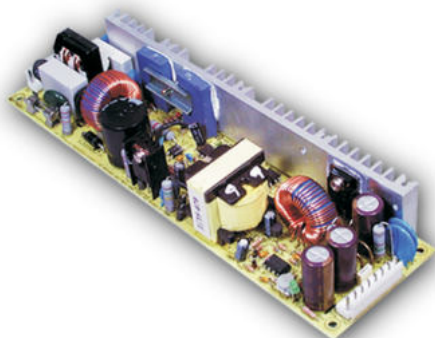




## ■ Features :

- Universal AC input / Full range
- Built-in active PFC function
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at PFC:67KHz PWM:134KHz
- 3 years warranty

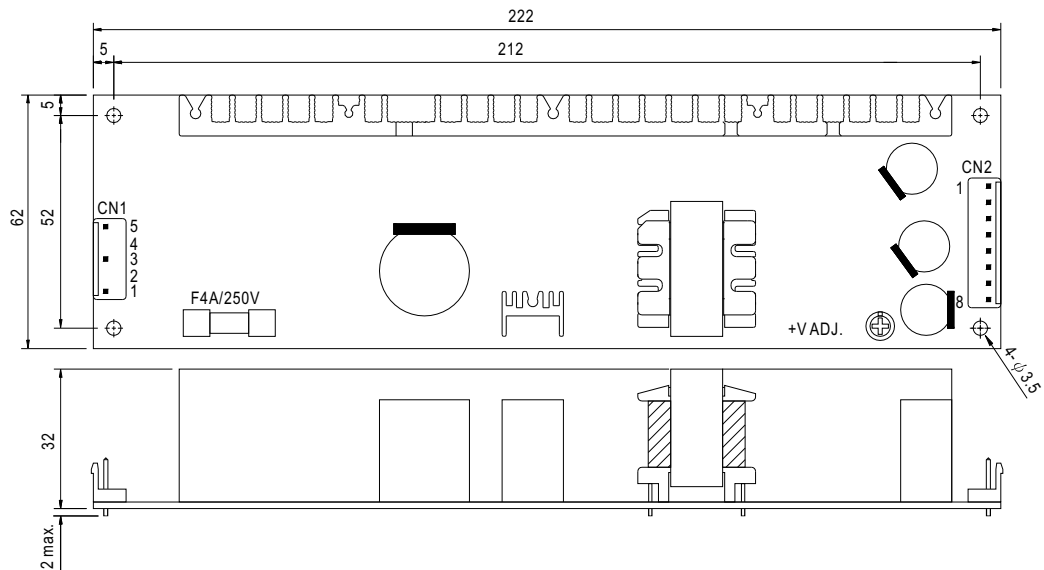


## SPECIFICATION

| MODEL                    |                              | LPP-100-3.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | LPP-100-5    | LPP-100-7.5  | LPP-100-12   | LPP-100-13.5 | LPP-100-15     | LPP-100-24   | LPP-100-27   | LPP-100-48   |
|--------------------------|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|--------------|--------------|----------------|--------------|--------------|--------------|
| OUTPUT                   | DC VOLTAGE                   | 3.3V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 5V           | 7.5V         | 12V          | 13.5V        | 15V            | 24V          | 27V          | 48V          |
|                          | RATED CURRENT                | 20A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 20A          | 13.5A        | 8.5A         | 7.5A         | 6.7A           | 4.2A         | 3.8A         | 2.1A         |
|                          | CURRENT RANGE                | 0 ~ 20A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0 ~ 20A      | 0 ~ 13.3A    | 0 ~ 8.5A     | 0 ~ 7.5A     | 0 ~ 6.7A       | 0 ~ 4.2A     | 0 ~ 3.8A     | 0 ~ 2.1A     |
|                          | RATED POWER                  | 66W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 100W         | 101.25W      | 102W         | 101.25W      | 100.5W         | 100.8W       | 102.6W       | 100.8W       |
|                          | RIPPLE & NOISE (max.) Note.2 | 100mVp-p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 100mVp-p     | 100mVp-p     | 100mVp-p     | 100mVp-p     | 100mVp-p       | 150mVp-p     | 150mVp-p     | 250mVp-p     |
|                          | VOLTAGE ADJ. RANGE           | 3.14 ~ 3.63V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 4.75 ~ 5.5V  | 7.13 ~ 8.25V | 11.4 ~ 13.2V | 12.8 ~ 14.9V | 14.3 ~ 16.5V   | 22.8 ~ 26.4V | 25.7 ~ 29.7V | 45.6 ~ 52.8V |
|                          | VOLTAGE TOLERANCE Note.3     | ±2.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ±2.0%        | ±2.0%        | ±2.0%        | ±2.0%        | ±2.0%          | ±1.0%        | ±1.0%        | ±1.0%        |
|                          | LINE REGULATION              | ±0.5%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ±0.5%        | ±0.5%        | ±0.5%        | ±0.5%        | ±0.5%          | ±0.5%        | ±0.5%        | ±0.5%        |
|                          | LOAD REGULATION              | ±1.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ±1.0%        | ±1.0%        | ±0.5%        | ±0.5%        | ±0.5%          | ±0.5%        | ±0.5%        | ±0.5%        |
|                          | SETUP, RISE TIME             | 600ms, 30ms/230VAC 1200ms, 30ms/115VAC at full load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |              |              |              |                |              |              |              |
|                          | HOLD UP TIME (Typ.)          | 28ms/230VAC 28ms/115VAC at full load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |              |              |              |                |              |              |              |
| INPUT                    | VOLTAGE RANGE Note.5         | 85 ~ 264VAC 120 ~ 370VDC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |              |              |              |                |              |              |              |
|                          | FREQUENCY RANGE              | 47 ~ 63Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |              |              |              |                |              |              |              |
|                          | POWER FACTOR (Typ.)          | PF>0.95/230VAC PF>0.98/115VAC at full load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |              |              |              |                |              |              |              |
|                          | EFFICIENCY(Typ.)             | 69%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 75%          | 76%          | 79%          | 79%          | 80%            | 83%          | 83%          | 83%          |
|                          | AC CURRENT (Typ.)            | 1.7A/115VAC 0.75A/230VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |              |              |              |                |              |              |              |
|                          | INRUSH CURRENT (Typ.)        | COLD START 30A/230VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |              |              |              |                |              |              |              |
