

# 40Watts Single Output LED Driver



### Features:

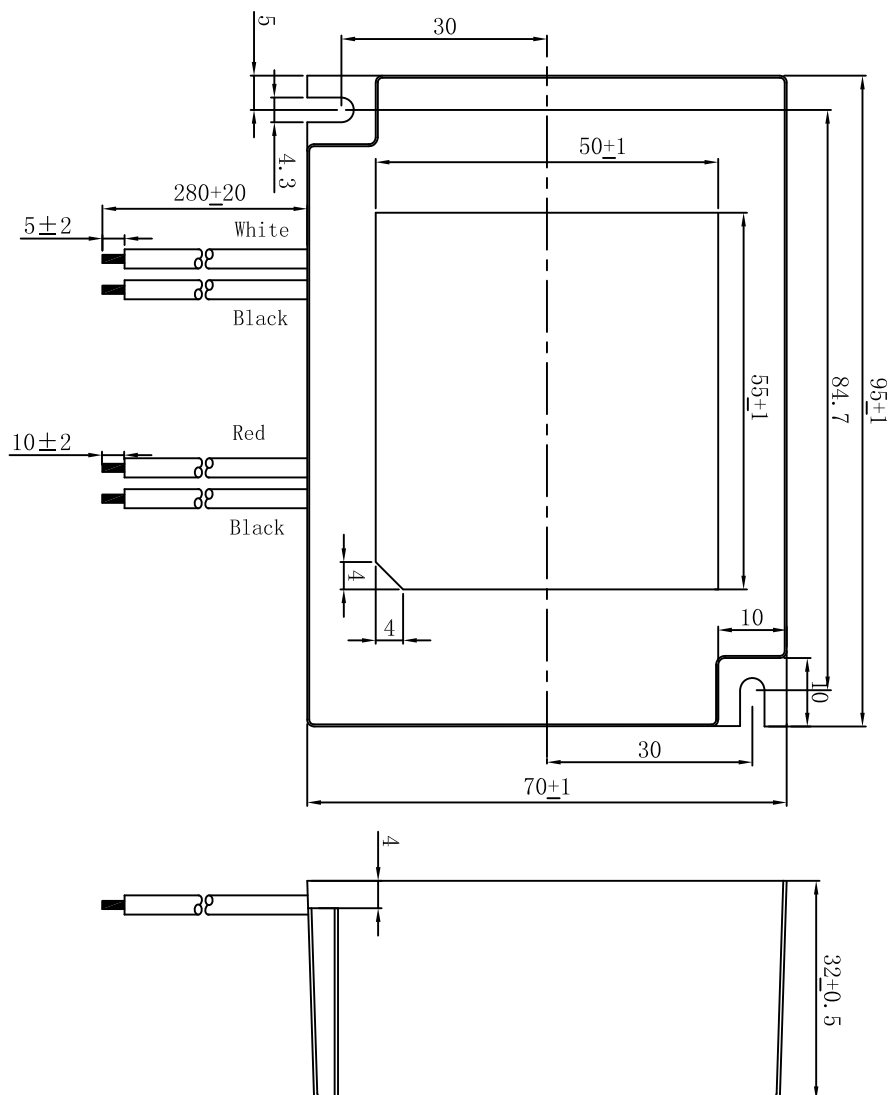
- Constant Voltage Design
- Universal AC input/ Full Range
- Built-in Active PFC function, PF 0.95 Typical
- High Efficiency (Up to 87%)
- Output Protections: OLP/OVP/SCP/OTP
- Lightning Protection
- Class 2 Power Unit (See Note)
- Waterproof (IP65)
- 3 Year Warranty



