

# SL POWER LB130S SERIES

130 Watts Single Output  
LED Grade



Industrial



LED/AV

Advanced Energy's SL Power LB130S family is the latest offering in high density single output open-frame AC/DC power supplies. Approved to EN/CSA/IEC/UL 62368-1. The LB130S operates at universal input range of 90 to 264 VAC and wide temperature range -10°C to +70°C, delivering full rated output power up to +50°C.

## AT A GLANCE

### Total Power

130 Watts

### Input Voltage

90 to 264 VAC

### # of Outputs

Single

## SPECIAL FEATURES

- 3"W x 5"L x 1.3"H Size
- 130 W @ 70°C Conduction Cooled
- 130 W @ 50°C Convection Cooled
- Class B Conducted EMI
- Meets IEC61000-3-2 Class C for 0% to 100% LED Dimming Application (5 to 130 Watts)
- ROHS Compliant
- 3 Year Warranty

## SAFETY

- EN/CSA/IEC/UL 62368-1



## ELECTRICAL SPECIFICATIONS

Input	
Input Range	90 to 264 VAC, 47 to 63 Hz, 1Ø
Inrush Current	<55 A, 264 VAC, cold start, turn on at AC zero crossing
Input Current	115 VAC: 1.8 A, 230 VAC: 0.9 A
Input Fuses	4 A, 250 VAC fuses provided in both line & neutral
Earth Leakage Current	<500 µA @ 264 VAC, 60 Hz, NC
Efficiency	Minimum of 90%
Isolation Voltage	Input/Ground: 3000 VAC Input/Output: 1800 VAC Output/Ground: 1500 VAC
Output	
Maximum Output Power	Maximum of 130 W conduction at 70°C. 200 W of peak for minimum of 60 Sec @ 50°C
Ripple and Noise	1% pk-pk, 0.5% rms
Total Regulation	+/-3% combined line, load and initial setting
Minimum Load	Not required
Switching Frequency	PFC: Fixed, 65kHz. Main converter: variable 35 to 200kHz, 65-70kHz at full load
Transient Response	For 5% to 50%, 50% to 5%, 50% to 100% or 100% to 50% load change: < 0.5 mSec, return to 0.5% of nominal, di/dt < 0.2A/µS. Max voltage deviation = 3%
Reliability	
MTBF	50K hrs at 115 VAC / 230 VAC, 70°C with 130 W of output
Protection	
Overvoltage Protection	Latch off
Short Circuit Protection	Hiccup mode, auto recovery
Thermal Protection	Sensing transformer temperature, 165°C latching type, requires AC power cycle to reset
Overload Protection	Hiccup mode

## SYSTEM TIMING SPECIFICATIONS

Parameter	Min	Typ	Max	Unit
Turn On Time - 115 VAC @ 100% load	-	-	3000	ms
Hold Up Time - 120 VAC @ 100% load, 60 Hz	20	-	-	ms

## EMI/EMC COMPLIANCE

Conducted Emissions	EN55015/22: Class B, FCC Part 15, Subpart B, Class B
Radiated Emissions	EN55011/22: Class A, FCC Part 15, Subpart B, Class A with 6db margin
Line Harmonic Emissions	EN61000-3-2, Class A, For Class C from no load to full load
Voltage Fluctuations & Flicker	EN61000-3-3, Complies (dmax<6%)
Static Discharge Immunity	EN61000-4-2, 6 kV Contact, 8 kV Air Discharge
Radiated RF EM Immunity	EN61000-4-3, 3 V/m
Electrical Fast Transients / Bursts	EN61000-4-4, 2 kV/5 KHz
Surges Line to Line (DM) and Line to Ground (CM)	EN61000-4-5, 1kV DM, 2kV CM
Conducted Disturbances Induced by RF Fields	EN61000-4-6, 3 Vrms
Power Frequency Magnetic Fields Immunity	EN61000-4-8, 3 A/m
Voltage Dips	IEC61000-4-11, 100% dip for 10ms, 30%, 275ms; 60%, 100ms; Performance Criteria A, A, & A at 70% load

