

LDB100

LED Power Supply

Constant Voltage /Current

LDB Series

FEATURES

- **Universal Input: 90-305VAC**
- **Constant Voltage/Current**
- **High Efficiency 91%**
- **Class II**
- **IP67 rated**
- **Class 2 device (UL1310)**
- **Power Factor: Typical 0.95**
- **OCV, OVP, SCP, OTP**
- **5 Year Warranty**

**LED Power
100W**

The LDB100 series of constant voltage/current LED power supplies can deliver up to 96W output power in an extremely compact package size.

The LDB100 can deliver constant voltage/current 24V, 36V and 48V outputs in a compact package. At only 28.5mm high, the LDB100 offers the lowest profile LED driver solution. Furthermore, the LDB100 can operate as a constant current driver delivering the maximum output current range over the defined voltage range.

Model Number	Output Voltage in Constant Voltage Mode	Output Current Range in Constant Voltage Mode	Output Voltage Range in Constant Current Mode	Output Current in Constant Current Mode	Efficiency
LDB100-024SW	24V	0 - 4.00A	12 - 24V	4.00A	90.0%
LDB100-036SW	36V	0 - 2.66A	18 - 36V	2.66A	90.5%
LDB100-048SW	48V	0 - 2.00A	24 - 48V	2.00A	91.0%

Input Specifications

Parameter	Conditions/Description	Min	Nom	Max	Units
Input Voltage Range	Universal Input	90		305	VAC
Input Frequency Range		47		63	Hz
Input Current	240VAC, 92W			0.45	A
Inrush Current	240VAC in, 25°C, Cold Start			45	A
Power Factor	240VAC, 100VAC		0.95		

Output Specifications

Parameter	Conditions/Description	Min	Nom	Max	Units
Line Regulation				±0.5	%
Load Regulation				±1.5	%
Voltage Accuracy	% of Vout			±2.0	%
Voltage Range	See individual models				
Current Regulation	Across Model Voltage Range			±3.0	%
Ripple and Noise	20MHz Bandwidth. See Note 1			2.0	% pk-pk
Turn-on Delay	Measured at 200VAC and full load			0.5	s
Hold Up Time		15			ms
Overload Protection	See Note 2	92		100	W
Short Circuit Protection	Auto Recovery				
Over Voltage Protection	Auto Recovery	105%		135%	V
Over Temp Protection	Auto Recovery, Case Temperature Range	85	92	100	°C

General Specifications

Parameter	Conditions/Description	Min	Nom	Max	Units
Isolation Voltage	Input to Output Input to Chassis	3750 3750			VAC VAC
Efficiency	See individual models				
Safety Agency Approvals	UL8750, UL1310, CSA C22.2 No.223 Designed to meet EN61347-2-13, EN61347-1				
No load Power Dissipation	Measured at 100VAC and 240VAC			1.5	W
MTBF	Telecordia SR-33, Full Load, 25°C		1,000,000		Hours
Lifetime	T case = 60°C		100,000		Hours
Weight			0.66		Kg
Operating Temperature	Maximum T case = 80°C. See Note 3	-30		+50	°C
Storage Temperature		-40		+85	°C
Relative Humidity	Non-condensing (operating)	5		95	%RH
Altitude	Operating, Non Operating 10,000m			2000	m
Vibration	5-500Hz, random vibration			1.0	Grms
Shock	Half-Sine, 11ms duration			10	Grms
Dimensions	L x H x W: 231.0 x 28.4 x 40.0mm				

- Note 1. Output connected in parallel with 0.1uF ceramic capacitor and 10uF electrolytic capacitor.
 Note 2. Output power will not exceed 100W under normal operating conditions.
 Note 3. Maximum allowable case temperature is 80°C