|                          | LEAKAGE CURRENT              | <2mA / 240VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |              |              |              |                |              |              |              |
| PROTECTION               | OVERLOAD                     | 105 ~ 150% rated output power<br>Protection type : Constant current limiting, recovers automatically after fault condition is removed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |              |              |              |                |              |              |              |
|                          | OVER VOLTAGE                 | 3.8 ~ 4.45V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5.75 ~ 6.75V | 8.6 ~ 10.1V  | 13.8 ~ 16.2V | 15.5 ~ 18.2V | 17.25 ~ 20.25V | 27.6 ~ 32.4V | 31 ~ 36.45V  | 55.2 ~ 64.8V |
|                          |                              | Protection type : Shut down o/p voltage, re-power on to recover                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |              |              |              |                |              |              |              |
| ENVIRONMENT              | WORKING TEMP.                | -10 ~ +60°C (Refer to output load derating curve)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |              |              |              |                |              |              |              |
|                          | WORKING HUMIDITY             | 20 ~ 90% RH non-condensing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |              |              |              |                |              |              |              |
|                          | STORAGE TEMP., HUMIDITY      | -20 ~ +85°C, 10 ~ 95% RH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |              |              |              |                |              |              |              |
|                          | TEMP. COEFFICIENT            | ±0.05%/°C (0 ~ 50°C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |              |              |              |                |              |              |              |
| SAFETY & EMC<br>(Note 4) | VIBRATION                    | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |              |              |              |                |              |              |              |
|                          | SAFETY STANDARDS             | UL60950-1, TUV EN60950-1 approved                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |              |              |              |                |              |              |              |
|                          | WITHSTAND VOLTAGE            | I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |              |              |              |                |              |              |              |
|                          | ISOLATION RESISTANCE         | I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |              |              |              |                |              |              |              |
|                          | EMI CONDUCTION & RADIATION   | Compliance to EN55022 (CISPR22) Class B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |              |              |              |                |              |              |              |
|                          | HARMONIC CURRENT             | Compliance to EN61000-3-2,-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |              |              |              |                |              |              |              |
| OTHERS                   | EMS IMMUNITY                 | Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, light industry level, criteria A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |              |              |              |                |              |              |              |
|                          | MTBF                         | 224.3Khrs min. MIL-HDBK-217F (25°C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |              |              |              |                |              |              |              |
|                          | DIMENSION                    | 222*62*32mm (L*W*H)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |              |              |              |                |              |              |              |
|                          | PACKING                      | 0.51Kg; 24pcs/13.9Kg/1.76CUFT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |              |              |              |                |              |              |              |
| NOTE                     |                              | <p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF &amp; 47uF parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.</p> <p>5. Derating may be needed under low input voltages. Please check the derating curve for more details.</p> |              |              |              |              |                |              |              |              |

