

# 50W Constant Current (700mA) Dimming LED Driver

## IZC070-050A-9267C-SA

### Product Overview

The IZC070-050A-9267C-SA operate from a 90 - 305 Vac input range. This unit will provide up to a 700mA of output current and a maximum output voltage of 72Vdc for 50 W maximum output power. It is designed to be highly efficient and highly reliable. Features include over voltage protection, short circuit protection and over load protection.

### Technical Features:

- High Efficiency
- Constant Current Output
- Active Power Factor Correction
- Waterproof (IP67)
- Constant Current Output
- Dimming with 0-10V source or 20k resistor
- Lightning Protection
- All-Round Protection: OVP, SCP, OTP
- Comply With UL8750 & EN61347 Safety Regulations



### Model

| Output Current | Input Voltage | Max. Output Voltage | Max. Output Power | Typical Efficiency(1) | Power Factor |        |
|----------------|---------------|---------------------|-------------------|-----------------------|--------------|--------|
|                |               |                     |                   |                       | 110Vac       | 220Vac |
| 700 mA         | 90 - 305 Vac  | 72 Vdc              | 50 W              | 88%                   | 0.99         | 0.92   |

N.B Measured at full load and 220 Vac input.

### Input Specifications

| Parameter        | Min.  | Typ. | Max.  | Notes                                    |
|------------------|-------|------|-------|--|
| Input Voltage    | 90 V  | -    | 305 V |  |
| Input Frequency  | 47 Hz | -    | 63 Hz |  |
| Input AC Current | -     | -    | 0.6 A | Measured at full load and 100 Vac input. |
|                  | -     | -    | 0.3 A | Measured at full load and 220 Vac input. |
| Inrush Current   | -     | -    | 20 A  | At 230Vac input 25°C Cold Start          |

## Output Specifications

| Parameter                           | Min.  | Typ.  | Max.      | Notes  |
|-------------------------------------|-------|-------|-----------|--|
| Output Current Range $I_o = 700$ mA | 665mA | -     | 735mA     |  |
| Output Voltage Range $I_o = 700$ mA | 24V   |       | 72V       |  |
| Ripple and Noise (pk-pk)            | -     | -     | 10% $V_o$ | Measured by 20 MHz bandwidth oscilloscope and the output paralleled a 0.1 $\mu$ F ceramic capacitor and a 10 $\mu$ F electrolytic capacitor. |
| Line Regulation                     | -     | -     | 2%        |  |
| Load Regulation                     | -     | -     | 5%        |  |
| Turn-on Delay Time                  | -     | 1.7 S | 2.0 S     | Measured at 110Vac input.  |
|                                     | -     | 0.7 S | 1.0 S     | Measured at 220Vac input.  |
| Output Overshoot / Undershoot       | -     | -     | 10%       | When power on or off.  |

## Protection Functions

| Parameter                              | Min.   | Typ.   | Max. | Notes   |
|--|--|--------|------|---|
| Over Voltage Protection $I_o = 700$ mA | 92V  | 94V    | 96V  | Hiccup mode. The power supply shall be self-recovery when the fault condition is removed. |
| Over Load Protection                   | -  | 1.25Po | -    | Hiccup mode. The power supply shall be self-recovery when the fault condition is removed. |
| Short Circuit Protection               | No damage shall occur when any output operating in a short circuit condition. The power supply shall be self-recovery when the fault condition is removed. |        |      |   |

## General Specifications

| Parameter                             | Min.                           | Typ.  | Max. | Notes                                    |
|---------------------------------------|--------------------------------|-------|------|--|
| Efficiency $I_o = 700$ mA             | 86%                            | 87%   | -    | Measured at full load and 110 Vac input. |
| Efficiency $I_o = 700$ mA             | 87%                            | 88%   | -    | Measured at full load and 220 Vac input. |
| No Load Power Dissipation             | $\leq 3$ W                     |       |      |  |
| MTBF                                  | 487,000 hours                  |       |      |  |
| Life Time                             | 66,000 hours                   |       |      |  |
| Dimensions                            |                                |       |      |  |
| Inches (L $\times$ W $\times$ H)      | $6.77 \times 1.36 \times 1.67$ |       |      |  |
| Millimeters (L $\times$ W $\times$ H) | $172 \times 34.5 \times 42.5$  |       |      |  |
| Net Weight                            |                                | 480 g |      |  |

Note: All specifications are typical at 25 °C unless otherwise stated.

