



## Description

ZP-LED series thermally protected Surge Protective Device is specially designed to be used in outdoor and commercial LED lighting fixtures for transient overvoltage protection. It is mainly composed of thermally protected varistors and gas discharge tube components. Its built-in thermal disconnect function provides additional protection to prevent catastrophic failure and fire hazard even under the extreme circumstances of varistor end-of-life or sustaining over voltage conditions. The product is connected with LED power driver to provide reliable lightning surge protection, which can effectively prolong the service life and stability of luminaires.

## Features

- ◆ Applicable to class I or II luminaire
- ◆ Protection mode: L-N, L-PE, N-PE
- ◆ Built in thermal separation function, higher safety
- ◆ Series connection, with its own lead
- ◆ Excellent surge impact resistance and low residual voltage
- ◆ Miniature size and convenient for embedded installation
- ◆ IP67 Water-proof and Dust-proof.

## Applications

- ◆ Street lighting
- ◆ Tunnel lighting
- ◆ Flood lighting
- ◆ Stadium lighting
- ◆ Port lighting
- ◆ Digital signage
- ◆ Gas station lighting
- ◆ AC-LED lighting
- ◆ Traffic lighting
- ◆ Industrial high bay lighting

## Agency Approvals

Agency	Standard	Certificate No.
CE	EN 61643-11	LCS200109018AS

## Electrical Data

Product model	ZP-LED-S10C
SPD according to IEC/EN61643-11	Type2+Type3/Class II +ClassIII
Nominal operating voltage/ $U_n$	100-277V(50/60Hz)
Max. continuous operating voltage/MCOV ( $U_c$ )	320V(50/60Hz)
Rated load current / $I_L$	5A
Nominal discharge current/ $I_n(8/20\mu s)$	5kA
Max. discharge current/ $I_{max}(8/20\mu s)$	10kA
Open-circuit voltage/ $U_{oc}(1.2/50\mu s \& 8/20\mu s)$	10kV
Voltage protection level/ $U_p(@I_n)$	$\leq 1.2kV(L-N, L/N-PE)$
Follow current extinguishing capability/ $I_n(N-PE)$	100A <sub>rms</sub>
Temporary overvoltage TOV/ $U_T(L-N)$	337V/5sec.-withstand
Temporary overvoltage TOV/ $U_T(L-N)$	442V/120min.-safe failure
Connecting wires	H05RN-F 3×1.0mm <sup>2</sup>
Connection mode	Series connection
Enclosure material	Thermoplastic UL94-V0
Operating temperature range	-40℃~+85℃
Degree of protection	IP67
Product size	L69×W33×H26mm
Weight(one piece)	110g
Packing quantity	150pcs/CTN
Package size	L428×W222×H205mm

