LB240 Family

240W Single Output LED Supply

LED

Industrial

FEATURES AND BENEFITS

3" X 5" X 1.3" Package	190 Watts @ 60C (200 LFM)
240 Watts	160 Watts @ 70C (200 LFM)
EN55015 Class B Conducted EMI	Universal Input 90-264Vac
50°C Ambient Operation With 300 LFM	Meets IEC61000-3-2 Class C For 0% To 100% LED Dimming Applications(1 Watt Input Power To Full Load)
130 Watts @ 70C (Conduction Cooled)	Approved to EN/CSA/IEC/UL62368-1

RoHS CE

MODEL SELECTION

Model Number*	Volts	Maximum Output Current (A)	Minimum Load	Ripple & Noise**	Total Regulation	OVP Threshold
LB240S56K	56V	4.29	0A	560mV pk-pk	±3%	66V± 4V
LB240S48K	48V	5	0A	480mV pk-pk	±3%	56V± 3V
LB240S24K	24V	10	0A	240mV pk-pk	±3%	29V±2.5V

Notes:
1. * For Cold Plate cooling, add option H. Consult the factory for model number availability
2. **Ripple is 800mV pk-pk @ -10°C

INPUT

AC Input	100-240Vac, ±10%, 47-63Hz, 1Ø
Input Current	Max. 115Vac:2.6A, 230Vac: 1.3A
Inrush Current	< 55A peak, 264Vac, cold start, turn on at AC zero crossing
Input Fuses	5A, 250Vac fuse provided on all models
Earth Leakage Current	<500µA@264Vac, 60Hz, NC
Efficiency	VIN 24V 48V 56V (Vac) ------- ------- ------- 115 88% 90% 90% 230 90% 92% 92%

OUTPUT

Output Voltage	See Model Chart
Output Power	240 Watts max. with 300 LFM
Turn On Time	Less than 3 sec. @115Vac, Full Load
Hold-up Time	12 mSec min, 115Vac/60Hz
Ripple and Noise	0.5%rms, 1% pk-pk, see chart
Total Regulation	+/- 3% combined line, load and initial setting
Switching Frequency	PFC: Fixed, 65kHz Main Converter: Variable 35 200kHz, 65-70kHz at full load
Transient Response	For 50% to 100% or 100% to 50% load change: <1 mSec, return to 1% of nominal, di/dt <0.2A/uS. Max voltage deviation=3%
Minimum Load	Not required

PROTECTION

Overvoltage Protection	OVP latch, remove AC input to reset
Short Circuit Protection	Hiccup Mode, auto recovery. A direct hard short may latch off the converter; remove AC input to reset
Overtemperature Protection	Sensing transformer temperature, 165°C latching type, requires input power recycling to reset
Overload Protection	Hiccup Mode

RELIABILITY

MTBF	438,540 hours Conditions: Standard: Telcordia SR-332 issue 3 Ambient temp: 25c Voltage: 110v Level: 0/1 Environment: Ground, fixed, controlled

ISOLATION

Isolation	Input-Output: 3,000Vac Input-Ground: 1,800Vac Output-Ground: 1,500Vac

SAFETY

Safety Standards	EN/CSA/IEC/UL62368-1

EMI/EMC COMPLIANCE

Conducted Emissions	EN55015 Class B, FCC Part 15, Subpart B, Class B
Radiated Emissions	EN55022 Class A, FCC Part 15, Subpart B, Class A
Static Discharge Immunity	EN61000-4-2, 6kV Contact Discharge, 8kV air discharge
Radiated RF Immunity	EN61000-4-3, 3V/m
EFT/Burst Immunity	EN61000-4-4, 2kV/5kHz
Line Surge Immunity	EN61000-4-5, 1kV differential, 2kV \ common-mode
Conducted RF Immunity	EN61000-4-6, 3Vrms
Power Frequency Magnetic Field Immunity	EN61000-4-8, 3A/m
Voltage Dip Immunity	EN61000-4-11, 100%, 10ms; 30%, 500ms; 60%, 100ms; Performance Criteria A, A, & A at 58% load
Line Harmonic Emissions	EN61000-3-2, Class A, D For Class C from 1W input power to full load
Flicker Test	EN61000-3-3, Complies (dmax<6%)