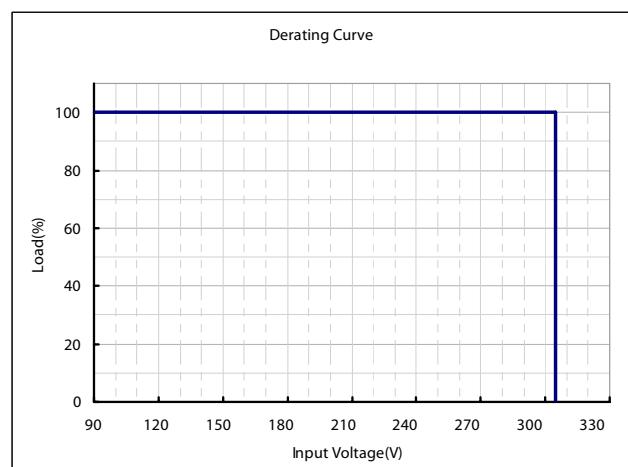
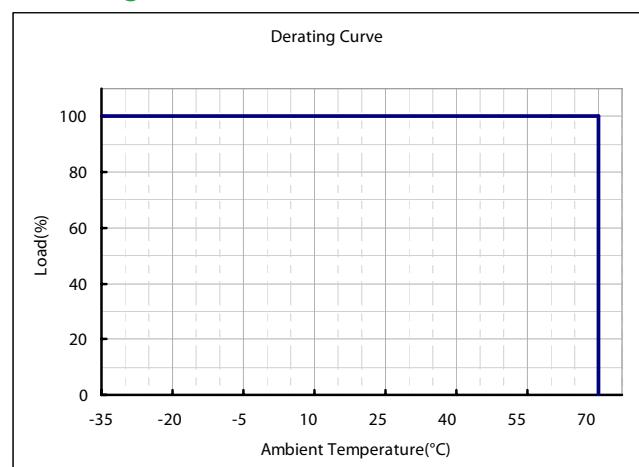
## Environmental Specifications

| Parameter             | Min.   | Typ. | Max.   | Notes                       |
|-----------------------|--------|------|--------|-----------------------------|
| Operating Temperature | -35 °C |      | +70 °C | Humidity: 10% RH to 100% RH |
| Storage Temperature   | -40 °C |      | +85 °C | Humidity: 5% RH to 100% RH  |