Specifications are subject to change without notice



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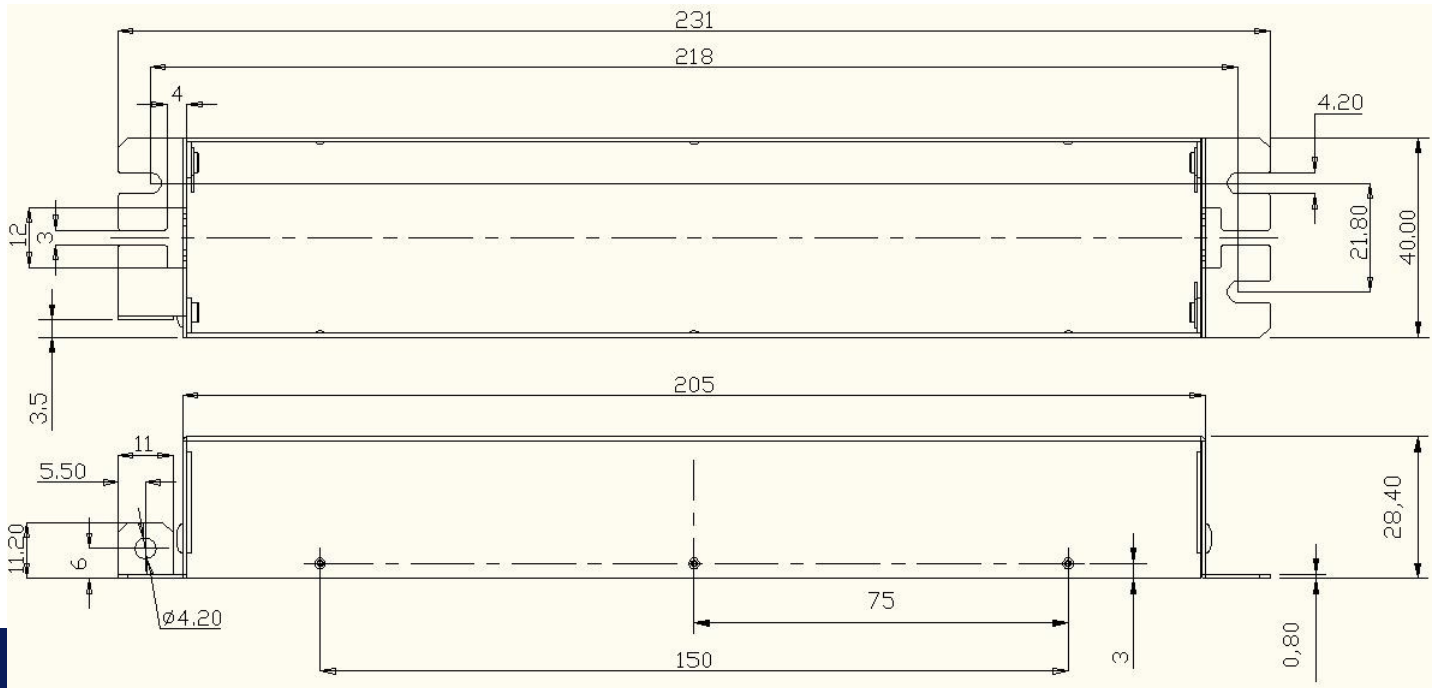
EMC				
Parameter	Standard Tested To		Level	Units
Emissions				
Conducted	EN55015, EN55022 Class B		Compliant	
Radiated	EN55015, EN55022 Class B		Compliant	
Harmonic Distortion	EN61000-3-2, Class C		Compliant	
Flicker and Fluctuation	EN61000-3-3		Compliant	
Immunity				
ESD	EN61000-4-2		Level 4	
Radiated RFI	EN61000-4-3		Level 3	
Fast Transients - burst	EN61000-4-4		Level 4	
Input Line Surges	EN61000-4-5		Level 4	
Conducted RFI	EN61000-4-6		Level 3	
Power Freq Magnetic Field	EN61000-4-8		Compliant	
Voltage Dips	EN61000-4-11		Criterion B	