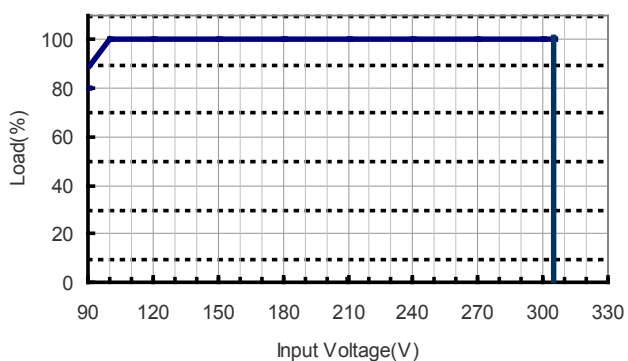
| Model                                    |        | PLV-040S012                                                                                                                                                                                                                                                                                                                                                                                              | PLV-040S018          | PLV-040S024          | PLV-040S036          | PLV-040S048          |
|------------------------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|----------------------|----------------------|
| Output Characteristics                   |        |                                                                                                                                                                                                                                                                                                                                                                                                          |                      |                      |                      |                      |
| DC Output                                |        | 12V                                                                                                                                                                                                                                                                                                                                                                                                      | 18V                  | 24V                  | 36V                  | 48V                  |
| Rated Current <div>See Note</div>        |        | 3.00A <div>(3)</div>                                                                                                                                                                                                                                                                                                                                                                                     | 2.00A <div>(3)</div> | 1.50A <div>(3)</div> | 1.05A <div>(3)</div> | 0.80A <div>(2)</div> |
| Current Range                            |        | 0~3.00A                                                                                                                                                                                                                                                                                                                                                                                                  | 0~2.00A              | 0~1.50A              | 0~1.05A              | 0~0.80A              |
| Ripple and Noise (max) <div>Note 1</div> |        | ±10% Vo                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                      |                      |                      |
| Voltage Accuracy                         |        | ±5% Vo                                                                                                                                                                                                                                                                                                                                                                                                   |                      |                      |                      |                      |
| Line Regulation                          |        | ±1% Vo                                                                                                                                                                                                                                                                                                                                                                                                   |                      |                      |                      |                      |
| Load Regulation                          |        | ±5% Vo                                                                                                                                                                                                                                                                                                                                                                                                   |                      |                      |                      |                      |
| Rise Time                                |        | 50mS Max @ Rated Load                                                                                                                                                                                                                                                                                                                                                                                    |                      |                      |                      |                      |
| Hold-up Time (Typ.)                      |        | 10mS Min (110VAC input, full load), 20mS Min (220VAC input, full load)                                                                                                                                                                                                                                                                                                                                   |                      |                      |                      |                      |
| Input Characteristics                    |        |                                                                                                                                                                                                                                                                                                                                                                                                          |                      |                      |                      |                      |
| Voltage Range                            |        | 90VAC~305VAC                                                                                                                                                                                                                                                                                                                                                                                             |                      |                      |                      |                      |
| Frequency Range                          |        | 47Hz-63Hz                                                                                                                                                                                                                                                                                                                                                                                                |                      |                      |                      |                      |
| Power Factor<br>(Typical)                | 110VAC | >0.95                                                                                                                                                                                                                                                                                                                                                                                                    | >0.95                | >0.95                | >0.95                | >0.95                |
|                                          | 220VAC | >0.90                                                                                                                                                                                                                                                                                                                                                                                                    | >0.90                | >0.90                | >0.90                | >0.90                |
| Efficiency (Typical)                     |        | 84%                                                                                                                                                                                                                                                                                                                                                                                                      | 85%                  | 86%                  | 87%                  | 87%                  |
| AC Current (max)                         |        | 0.60A @ 100-277VAC Input Full Load                                                                                                                                                                                                                                                                                                                                                                       |                      |                      |                      |                      |
| Inrush Current (max)                     |        | 65A @ 230VAC, 25°C                                                                                                                                                                                                                                                                                                                                                                                       |                      |                      |                      |                      |
| Leakage Current                          |        | 0.50mA max @ 277VAC                                                                                                                                                                                                                                                                                                                                                                                      |                      |                      |                      |                      |