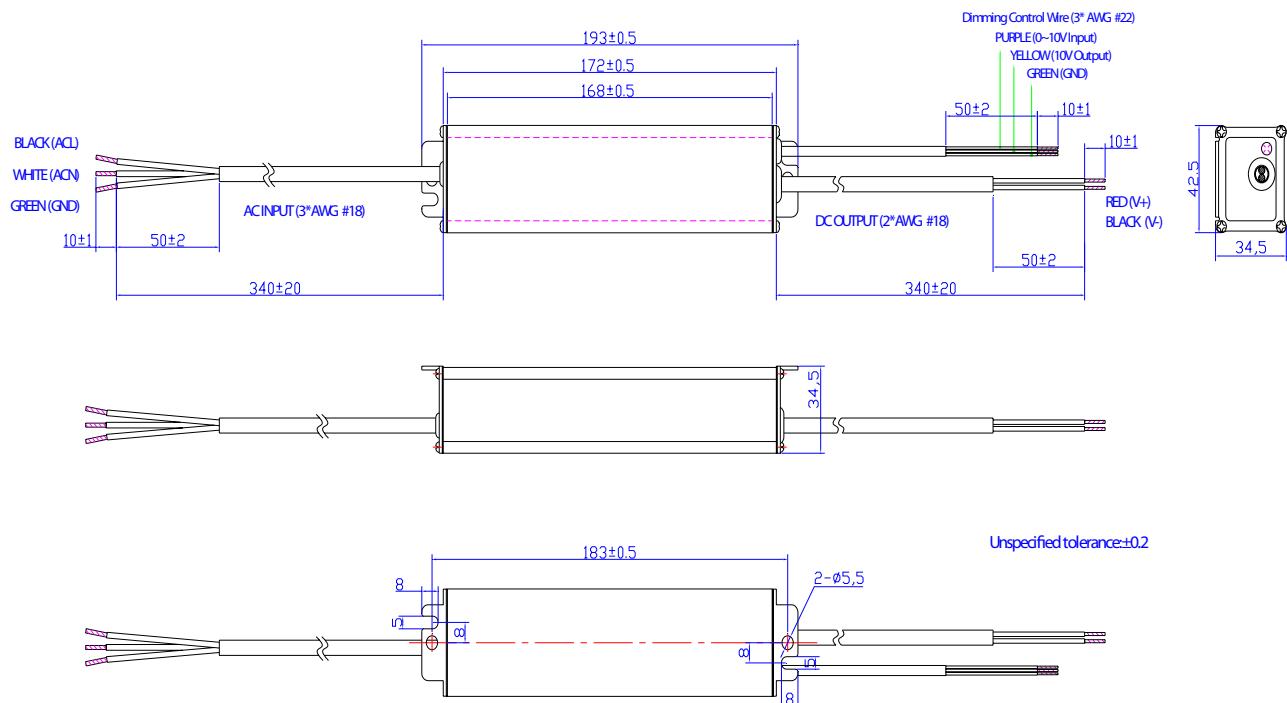
## Safety & EMC Compliance

| Safety Category | Country      | Standard  |
|-----------------|--------------|---|
| CUL             | USA & Canada | UL8750 Compliance to UL1310 Class2, UL1012 UL953, CAN/CSA-C22.2 No. 0, CSA-C22.2 No. 107.1, CSA-C22.2 No. 250.0 |
| CE              | Europe       | EN61347-1, EN61347-2-13   |
| EMI Standards   |              | Notes   |
| EN 55015        |              | Conducted emission Test & Radiated emission Test with 6 dB margin   |
| EN 61000-3-2    |              | Harmonic current emissions  |
| EN 61000-3-3    |              | Voltage fluctuations & flicker  |
| EN 61000-4-2    |              | Electrostatic Discharge (ESD): 8 kV air discharge, 4 kV contact discharge                                       |
| EN 61000-4-3    |              | Radio-Frequency Electromagnetic Field Susceptibility Test-RS  |
| EN 61000-4-4    |              | Electrical Fast Transient / Burst-EFT   |
| EN 61000-4-5    |              | Surge Immunity Test: AC Power Line: line to line 2 kV, line to earth 4 kV                                       |
| EN 61000-4-6    |              | Conducted Radio Frequency Disturbances Test-CS  |
| EN 61000-4-8    |              | Power Frequency Magnetic Field Test   |
| EN 61000-4-11   |              | Voltage Dips  |
| EN 61547        |              | Electromagnetic Immunity Requirements Applies to Lighting Equipment   |

## Derating Curve

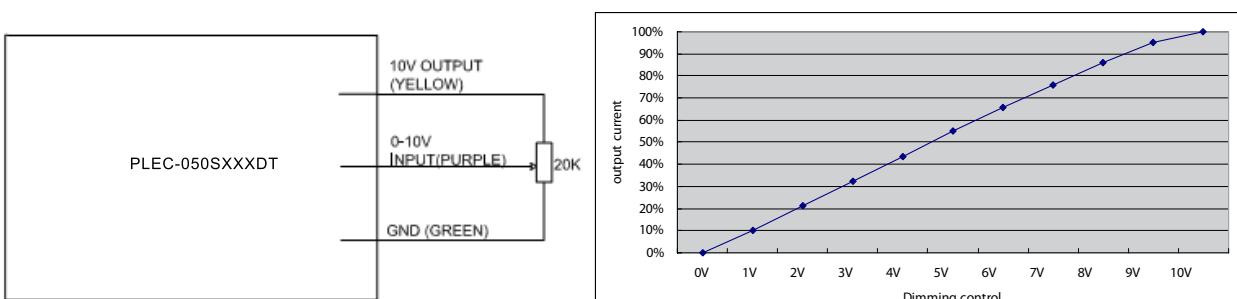


## Mechanical Outline

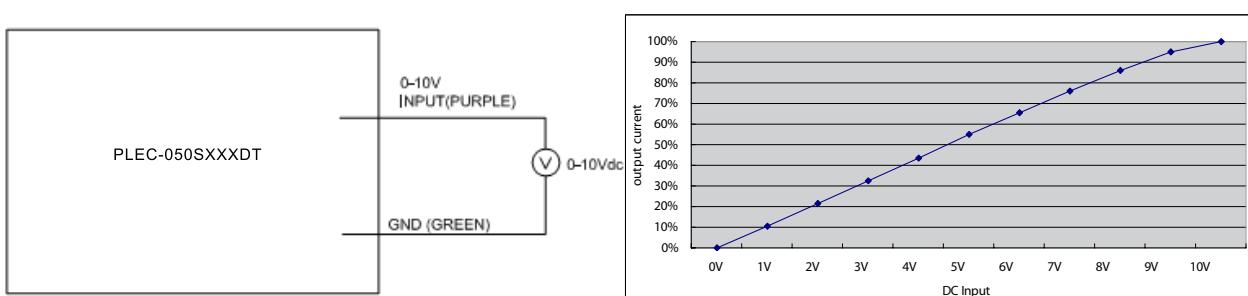


## Dimming Control (On secondary side)

| Parameter                                       | Min.   | Typ. | Max.   |
|---|--------|------|--------|
| 10V output voltage                              | 9.8 V  | 10 V | 10.2 V |
| 10V output source current                       | -10 mA | -    | 2 mA   |
| Absolute maximum voltage on the 1-10V input pin | -2 V   | -    | 15 V   |
| Source current on 1-10V input pin               | 0 mA   | -    | 1mA    |



Implementation 1: Potentiometer control



Implementation 2: DC input

## Notes:

1. For the driver to operate properly, the load voltage must be maintained above the minimum voltage threshold (approx. 33% of the max. output voltage for any given model).
2. If the output voltage is maintained above 50% of the maximum output voltage, the dimmer control may be operated over the entire 0-10V range with output current varying from 100% down to practically 0%.
3. If the output voltage is maintained between 33-50% of the maximum output voltage, the dimmer control may be operated over 5-10V range with output current varying from 100% down to 50%. Dimming below 5V under these conditions is not guaranteed.

## RoHS Compliance

Our products comply with the European Directive 2002/95/EC, calling for the elimination of lead and other hazardous substances from electronic products.

## For further information please contact ILS

The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification.