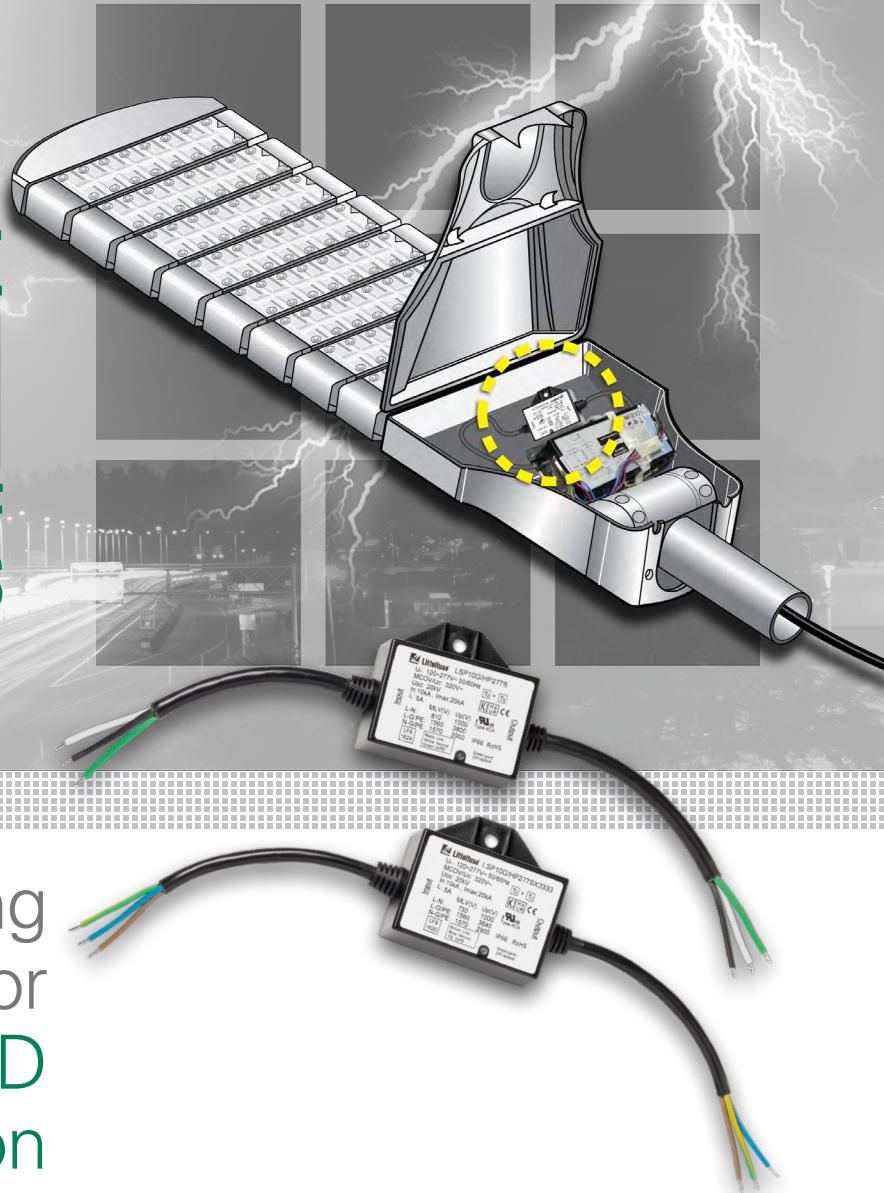


# REDUCES SURGE LET-THROUGH EXTENDS LIFETIME OF YOUR LED LUMINAIRES



## Highest Performing SPD Module for Outdoor LED Lighting Protection

LSP10GIHP Series modules provide coordinated protection for most commercially available LED drivers used today, reducing driver failure more effectively than ever before.

Lower clamping voltage and surge let-through current ensure greater luminaire protection.

These modules comply with ANSI C136.2-2015 Extreme, ANSI C82.77-5-2015 High Exposure, IEEE C62.41.2 Location Category C High Exposure, and US Dept. of Energy MSSLC Roadway Luminaire Elevated (20kV/10kA, 1.2/50 $\mu$ s-8/20 $\mu$ s) surge immunity standards. A built-in thermal disconnect provides additional protection against catastrophic failure/fire hazard under varistor end-of-life or sustained overvoltage conditions.

### Applications

- Roadway, street and traffic lighting
- Parking garage lighting
- Wash wall lighting
- Digital signage
- Tunnel lighting
- Flood lighting



DataSheet



Design Guide



Samples

## LSP10GIHP Series Surge Protection Modules provide the industry's most robust surge protection for your outdoor/commercial LED lighting fixtures



LSP10GIHP277S



LSP10GIHP277SX3333

### Features

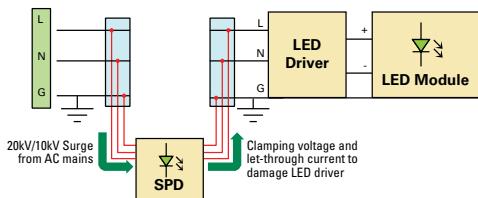
- Low measured limiting voltage (MLV) and low voltage protection level ( $U_p$ )
- 20kA Maximum Discharge Current ( $I_{max}$ ) 8/20μs
- Meets US Department of Energy Municipal Solid State Street Lighting Consortium Specification
- Meets ANSI C136.2-2015 Extreme Level and ANSI C82.77-5 Category C High (20kV, 10kA combination wave surge) requirements
- UL 1449 and IEC 61643-11/ EN 61643-11 approved
- Thermally protected
- Double-insulated cable wire
- IP66 rated
- Series-connected design with built-in LED indication

### Benefits

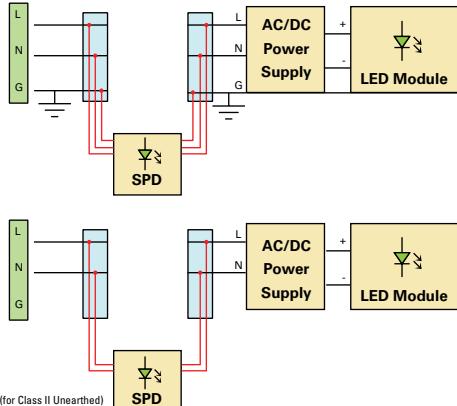
- Reduces driver failure and increases time between maintenance calls
- Coordinated protection with most commercially available drivers used today
- Allows easy selection from only two voltage options for confident use across more luminaire voltages
- Protects outdoor LED fixtures from high electrical hazard environments
- Suitable for use in many parts of the world
- Protection from hazards affecting light or facility due to 'end-of-life' or extreme surge conditions
- Suitable for use in Class II luminaires per EN 60598-1\*
- Dust-tight and water resistant
- Saves maintenance time by identifying when a replacement module is needed

### Surge Let-through Compared to LSP10

|                                             | NEW!                                                        | LSP10                                                          |
|---------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------|
| Clamping Voltage (10kA source, L-N)         | LSP10GIHP277S - <b>810V</b><br>LSP10GIHP480S - <b>1400V</b> | LSP10277S - <b>1330V</b><br>LSP10480S - <b>2020V</b>           |
| Let-through Current (20kV/10kA source, L-N) | Independent from LED driver, less than <b>0.5kA</b>         | Vary with different LED drivers, ranged from <b>1kA to 4kA</b> |

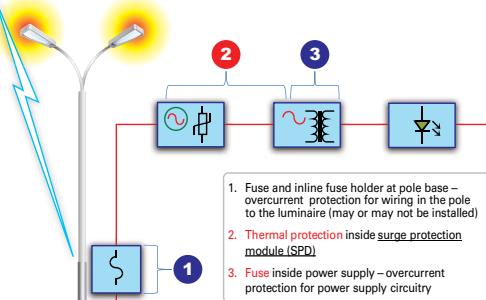


### Series Connection Using an SPD



- Thermal protection prevents MOV fire hazard caused by unstable line voltage and end-of-life failure
- Series-connected SPD turns off luminaire power to provide a clear indication the light requires maintenance
- The built-in LED indicator alerts the need for SPD replacement

### LED Street Light Protection Scheme



### Surge Protection Module Key Characteristics

| Model                                      | LSP10GIHP277S<br>LSP10GIHP277SX3333<br>LSP10GIHP277SX3316                                                                                                                                                                      | LSP10GIHP480S                                                                                                                                                             |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Connection Type                            | Series                                                                                                                                                                                                                         |                                                                                                                                                                           |
| Indication for SPD Replacement             | Luminaire turned off                                                                                                                                                                                                           |                                                                                                                                                                           |
| Thermal Protection                         | MOV thermal disconnection when overheated                                                                                                                                                                                      |                                                                                                                                                                           |
| Recognition/Compliance                     | UL 1449 Type 4 CA<br>IEEE C62.41.2 C High Exposure<br>ANSI C136.2 Extreme<br>ANSI C82.77-5 High Exposure<br>US DOE MSSLC Roadway Elevated<br>EN/IEC 61643-11 Class II + III<br>CE<br>KEMA-KEUR<br>(20kV/10kA, 1.2/50μs-8/20μs) | UL 1449 Type 4 CA<br>IEEE C62.41.2 C High Exposure<br>ANSI C136.2 Extreme<br>ANSI C82.77-5 High Exposure<br>US DOE MSSLC Roadway Elevated<br>(20kV/10kA, 1.2/50μs-8/20μs) |
| $U_n$ (nominal operating voltage)          | 120VAC - 277VAC                                                                                                                                                                                                                | 347VAC - 480VAC                                                                                                                                                           |
| $I_{max}$ (maximum surge current, one hit) |                                                                                                                                                                                                                                | 20kA                                                                                                                                                                      |
| $I_n$ (nominal surge current, 15 hit)      |                                                                                                                                                                                                                                | 10kA                                                                                                                                                                      |
| Luminaire Insulation Class                 | Class I earthed/Class II unearthing                                                                                                                                                                                            | Class I earthed                                                                                                                                                           |
| Water-proof and Dust-proof                 |                                                                                                                                                                                                                                | IP66                                                                                                                                                                      |
| Dimensions                                 | 71.63 x 49.6 x 32mm (mounting tab excluded)                                                                                                                                                                                    |                                                                                                                                                                           |
| Applicable Markets                         | America/Europe                                                                                                                                                                                                                 | America                                                                                                                                                                   |