



■ Features :

- 90-132VAC input only
- Fully encapsulated with IP67 level
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Pass LPS
- 100% full load burn-in test
- Suitable for LED lighting and moving sign applications
- High reliability / Low cost
- 2 years warranty

FC LPS IP67 CE (LVD)

**SPECIFICATION**

MODEL		LPLC-18-350	LPLC-18-700
OUTPUT	DC VOLTAGE	48V	25V
	DC VOLTAGE RANGE	6~48V	6~25V
	RATED CURRENT	350mA	700mA
	RATED POWER	16.8W	17.5W
	RIPPLE & NOISE (max.) Note.2	300mVp-p	250mVp-p
	VOLTAGE TOLERANCE Note.3	±5.0%	
	LINE REGULATION	±1.0%	
	LOAD REGULATION	±3.0%	
	SETUP, RISE TIME	3600ms, 150ms / 115VAC	
HOLD UP TIME (Typ.)	20ms/115VAC at full load		
INPUT	VOLTAGE RANGE	90 ~ 132VAC 127 ~ 186VDC	
	FREQUENCY RANGE	47 ~ 63Hz	
	EFFICIENCY(Typ.)	82%	80%
	AC CURRENT	0.5A/115VAC	
	INRUSH CURRENT(max.)	Cold start 40A/115VAC	
	LEAKAGE CURRENT	0.25mA / 120VAC	
PROTECTION	CURRENT LIMIT Note.4	±5% rated output current Protection type : Constant current limiting type	
	OVER VOLTAGE	50.4~ 60V	28.75~ 33.75V
	OVER TEMPERATURE	Tj 140 t ypically (U1) Detect on main control IC Protection type : Hiccup mode, recovers automatically after temperature goes down	
ENVIRONMENT	WORKING TEMP.	-30 ~ 70°C (Refer to output load derating curve)	
	WORKING HUMIDITY	20 ~ 90% RH non-condensing	
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH	
	TEMP. COEFFICIENT	±0.2%/°C (0 ~ 50°C)	
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes	
SAFETY & EMC (Note 5)	SAFETY STANDARDS	Design refer to UL1310 Class 2, TUV EN60950-1, EN61347-2-13, CAN/CSA C22.2 No. 223-M91, IP67 approved	
	WITHSTAND VOLTAGE	I/P-O/P: 3KVAC	
	ISOLATION RESISTANCE	I/P-O/P: >100M Ohms / 500VDC / 25°C / 70% RH	
	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22) Class A FCC part15	
	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	1200.6K hrs min. MIL-HDBK-217F (25)	
OTHERS	DIMENSION	140*30*22(L*W*H)	
	PACKING	0.175Kg; 70pcs/13.3Kgs/0.71CUFT	
NOTE	<ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 115VAC input, rated load and 25°C of ambient temperature.</li> <li>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.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>4. Derating may be needed under low input voltage. Please check the derating curve for more details.</li> <li>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-qualify EMC Directive on the complete installation again.</li> </ol>		

**Mechanical Specification**

Unit:mm

The drawing shows a top view of the power supply with dimensions: 300±20mm for the AC input section, 140mm for the main body, and 300±20mm for the DC output section. Terminal labels include AC/N (Blue), AC/L (Brown), AC IN, DC OUT, -V (Black), and +V (Red). Wire gauges are specified as 18AWG 1015. A height dimension of 22mm is shown for the main body.

**Block Diagram**

fosc : 67KHz

The block diagram illustrates the power flow from the I/P (Input) through an EMI FILTER, RECTIFIERS, and POWER SWITCHING (containing a transformer) to a second set of RECTIFIERS & FILTER. A PWM CONTROL block is connected to the power switching stage. A DETECTION CIRCUIT is connected to the output terminals (+V and -V).

**Derating Curve**

**Static Characteristics**

The derating curve shows that the power supply can operate at 100% load from -30°C to 50°C. Above 50°C, the load capacity decreases linearly to 60% at 70°C. The x-axis is labeled '(HORIZONTAL)'.

The static characteristics graph shows that the power supply can operate at 100% load across an input voltage range of 100V to 132V. At 90V, the load capacity is approximately 80%. The condition Ta=25 is noted.