group

B

Confirm the t-number for selected fixture

Ensure specific wattage, beam angle, housing and mounting attachments have been selected from the datasheet or contact your local Sunled sales representative for further assistance

C

Refer table below for maximum allowable temperature of the hazardous material that is present

Class I Gas	NFPA497M Gas Ignition Temperature
Class II Dust	Group E: 392°F (200°C)
	Group F: 392°F (200°C)
	Group G: 329°F (165°C)
	Or ignition temperature from NEC

D

Refer table below. Ensure corresponding maximum temperature of t-number from the selected fixture in step B is more than that of the hazardous material maximum temperature of step C

+ If the fixture temperature is less than that of the material temperature fixture is not suitable
+ If the fixture temperature is more than that of the material temperature fixture safe for use

Fixture T-Number	Max Allowable Temperature
T1	842°F (450°C)
T2	572°F (300°C)
T2A	536°F (280°C)
T2B	500°F (260°C)
T2C	446°F (230°C)
T2D	419°F (215°C)
T3	392°F (200°C)
T3A	356°F (180°C)
T3B	329°F (165°C)
T3C	320°F (160°C)
T4	275°F (135°C)
T4A	248°F (120°C)
T5	212°F (100°C)
T6	185°F (85°C)

T-Number Table

Sunled Industries, LLC.

100 Duffy Ave, Ste 510 Hicksville NY 11801

Contact your local Sunled sales representative directly for project assistance, cost analysis or computer aided simulations. For technical support or general enquiries and information on any other Sunled products contact the customer support line on 917-563-7078

Five year limited warranty
See full terms and conditions
https://www.sunledind.com/resources-hidden/sales-conditions

Visit our website at www.sunledind.com for the full product range

Please refer to online specifications for most up to date content as specifications are subject to change without notice

Due to continued efforts to stay up-to-date with constantly emerging technology our product specifications are subject to change without notice