## Mechanical Specification

Unit:mm



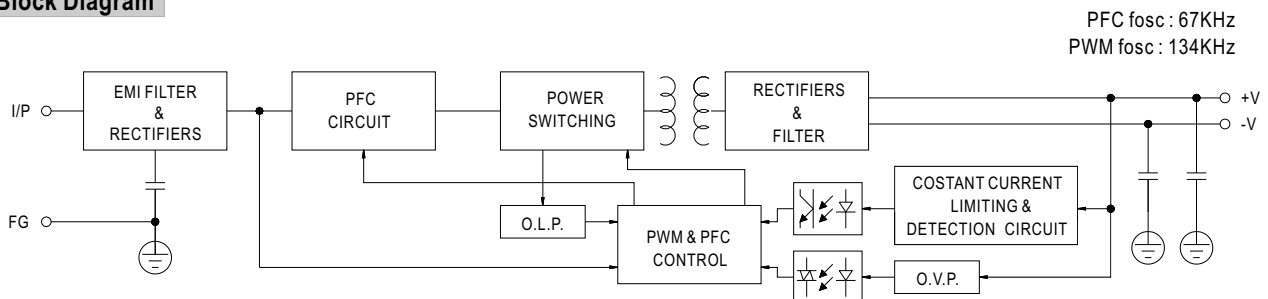
AC Input Connector (CN1) : JST B5P-VH or equivalent

| Pin No. | Assignment | Mating Housing        | Terminal                       |
|---------|------------|-----------------------|--------------------------------|
| 1       | AC/L       | JST VHR or equivalent | JST SVH-21T-P1.1 or equivalent |
| 2,4     | No Pin     |                       |                                |
| 3       | AC/N       |                       |                                |
| 5       | FG         |                       |                                |

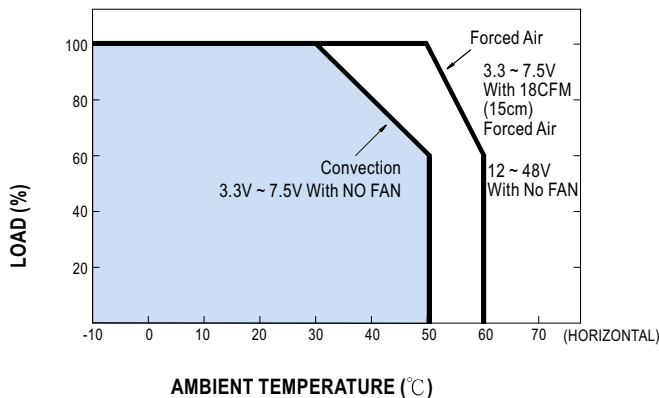
DC Output Connector (CN2) : JST B8P-VH or equivalent

| Pin No. | Assignment | Mating Housing        | Terminal                       |
|---------|------------|-----------------------|--------------------------------|
| 1,2,3,4 | -V         | JST VHR or equivalent | JST SVH-21T-P1.1 or equivalent |
| 5,6,7,8 | +V         |                       |                                |

## Block Diagram



## Derating Curve



## Output Derating VS Input Voltage

