SL POWER
LGU350 SERIES

350 Watts Single Output
LED Grade

LED

Advanced Energy's SL Power LGU350 AC-DC power supplies are available with a nominal main output of 24 V, 48 V or 56 V. LGU350 power supplies provide up to 350 Watts of output power at 50°C ambient with 200 LFM airflow, designed to meet global lighting requirements and has a built-in EMI filter to meet EN55015 class B. All models have output overvoltage, short circuit and overload protection and a 3 x 5 x 1.4 inch form factor.

AT A GLANCE

Total Power

350 Watts

Input Voltage

90 to 305 VAC

# of Outputs

Single

SPECIAL FEATURES

- 350 Watts @ 50°C (200 LFM)
- Up to 425W Peak Watts
- 250 Watts Convection Cooled
- Universal Input 90 to 305 VAC
- 50°C Ambient Operation
- EN55015 Class B Conducted EMI
- For Class C 30%-100% LED Dimming Apps
- ROHS Compliant
- 3-years Warranty

SAFETY

EN	EN62368-1
CSA	CSA62368-1
UL	UL62368-1
IEC	IEC62368-1

ELECTRICAL SPECIFICATIONS

Input	
Input Range	100 to 277 VAC, ±10%, 47-63 Hz
Input Current	4.5A max at 115VAC, 2.5A max at 230VAC
Inrush Current	< 10A peak, cold start at 264VAC input, turn on at AC zero crossing
Input fuses	Line and Neutral: 6.3A, 500VAC, provided on all models
Earth Leakage Current	<500uA at 64VAC, 60Hz, NC
Efficiency	90% min at 115VAC, full load
Switching Frequency	PFC: Fixed, 65kHz Main converter: Variable 35-200 kHz, 65-70 kHz at full load
Isolation Voltage	Input/Ground: 1800VAC Input/Output: 3000VAC Output/Ground: 1500VAC
Output	
Output Voltage	See "Ordering information" section
Output Voltage Adjustment	Fixed output
Ripple and Noise	1% of Vout, pk-pk
Total Regulation	±3%,combined line, load, and initial setting
Minimum Load	Not required
Turn On Delay	<3 Seconds at 115Vac, full load
Hold Up Time	20mS at 80% load
Transient Response	For 5% to 50% or 50% to 0%: <20mS response time for return to within 1% of nominal. Δi/Δt<0.2A/uS. Max. voltage deviation is ±3% For 50% to 100% or 100% to 50%: <1mS response time for return to within 1% of nominal. Δi/Δt<0.2A/uS. Max. voltage deviation is ±3% For 5% to 100% or 100% to 5%: <25mS response time for return to within 1% of nominal. Δi/Δt<0.2A/uS. Max. voltage deviation is ±4%
Reliability	
MTBF	438,540 hours @ 110VAC, 25°C ambient, Standard: Telcordia SR-332 issue 3
Protection	
Over Voltage Protection	Latch mode, remove AC input to reset
Short Circuit Protection	Hiccup mode, auto recovery. Direct short may latch off converter; remove AC input to reset.
Over Temperature Protection	Latch mode, Automatic power shutdown at 165°C of sensing transformer temperature
Over Current Protection	120% to 140% of current rating, Hiccup Mode

EMI/EMC COMPLIANCE

Conducted emissions	EN55015 Class B, with 3~6 db Margin minimum FCC Part 15, Subpart B, Class B 5%-100% load
Radiated emissions	EN55022 Class B, with 3~6 db Margin minimum FCC Part 15, Subpart B, Class B 5%-100% load
Harmonic current emissions	EN61000-3-2, Class A, D For Class C from 30% to 100% total load
Voltage fluctuations & flicker	EN61000-3-3, Complies (dmax<6%)
Electrostatic discharge immunity	EN61000-4-2, 6kV Contact Discharge, 8kV air discharge
Radiated RF Immunity	EN61000-4-3, 3V/m
Rated Power Frequency magnetic fields	EN61000-4-8, 3A/m
Electrical fast transients / bursts	EN61000-4-4, 2kV/5kHz
Surges line to line (DM) and line to ground (CM)	EN61000-4-5, 1kV differential, 2kV common-mode
Conducted RF Immunity	EN61000-4-6, 3Vrms
Voltage Dip Immunity	EN61000-4-11, 100%, 10ms; 30%, 500ms; Criteria A 60%, 100ms; Criteria B Performance Criteria A, A, & A @ 58% load.