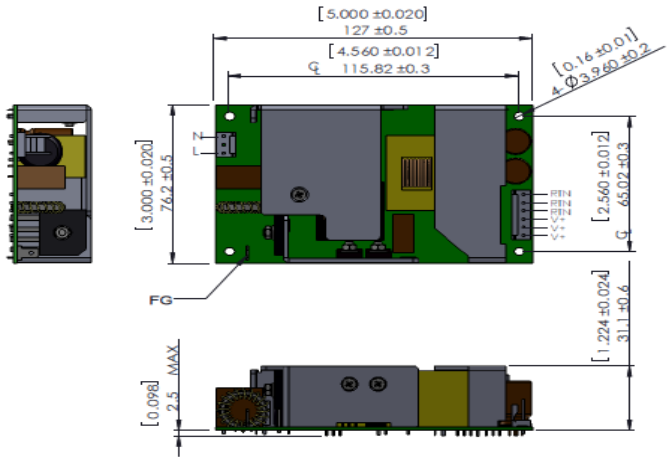
ENVIRONMENT

Operating Temperature	-10°C to +70°C(See Below Chart) Start Up at -40°C
Relative Humidity	5% to 95%, non-condensing
Weight	370g "H" option: TBD
Dimensions	W: 3.0" x L: 5.0" x H: 1.3" "H" option: 3.0"x 6.0" x1.5"
Altitude	Operating: -457 to 3000 m Non-operating: -457 to 12,192m
Storage Temperature	-40°C to +85°C
Vibration	Operating: 0.003g²/Hz, 1.5grms overall, 3 axes, 1 hr/axis Non-Operating: 0.026g²/Hz, 5.0grms overall, 3 axes, 10 min/axis
Shock	Half-sine, 40 gpk, 10 mS duration, +/- in each of 3 axes, 6 shocks total

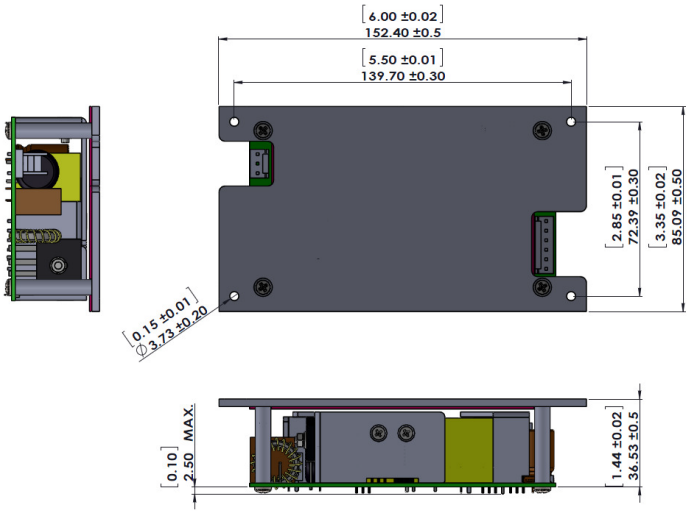
Ambient	Cooling Method	Wattage (watts)
50°C	Forced Air, 300 LFM	240
60°C	Forced Air, 200 LFM	190
70°C	Forced Air, 200 LFM	160
70°C with Max. Temperature of primary heat-sink to be held under 85°C	Conduction	130
50°C	Convection	160
40°C with "H" option, Max. Temp of cold plate to be held under 60°C	Conduction	200

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

MECHANICAL DRAWING



LB240SXXKH



Notes

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 min of 0.20" (5mm) in height