RSL®
Fiber Systems, LLC
"Advanced Lighting Technologies"

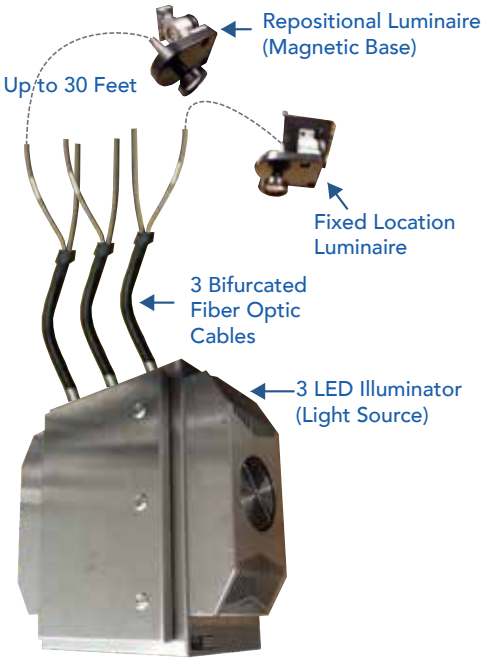
LIGHT REIMAGINED

ILLUMINATION FOR HAZARDOUS AREAS

What is "Remote Source Lighting"?

Remote Source Lighting is an innovative approach to industrial lighting where the light source is safely placed outside the harsh or hazardous environment to be illuminated. The light is transmitted inside the area via optical fibers and is emitted by non-electric luminaires, eliminating 100% of the electrical hazards associated with traditional lights.

The RSL System For Hazardous Locations



The RSL remote source fiber optic illumination system (PN 119854) consists of one (1) light engine or illuminator (PN 119986) with three (3) high efficiency white LED light sources. Each LED is optically coupled to one (1) bifurcated fiber optic cable assembly (PN 119855) transporting light to two (2) luminaires (PN 119856), emitting in a circular pattern. In this configuration each illuminator provides light to six (6) luminaires.

Luminaires can be positioned for optimal vertical alignment with an easy push button locking hinge, preventing further movement in high vibration environments. A magnetic base assembly (PN 119856-M) is available for applications where the luminaires may have to be repositioned during maintenance activities.

Optional (Side Emitting Fiber):

The luminaire and end emitting fiber can be replaced with side emitting fiber to provide a diffused illumination pattern suitable for background and passage way lighting.

Environment

The illuminator:

- Designed to be installed for installation on the external hazardous location to be illuminated.
- Housed within a NEMA 4X enclosure which is corrosion resistant.
- Rated at IP56 to protect personnel against internal parts, prevent ingress of solid foreign objects and water.
- Has an operating temperature of -40°C to +55°C.

The fiber optic cables:

- Are routed inside the hazardous location to be illuminated.
- Have flexible, interlocked steel sheaths and are rated to 150°C.
- The high temperature rating is ideal enclosures such as power generation gas turbines.
- Cables are typically fed through a cable transit sealing the enclosure.
- The portion external to the enclosure has a protective plastic jacket.

The luminaires are installed within the enclosure and are rated to 125°C.

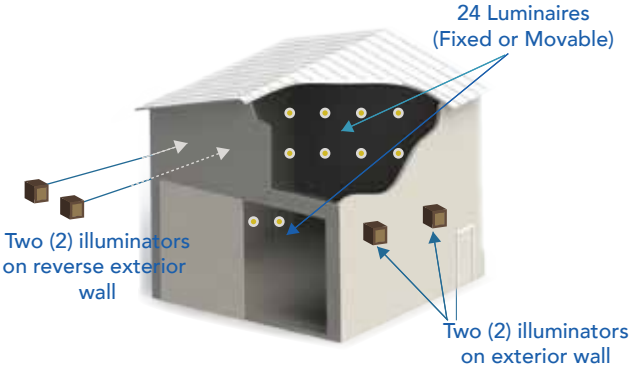
*These are baseline temperature requirements. Higher temperature ratings can be achieved for more extreme applications. An illuminator designed to operate at +60°C is available on request.

Features

- Highly efficient luminous flux deliverd to areas needing illumination.
- Significantly increased life span of the light sources. (LED sources retain 70% of full intensity after 50,000 hour, approximately 5.7 years.)
- No scheduled maintenance required for the life of the system.
- All electrical and sensitive components are outside the hazardous area, eliminating the risk of damage from vibrations, acoustics, high temperature, and other conditions found inside the enclosure.
- No risk of electrical hazard inside the enclosure even if the cable is cut or if luminaires are damaged.
- Glass fiber bundles are flexible, light weight, low cost, and very heat resilient.

Configuration

One (1) RSL system consists of one (1) illuminator, three (3) bifurcated fiber optic cable and six (6) luminaires. The number of systems per enclosure is adapted to illumination needs.
A three (3) story structure with approximately 575 sq ft per floor would typically require 4 systems for adequate task illumination.



Example Configuration

Installation

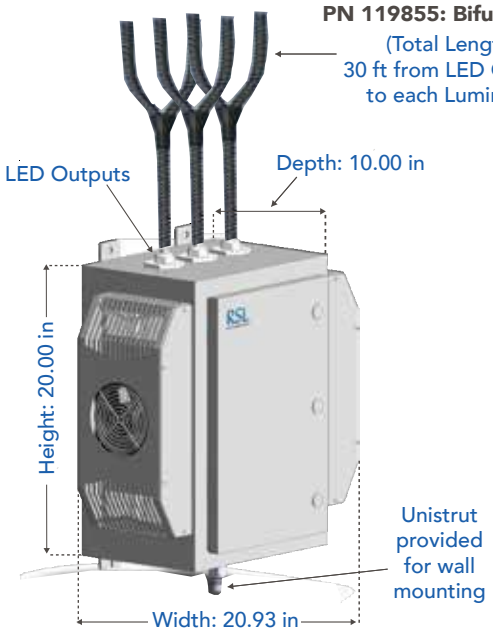
Mounting hardware for the illuminator and luminaires, including cable clamps for the fiber optic cable assemblies, are provided as part of the delivered systems. Full installation instructions are included.

Hardware Part Numbers and Dimensions*

PN 119856: Push Button Locking Hinge Luminaire
(Allows Vertical Adjustments)

PN 119856-M: Push Button Locking Hinge Luminaire with Magnet
(Allows Vertical Adjustments and Relocation of Luminaire)

**Dimensions are approximate.*
Refer to specifications for accurate dimensions.



PN 119986: Wall Mounted Illuminator

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Certified System
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Quality