

## LSU120A series

V1.4

## 120W LED Power Supply-LED Driver

The LSU120A series of LED power supplies provide 120 Watts of continuous output power. All units pass burn-in test at full load condition.

### 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: 0.1~5.71A
- \* Constant Voltage: 21~50V
- \* 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, IEC/EN61347-1:2008/A2:2013, IEC/EN61347-2-13: 2014, EN61547

### APPROVALS:



### 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			120	W
Iil	Low Line Input Current	Full Load, Vin=100VAC		1.8		A
Iih	High Line Input Current	Full Load, Vin=240VAC		0.7		A
Irl	Low Line Input Inrush Current	Full Load, 25°C, Cool start, Vin=100VAC			37	A
Irh	High Line Input Inrush Current	Full Load, 25°C, Cool start, Vin=240VAC			75	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	%
OLP	Over Load Protection	Recovers automatically after fault condition is removed			130	%
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			1	kV
Vsg	Surge Voltage	Line-PE & Neutral-PE			2	kV

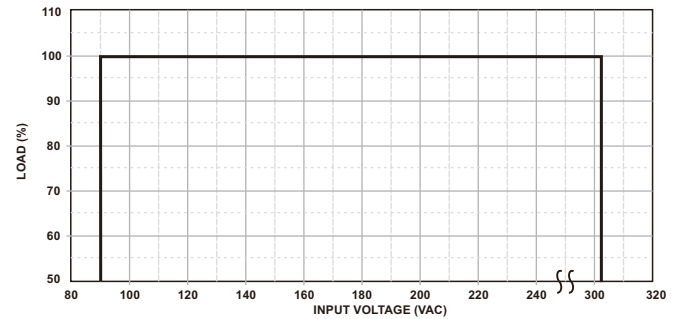
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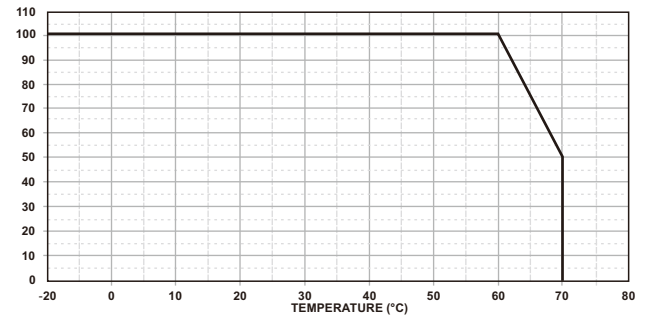
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### SPECIFICATION NOTE :

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. The ripple is measured from peak to peak with a bandwidth-limit of 20MHz (Measured at the output connector with a 0.1uF ceramic capacitor and a 47uF electrolytic capacitor).
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.

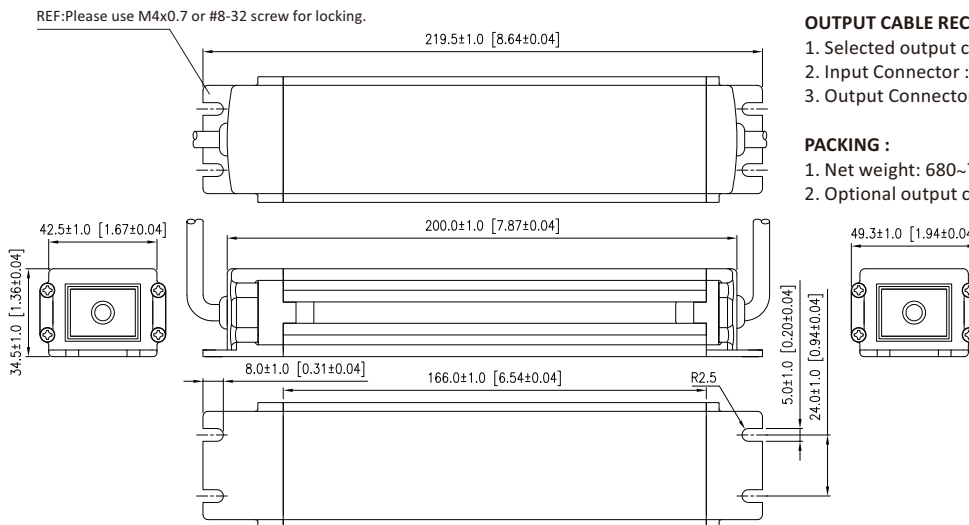


(FIG.1) INPUT VOLTAGE DERATING CURVE



(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: 680~750g approx.
2. Optional output connectors available contact sales for details.

### Rating Chart:

MODEL NO.	Current I <sub>max</sub> (A)	Setting Voltage Range (Factory setting, can't be adjusted)		Maximum Output Power (W)	Ripple & Noise (mVp-p)	Total Regulation (%)	Typ. Efficiency (%)	Typ. No Load Consumption (W)	Hold-Up Time (ms)	Protection Mode
		DC Voltage (V <sub>o</sub> )	C.C. mode Voltage REGION (V <sub>min</sub> ~V <sub>o</sub> )							
LSU120A-108	5.00	24	14.4~24	120	240	±5	85	1	12	CC
LSU120A-109	4.00	30	18.0~30	120	300	±5	86	1	12	CC
LSU120A-110	3.33	36	21.6~36	120	300	±5	87	1	12	CC
LSU120A-111	2.5	48	28.8~48	120	300	±5	87	1	12	CC

\*If require different DC voltage, please contact sales.