INPUT / OUTPUT WIRING**INPUT CABLE**

Black (L) and White(N) 300±20mm
18AWG

OUTPUT CABLE

Red (+V) and Black (-V) 300±20mm
18AWG

MECHANICAL SPECIFICATIONS

2

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**Europe/Asia**

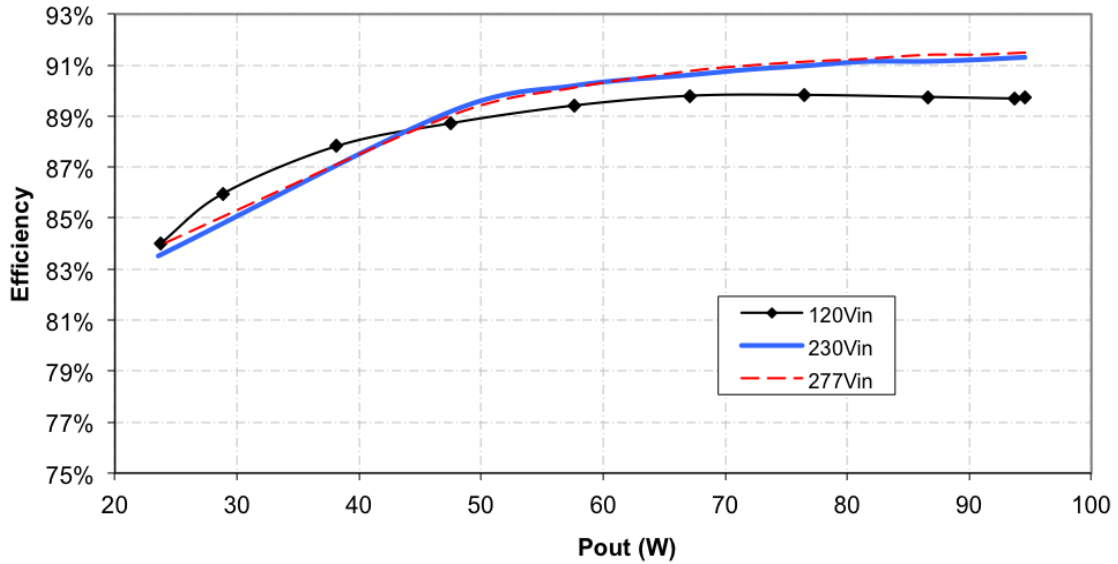
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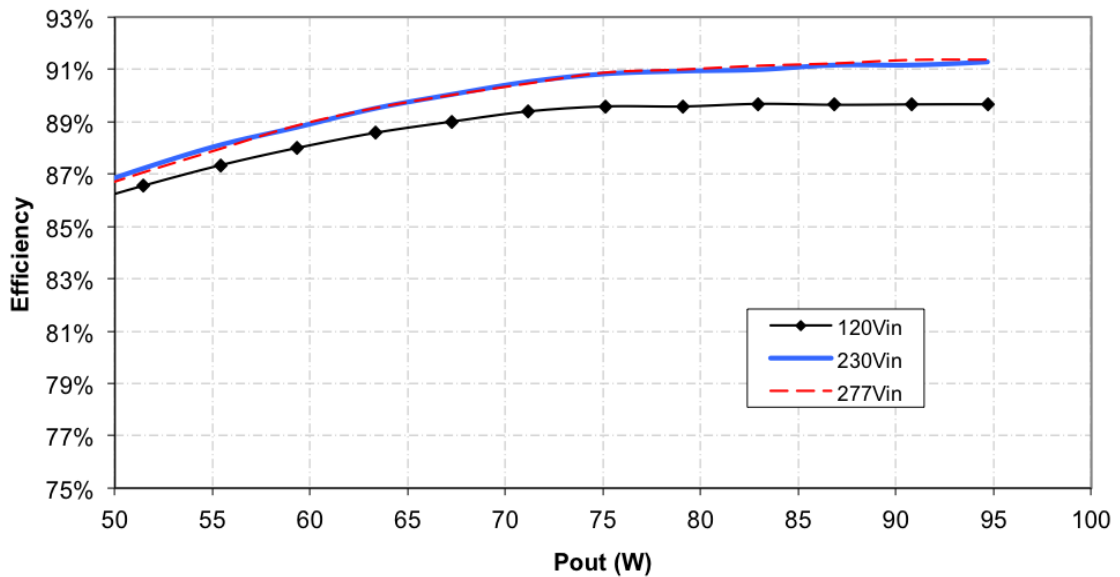
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EFFICIENCY CURVES