ENVIRONMENTAL SPECIFICATIONS

Vibration	Operating: 0.003 g^2/Hz, 1.5 grams overall, 3 axes, 1 hr/axis Non-operating: 0.026 g^2/Hz, 5.0 grms overall, 3 axes, 10 mins/axis
Shock	Operating: Half-sine shock waveform. 20 gpk, 10ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 gpk, 10ms, 3 axes, 6 shocks total
Heat - Sink Temperature	To maintain Safety approval & life expectancy, heatsink temperature should not exceed 85°C
Operating Temperature	-20°C to +80°C (See below chart). Start up at -40°C. Storage Temp = -40°C to 85°C
Altitude	Operating: -475 to 3,000 m. Non-operating: 150 to 12,192 m
Relative Humidity	5% to 95%, non-condensing
Audible Noise	20dbA max per ISO7779 with 0% - 100% static load 25dbA max per ISO7779 with 0% - 100% - 0% transient load
Dimensions	3” X 5” X 1.4”
Weight	500 g

Ambient	Cooling Method	Wattage
50°C	Forced Air, 200 LFM	350
60°C	Forced Air, 200 LFM	275
70°C	Forced Air, 200 LFM	250
50°C with Max. Temperature of primary heat-sink to be held under 85°C	Conduction	350
50°C	Convection	250

ORDERING INFORMATION

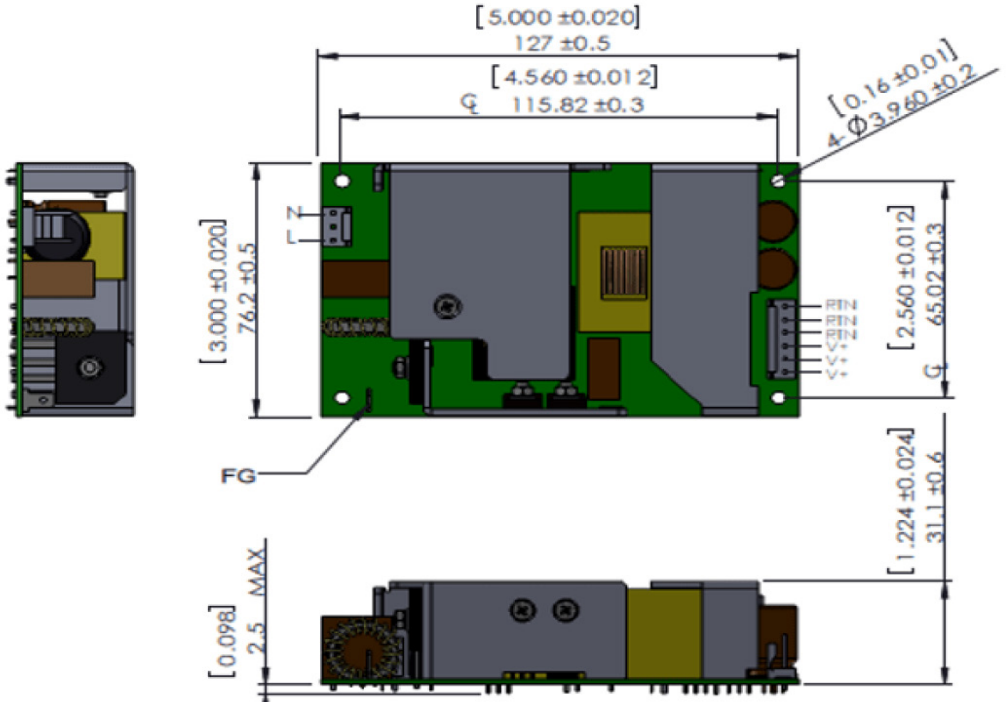
Model Number	Output Voltage	Output Current	Minimum Load	Ripple & Noise[1]	Total Regulation	OVP Threshold
LGU350S56K	56 V	6.25 A	0 A	1.5%	±3%	66±4.0 Vdc
LGU350S48K	48 V	7.30 A	0 A	1%	±3%	56±3.0 Vdc
LGU350S24K	24 V	14.59 A	0 A	1%	±3%	29±2.5 Vdc

Notes:
1. The specification above is based on 25°C ambient and where applicable at nominal input voltage of 100 to 240 VAC.

SAFETY

EN	EN62368-1
CSA	CAN/CSA62368-1
UL	UL62368-1
IEC	IEC62368-1

MECHANICAL DRAWING



Note: 1. All dimensions in inches (mm), tolerances 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 0.20" (5mm) in height, min.

CONNECTOR INFORMATIONG

Connector	Pin Assignment		Mating Connector
J100 (Input Connector)	PIN 1	AC Line	AMP 640250-3 Pins: 640252-2
	PIN 2	Empty	
	PIN 3	C Neutral	
FG (Ground)	0.25" FASTON TAB		Molex 190020001
J300 (DC Ouput Connector)	PIN 1	RTN	AMP 640250-6 Pins: 640252-2
	PIN 2	RTN	
	PIN 3	RTN	
	PIN 4	+Vout	
	PIN 5	+Vout	
	PIN 6	+Vout	

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

For international contact information,
visit advancedenergy.com.

powersales@aei.com (Sales Support)
productsupport.ep@aei.com (Technical Support)
+1 888 412 7832

ENG-LGU350-03.24.25