

LSU85A series

V1.0

The LSU85A series of LED power supplies provide 85 Watts of continuous output power. All units are 100% burned in and tested.


RoHS2
2011/65/EU

85W LED Power Supply-LED Driver

FEATURES:

- * Wide Operating Voltage 90 to 305 VAC, 47 to 63 Hz
- * Single Output
- * Active Power Factor Correction
- * C.C. Mode + C.V. Mode
- * Constant Current: 0.1~4.04A
- * Constant Voltage: 21~50V
- * Over Voltage, Over Current, Over Temperature (optional)
- * 3 year warranty

APPLICATIONS:

- * Outdoor installations

GENERAL SPECIFICATION:

- * **Short Circuit Protection:** Auto Recovery
- * **Cooling:** Free Air Convection
- * **Flammability Rating:** UL94V-1
- * **Protection Classes:** Class I
- * **Safety:** UL8750:1st edition, IEC61347-1: 2007, IEC61347-2-13: 2006, EN61347-1: 2008, EN61347-2-13: 2006, EN61547

APPROVALS:

UL US CE CB FCC IP68

Electrical Characteristics:

Symbol	Characteristic	Condition	Min.	Typ.	Max.	Unit
Vins	Safety Approval Input Voltage Range	Safety Approval & Specification in Label	100		277	VAC
Vin	Input Operate Voltage Range	Detail to see Fig.1	90		305	VAC
Fi	Input Frequency	Sine wave	47		63	Hz
PF	Power Factor Correction	Io=Full load, Vin=240VAC	0.90		1	
Po	Output Power Range	See Rating Chart			85	W
Iil	Low Line Input Current	Full Load, Vin=100VAC		1.3		A
Iih	High Line Input Current	Full Load, Vin=240VAC		0.5		A
Irl	Low Line Input Inrush Current	Full Load, 25°C, Cool start, Vin=100VAC			35	A
Irh	High Line Input Inrush Current	Full Load, 25°C, Cool start, Vin=240VAC			70	A
Ik	Safety Ground Leakage Current	Vin=240VAC, Fi=60Hz			0.75	mA
η	Efficiency	Full Load, Vin=230VAC, Detail to see Rating Chart	See Rating Chart			
ΔVoi	Line Regulation	Full Load, Vin=100~120VAC	0.5		1	%
ΔVoL	Load Regulation	Vin=230VAC, 10~90% Load Change at Condition			5	%
OVP	Over Voltage Protection	Over Voltage Protection	103		105	%
OLP	Over Load Protection	Recovers automatically after fault condition is removed			180	%
ttr	Time of Transient Response	Io=Full Load to Half Load, Vin=110VAC			4	ms
thu	Hold-Up Time	Full Load, Vin=100VAC	See Rating Chart			
ts	Start-up time	Full Load, Vin=100~240VAC			1	s
Tc	Temperature Coefficient	Full load, Vin=100~240VAC			±0.04	%/°C
HV	Dielectric Withstanding Voltage (P-S)	Primary to Secondary			6145	VDC
Vpg	Dielectric Withstanding Voltage (P-G)	Primary to PE			2542	VDC
EMI	EMC Emission	Compliance to EN55015, EN61000-3-2			C	Class

Environmental:

Symbol	Characteristic	Condition	Min.	Typ.	Max.	Unit
To	Operating Temperature	Detail to see Fig.2 (Derate linearly from 100% load at 60°C to 50% load at 70°C)	-20		70	°C
Ts	Storage Temperature	10 ~ 95% RH	-40		85	°C
Ho	Operating Humidity	non-condensing	0		95%	RH
Hs	Storage Humidity		0		95%	RH
ESDa	Electro Static Discharge	Air Discharge, IEC61000-4-2			8	kV
ESDc	Electro Static Discharge	Contact Discharge, IEC61000-4-2			4	kV
MTBF	Mean Time Between Failure	Operating Temperature at 25°C, Calculated per MIL-HDBK-217F	100k			h
ELEV	Operating Altitude (Elevation)	All condition			2000	m
VBR	Vibration	10 ~ 500Hz, 10min./1cycle, 60min. each along X, Y, Z axes			5	G
Vsl	Surge Voltage	Line-Neutral			2	kV
Vsg	Surge Voltage	Line-PE & Neutral-PE			4	kV