Efficiency under Constant Voltage



Efficiency under Constant Current



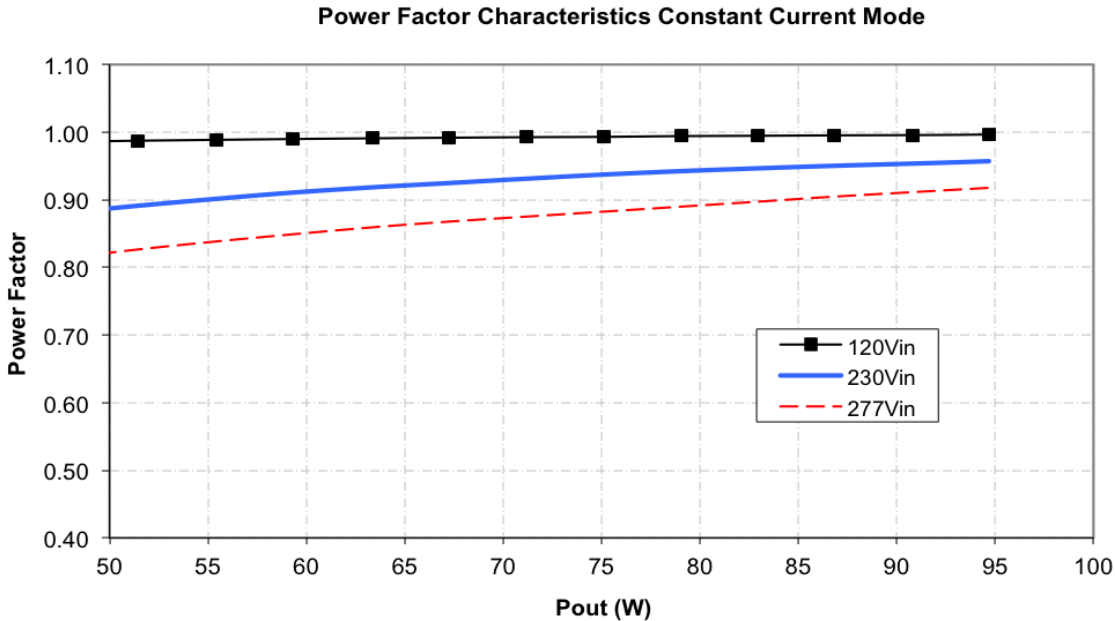
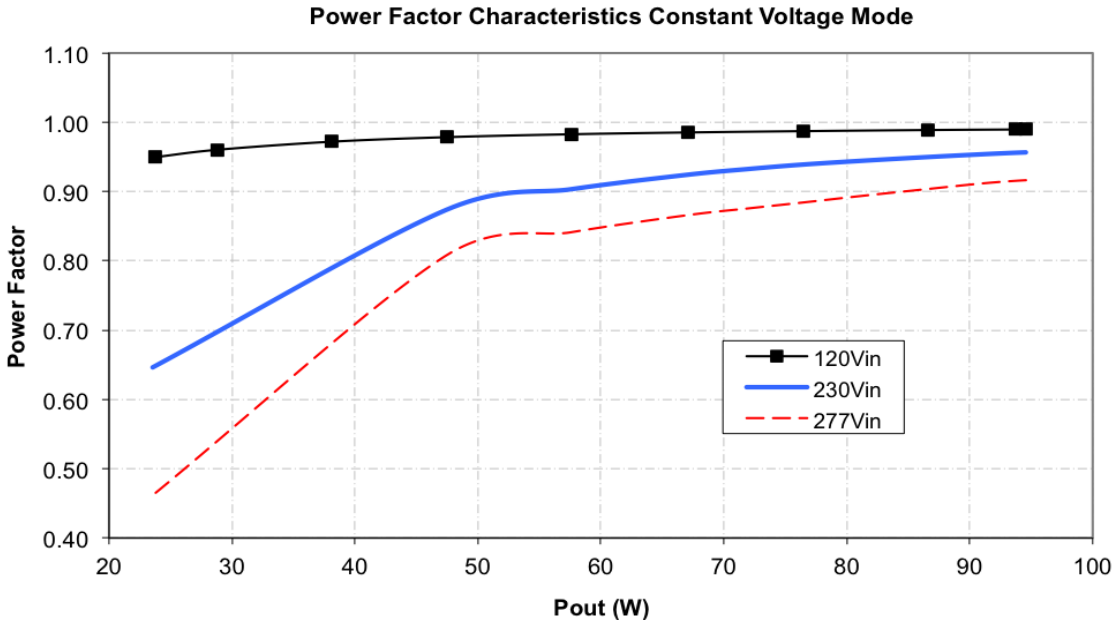
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POWER FACTOR CHARACTERISTICS