| Protection                               |        |                                                                                                                                                                                                                                                                                                                                                                                                          |                      |                      |                      |                      |
| Over Temperature (OTP)                   |        | 110°C (Temperature of internal components); shut down, auto recover after the temperature decreases                                                                                                                                                                                                                                                                                                      |                      |                      |                      |                      |
| Over Voltage (OVP) <div>Note 2</div>     |        | 1.2~1.7Vo                                                                                                                                                                                                                                                                                                                                                                                                |                      |                      |                      |                      |
| Short Circuit (SCP)                      |        | Long-term mode, auto recovery                                                                                                                                                                                                                                                                                                                                                                            |                      |                      |                      |                      |
| Environmental Characteristics            |        |                                                                                                                                                                                                                                                                                                                                                                                                          |                      |                      |                      |                      |
| Operating Temperature                    |        | -35°C~70°C                                                                                                                                                                                                                                                                                                                                                                                               |                      |                      |                      |                      |
| Operating Relative Humidity              |        | 5% RH to 95% RH                                                                                                                                                                                                                                                                                                                                                                                          |                      |                      |                      |                      |
| Storage Temperature                      |        | -40°C~85°C, 5% to 100% RH non-condensing                                                                                                                                                                                                                                                                                                                                                                 |                      |                      |                      |                      |
| Vibration                                |        | 10 to 300Hz sweep at constant acceleration of 1.0G(Breadth: 3.5mm) for 1 Hour for each of the perpendicular axes X, Y, Z                                                                                                                                                                                                                                                                                 |                      |                      |                      |                      |
| Waterproof Rating                        |        | IP65                                                                                                                                                                                                                                                                                                                                                                                                     |                      |                      |                      |                      |
| Safety Standards                         |        | UL8750, Compliance to UL1012 UL935, IEC61347                                                                                                                                                                                                                                                                                                                                                             |                      |                      |                      |                      |
| Withstand Voltage                        |        | L/N-GND: 4kV, L-N: 2kV                                                                                                                                                                                                                                                                                                                                                                                   |                      |                      |                      |                      |
| Isolation Resistance                     |        | I/P-O/P: >100M Ohms / 500VDC / 25°C / 70% RH                                                                                                                                                                                                                                                                                                                                                             |                      |                      |                      |                      |
| EMC Emission                             |        | Compliance to EN55022(CISPR22) Class B, EN61000-3-2 Class A, EN61000-3-3                                                                                                                                                                                                                                                                                                                                 |                      |                      |                      |                      |
| EMC Immunity                             |        | Compliance to EN61000-3-2, 3 EN61000-4-2, 3, 4, 5, 6, 8, 11, EN61547                                                                                                                                                                                                                                                                                                                                     |                      |                      |                      |                      |
| Characteristics                          |        |                                                                                                                                                                                                                                                                                                                                                                                                          |                      |                      |                      |                      |
| Life Time                                |        | More than 78,000Hrs (25°C, 80% Load)                                                                                                                                                                                                                                                                                                                                                                     |                      |                      |                      |                      |
| MTBF (MIL-HDBK-217F)                     |        | More than 490,000Hrs (25°C, 80% Load)                                                                                                                                                                                                                                                                                                                                                                    |                      |                      |                      |                      |
| Dimension (LxWxH)                        |        | 95x70x32mm                                                                                                                                                                                                                                                                                                                                                                                               |                      |                      |                      |                      |
| Note                                     |        | 1. Ripple & Noise: Measured by 20 MHz bandwidth oscilloscope and the output paralleled with a 0.1 uF ceramic capacitor and a 10 uF electrolytic capacitor.<br>2. Latch Mode: The power supply shall return to normal operation only after the power is turned on again<br><br>(1) Non-Class 2 output (USR & CNR)<br>(2) Class 2 output (USR); Non-Class 2 output (CNR)<br>(3) Class 2 output (USR & CNR) |                      |                      |                      |                      |

## MECHANICAL SPECIFICATIONS

UNIT: mm



Derating Curve



Ambient Temperature vs. Load