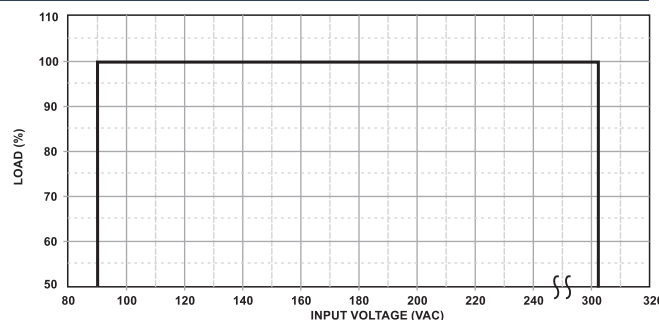
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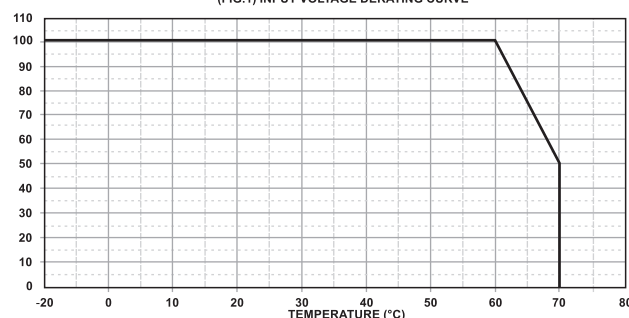
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SPECIFICATION NOTE :

1. Output can provide up to peak load when the power supply starts up. Continuous staying in more than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing $\pm 10\%$ of input voltage from nominal line at rated load.
4. Load regulation is defined by changing $\pm 40\%$ of measured output load from 60% rated load.
5. Ripple & noise is measured by using 20MHz bandwidth limited oscilloscope and terminated each output with a 0.47uF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time which the main output drops down to low limit of main output at rated load and nominal line.
7. Efficiency is measured at rated load, and nominal line.

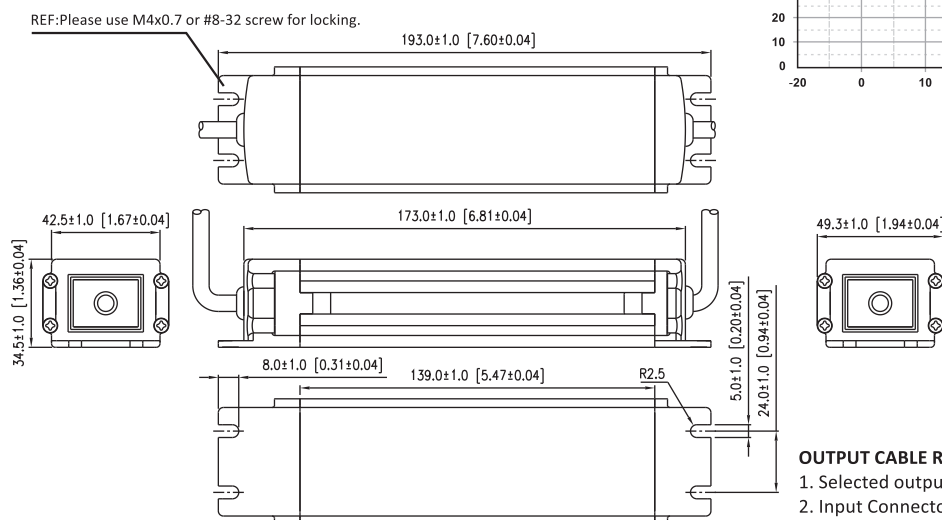


(FIG.1) INPUT VOLTAGE DERATING CURVE



(FIG.2) TEMPERATURE DERATING CURVE

MECHANICAL DIMENSIONS: (UNIT: mm)



OUTPUT CABLE RECOMMEND :

1. Selected output connectors and wire, please refer to Appendix.
2. Input Connector : SJTW, 18AWGx3C (1Ft)
3. Output Connector : SJTW, 18AWGx2C (1Ft)

PACKING :

1. Net weight: 530~600g approx.
2. Optional output connectors available contact sales for details.

Rating Chart:

MODEL NO.	Current	Setting Voltage Range (Factory setting, can't be adjusted)		Maximum Output Power	Ripple & Noise	Total Regulation	Typ. Efficiency	Typ. No Load Consumption	Hold-Up Time	Protection Mode
	I _{max}	DC Voltage	C.C. mode Voltage REGION							
	(A)	(V _o)	(V _{min} ~V _o)							
LSU85A-108	3.54	24	14.4~24	85	240	±5	85	1	12	CC
LSU85A-109	2.83	30	18.0~30	85	300	±5	86	1	12	CC
LSU85A-110	2.36	36	21.6~36	85	300	±5	87	1	12	CC
LSU85A-111	1.77	48	28.8~48	85	300	±5	87	1	12	CC

* If require different DC voltage, please contact sales.