**LED Power
100W**



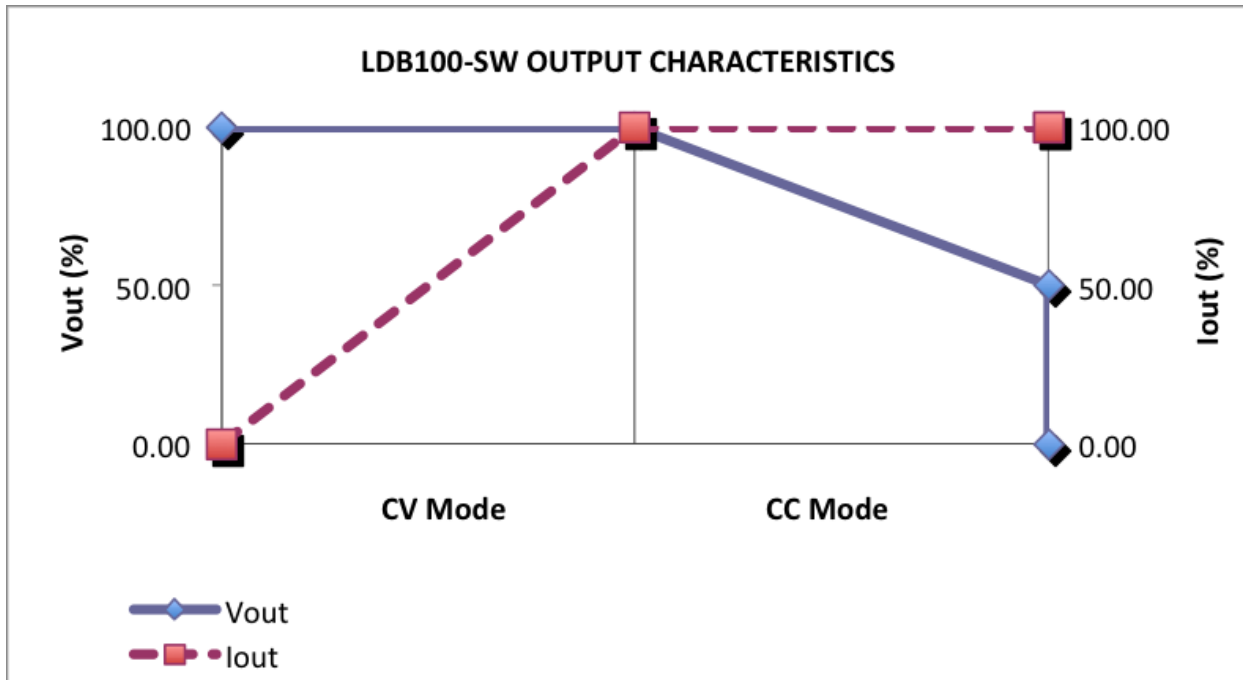
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LDB100-048SW	48V	0 - 2.00A	24 - 48V	2.00A



For more information on the Constant Voltage/Constant Current characteristics of the LDB100 series LED Driver see our LED Driver Application Note 1:

Driving LEDs & how to choose the correct LED power supply

On our website:

http://www.excelsys.com/technical_support/application.html