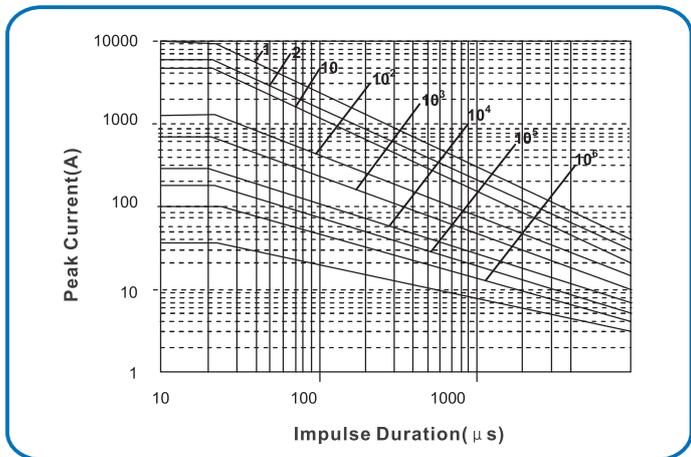




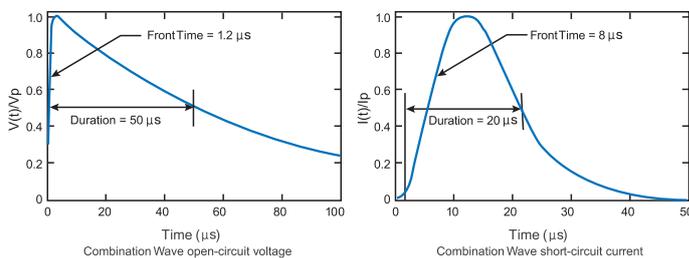
- Focus on R&D Lightning Protection -

## Power Surge Protective Device > ZP-LED-S10C

### Repetitive surge capability



### Test waveform



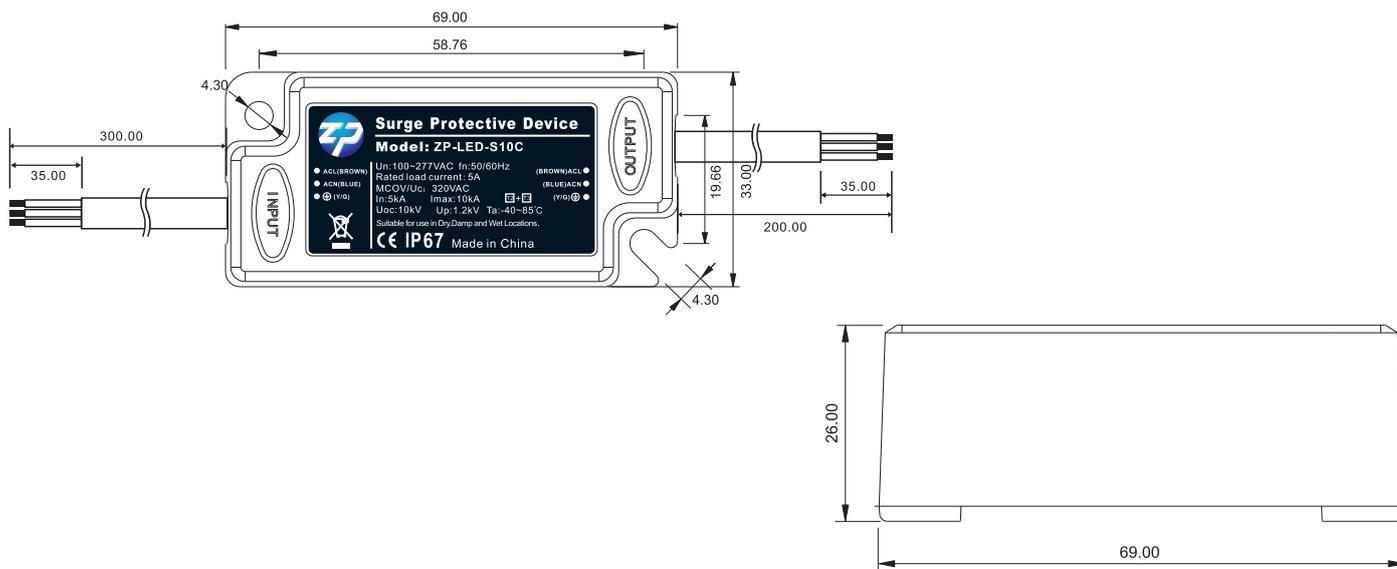
#### Lightning surge test (8/20 μs)

Surge	Strikes	Lightning surge test (8/20 μs & 1.2/50 μs)	
Surge	Strikes	Surge	Strikes
10000A	1	5kA/10kV	120
7000A	2		
5000A	15		

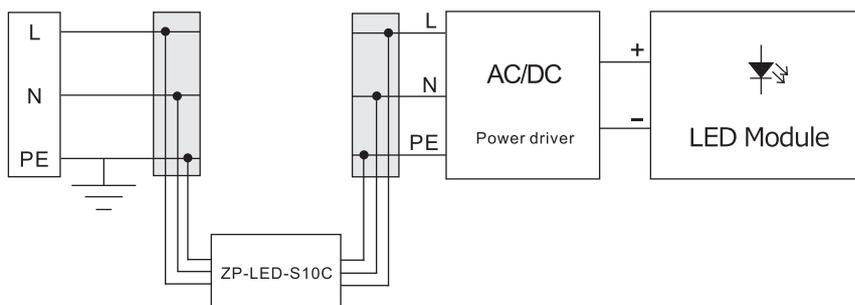
Notes: IEC 61000-4-5 surge immunity test waveforms: 1.2/50 μs open circuit voltage and 8/20 μs short circuit current.

### Dimensions

Unit: (mm)



### Application / Installation schematic



Installation instructions:

1. The input of SPD is connected to AC power grid and the output is connected to LED driver, which is installed in front of the driver nearby.
2. Brown-phase line (L); Blue-neutral line (N); Yellow&green-ground line (PE).
3. Fixed with two M4 screws.