## SAFETY

EN	EN 62368-1
CSA	CSA 62368-1
IEC	IEC 62368-1
UL	UL 62368-1

## ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	Conduction cooled: -10°C to +70°C full Load Convection cooled: -10°C to +50°C full Load, 110 Watts @ 60°C, 90 W @70°C, start up at -40°C
Storage Temperature	-40°C to +85°C
Heat-Sink Temperature	To maintain Safety approval & life expectancy, heat-sink temperature should not exceed 85°C
Relative Humidity	5% to 95%, non-condensing
Altitude	Operating: -457 to 3000 m. Non-operating: -457 to 12.192 Km
Vibration	Operating: 0.003g <sup>2</sup> /Hz, 1.5grms overall, 3 axes, 10 min/axis Non-Operating: 0.026g <sup>2</sup> /Hz, 5.0grms overall, 3 axes, 1 hr/axis
Shock	Operating: half-sine, 20gpk, 10ms, 3 axes, 6 shocks total Non-Operating: half-sine, 40 gpk, 10 ms, 3axes, 6 shocks total
Dimensions	W: 3.0" x L: 5.0" x H: 1.3"; "H" option: 3.0" x 6.0" x 1.5"
Weight	380 g

ORDERING INFORMATION

Model Number	Output Voltage	Maximum Output Current	Minimum Load	Efficiency	Ripple & Noise <sup>1</sup>	Total Regulation	OVP Threshold
LB130S56K	56 V	2.32 A	0 A	> 90%	560 mV pk-pk	+/-3%	66 ± 4 V

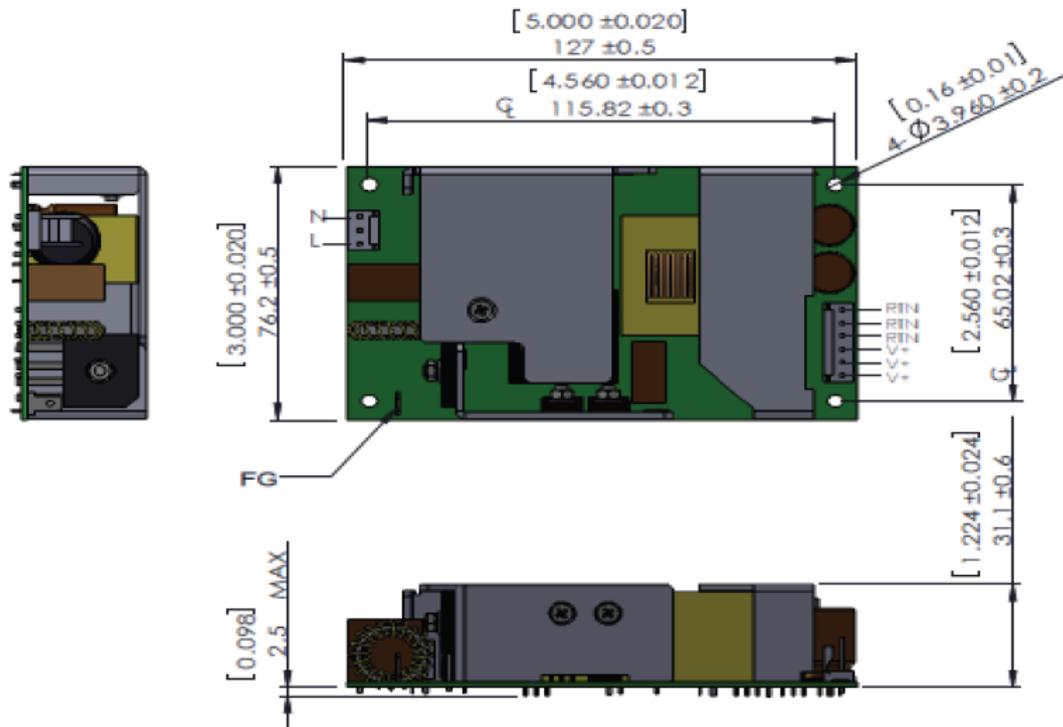
Notes:

1. Ripple is 800mV pk-pk @ -10°C

CONNECTOR INFORMATION

Type	Connector	Pin #	Assignment	Mating Connector
INPUT	J100	1	AC Line	AMP: TE-Connectivity 640250-3 Pin: TE-Connectivity 640252-2
		2	Empty	
		3	AC Neutral	
OUTPUT	J300	1	-Vout	AMP: TE-Connectivity 640250-6 Pin: TE-Connectivity 640252-2
		2	-Vout	
		3	-Vout	
		4	+Vout	
		5	+Vout	
		6	+Vout	
GROUND(FG)	0.25" FASTON TAB			Molex 190020001

## MECHANICAL DRAWING



## Notes:

1. All dimensions in inches (mm), tolerance are mentioned for each measurement
2. Mounting holes should be grounded for EMI purposes
3. FG is safety ground connection
4. The power supply requires mounting on metal standoffs min of 0.20" (5mm) in height



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## ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than three decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

**PRECISION | POWER | PERFORMANCE | TRUST**

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