### Specifications

**Model:** LPV-60 series

#### Features:
- Constant voltage design
- Universal AC input / Full range
- Withstand 300VAC surge input for 5 seconds
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Fully encapsulated with IP67 level (Note.8)
- Fully isolated plastic case
- Class II power unit, no FG
- Class 2 power unit
- Pass LPS
- Suitable for LED lighting and moving sign applications (Note.7)
- 100% full load burn-in test
- Low cost, high reliability
- 2 years warranty

#### Specification Table

<table>
<thead>
<tr>
<th>Model</th>
<th>DC Voltage</th>
<th>Rated Current</th>
<th>Current Range</th>
<th>Rated Power</th>
<th>Ripple &amp; Noise (max.)</th>
<th>Voltage Tolerance</th>
<th>Line Regulation</th>
<th>Load Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPV-60-5</td>
<td>5V</td>
<td>8A</td>
<td>0 ~ 8A</td>
<td>40W</td>
<td>60mVp-p</td>
<td>±6.0%</td>
<td>±1.0%</td>
<td>±6.0%</td>
</tr>
<tr>
<td>LPV-60-12</td>
<td>12V</td>
<td>5A</td>
<td>0 ~ 5A</td>
<td>60W</td>
<td>120mVp-p</td>
<td>±5.0%</td>
<td>±1.0%</td>
<td>±6.0%</td>
</tr>
<tr>
<td>LPV-60-15</td>
<td>15V</td>
<td>4A</td>
<td>0 ~ 4A</td>
<td>60W</td>
<td>120mVp-p</td>
<td>±5.0%</td>
<td>±1.0%</td>
<td>±6.0%</td>
</tr>
<tr>
<td>LPV-60-24</td>
<td>24V</td>
<td>2.5A</td>
<td>0 ~ 2.5A</td>
<td>60W</td>
<td>150mVp-p</td>
<td>±5.0%</td>
<td>±1.0%</td>
<td>±6.0%</td>
</tr>
<tr>
<td>LPV-60-36</td>
<td>36V</td>
<td>1.67A</td>
<td>0 ~ 1.67A</td>
<td>60W</td>
<td>150mVp-p</td>
<td>±5.0%</td>
<td>±1.0%</td>
<td>±6.0%</td>
</tr>
<tr>
<td>LPV-60-48</td>
<td>48V</td>
<td>1.25A</td>
<td>0 ~ 1.25A</td>
<td>60W</td>
<td>150mVp-p</td>
<td>±5.0%</td>
<td>±1.0%</td>
<td>±6.0%</td>
</tr>
</tbody>
</table>

**Input**

- **Voltage Range:** 90 ~ 264VAC 127 ~ 370VDC
- **Frequency Range:** 47 ~ 63Hz
- **Efficiency (Typ.):** 76% 83% 83% 86% 86% 86%
- **AC Current (Typ.):** 1.2A/115VAC 1A/230VAC
- **Inrush Current (max.):** COLD START 30A/115VAC 60A/230VAC
- **Leakage Current:** 0.25mA / 240VAC

**Protection**

- **Overload:** 110 ~ 150% rated output power
- **Protection type:** Hiccup mode, recovers automatically after fault condition is removed
- **Over Voltage:** 5.75 ~ 6.75V 13.6 ~ 16.2V 17.25 ~ 20.25V 27.6 ~ 32.4V 41.4 ~ 48.6V 55.2 ~ 64.8V
- **Protection type:** Shut down o/p voltage, re-power on to recover
- **Working Temp.:** -30 ~ +70°C (Refer to "Derating Curve")
- **Working Humidity:** 20 ~ 90% RH non-condensing
- **Storage Temp., Humidity:** -40 ~ +80°C, 10 ~ 95% RH
- **Temp. Coefficient:** ±0.03%/°C (0 ~ 50°C)
- **Vibration:** 10 ~ 500Hz, 2G 10min./cycle, period for 60min. each along X, Y, Z axes

**Environment**

- **Safety Standards:** UL879(except for LPV-60-5), UL1310(except for LPV-60-5), CSA C22.2 No. 207-M89(except for LPV-60-5, LPV-60-48), CAN/CSA C22.2 No. 223-M91(except for LPV-60-5, LPV-60-48), IP67 approved; design refer to TUV EN60950-1
- **Withstand Voltage:** 3kVAC
- **Isolation Resistance:** 1000M 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 EN61000-4-2, 3, 4, 5, 6, 8, 11, EN55024, light industry level, criteria A

**Others**

- **MTBF:** 732Khrs. min.
- **Dimension:** 162.5*42.5*32mm (L*W*H)
- **Packaging:** 0.4Kg, 32pcs/13.8Kg/0.56CUFT

**Note**

- 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
- 2. Ripple & noise are measured at 20MHz bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf of parallel capacitor.
- 3. Tolerance: includes set up tolerance, line regulation and load regulation.
- 4. Derating may be needed under low input voltage. Please check the static characteristics for more details.
- 5. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-quality EMC Directive on the complete installation again.
- 6. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.
- 7. The unit might not be suitable for lighting applications in EU countries. Please check with your local authorities for the possible use of the unit.
- 8. Suitable for indoor use or outdoor use without direct sunlight exposure. Please avoid immerse in the water over 30 minute.
**Mechanical Specification**

- **File Name**: LPV-60-SPEC 2012-09-18
- **fosc**: 65KHz
- **PWM**
- **O.L.P.**
- **EMI FILTER**
- **RECTIFIERS**
- **POWER SWITCHING FILTER**
- **& RECTIFIERS +V**
- **-VI/P**
- **CONTROL**

**Block Diagram**

- **fosc**: 65KHz
- **EMI FILTER & RECTIFIERS**
- **POWER SWITCHING**
- **RECTIFIERS & FILTER**
- **DETECTION CIRCUIT**
- **O.V.P.**

**Derating Curve**

- **LOAD (%)**
- **AMBIENT TEMPERATURE (°C)**
- **230VAC**
- **115VAC**

**Static Characteristics**

- **LOAD (%)**
- **INPUT VOLTAGE (V) 60Hz**