

# 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
<b>Input Voltage Range</b>	Universal Input	90		305	VAC
<b>Input Frequency Range</b>		47		63	Hz
<b>Input Current</b>	240VAC, 92W			0.45	A
<b>Inrush Current</b>	240VAC in, 25°C, Cold Start			45	A
<b>Power Factor</b>	240VAC, 100VAC		0.95		

#### Output Specifications

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

#### General Specifications

Parameter	Conditions/Description	Min	Nom	Max	Units
<b>Isolation Voltage</b>	Input to Output Input to Chassis	3750 3750			VAC VAC
<b>Efficiency</b>	See individual models				
<b>Safety Agency Approvals</b>	UL8750, UL1310, CSA C22.2 No.223 Designed to meet EN61347-2-13, EN61347-1				
<b>No load Power Dissipation</b>	Measured at 100VAC and 240VAC			1.5	W
<b>MTBF</b>	Telecordia SR-33, Full Load, 25°C		1,000,000		Hours
<b>Lifetime</b>	T case = 60°C		100,000		Hours
<b>Weight</b>			0.66		Kg
<b>Operating Temperature</b>	Maximum T case = 80°C. See Note 3	-30		+50	°C
<b>Storage Temperature</b>		-40		+85	°C
<b>Relative Humidity</b>	Non-condensing (operating)	5		95	%RH
<b>Altitude</b>	Operating, Non Operating 10,000m			2000	m
<b>Vibration</b>	5-500Hz, random vibration			1.0	Grms
<b>Shock</b>	Half-Sine, 11ms duration			10	Grms
<b>Dimensions</b>	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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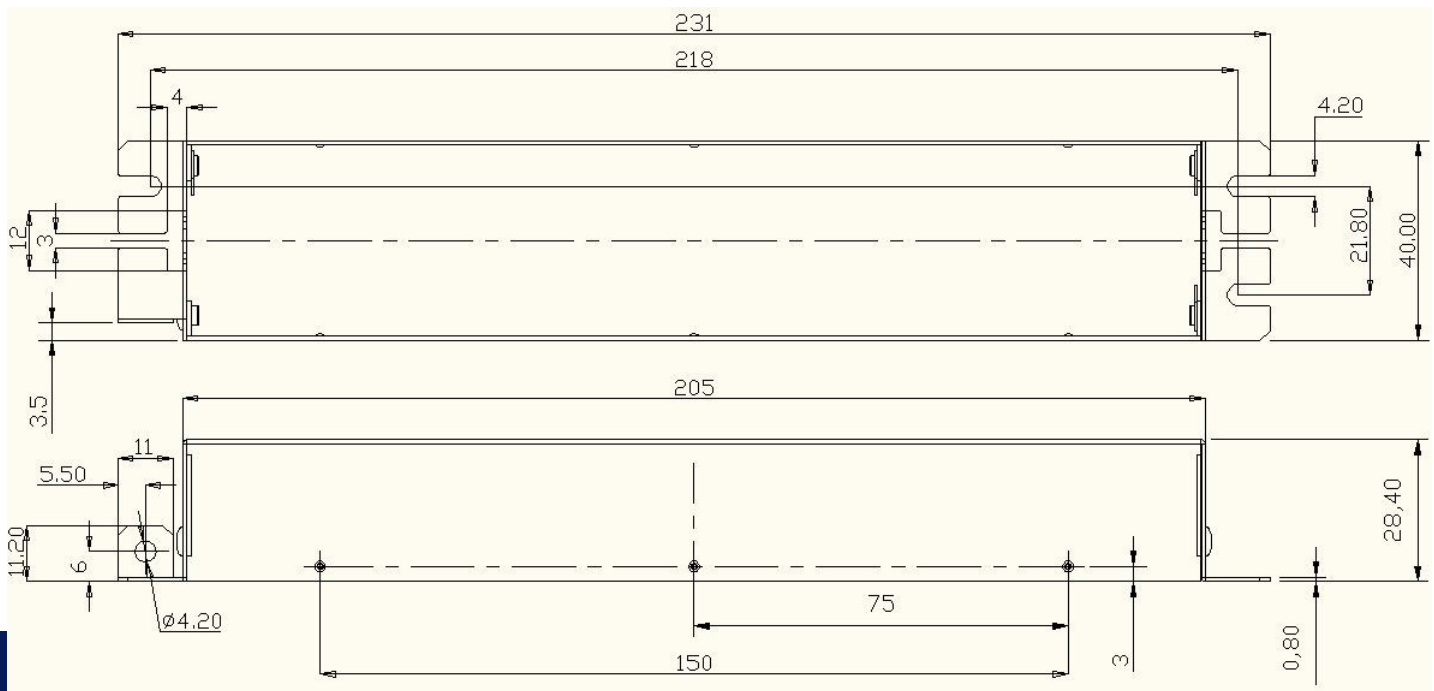
EMC				
Parameter	Standard Tested To		Level	Units
<b>Emissions</b>				
<b>Conducted</b>	EN55015, EN55022 Class B		Compliant	
<b>Radiated</b>	EN55015, EN55022 Class B		Compliant	
<b>Harmonic Distortion</b>	EN61000-3-2, Class C		Compliant	
<b>Flicker and Fluctuation</b>	EN61000-3-3		Compliant	
<b>Immunity</b>				
<b>ESD</b>	EN61000-4-2		Level 4	
<b>Radiated RFI</b>	EN61000-4-3		Level 3	
<b>Fast Transients - burst</b>	EN61000-4-4		Level 4	
<b>Input Line Surges</b>	EN61000-4-5		Level 4	
<b>Conducted RFI</b>	EN61000-4-6		Level 3	
<b>Power Freq Magnetic Field</b>	EN61000-4-8		Compliant	
<b>Voltage Dips</b>	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**

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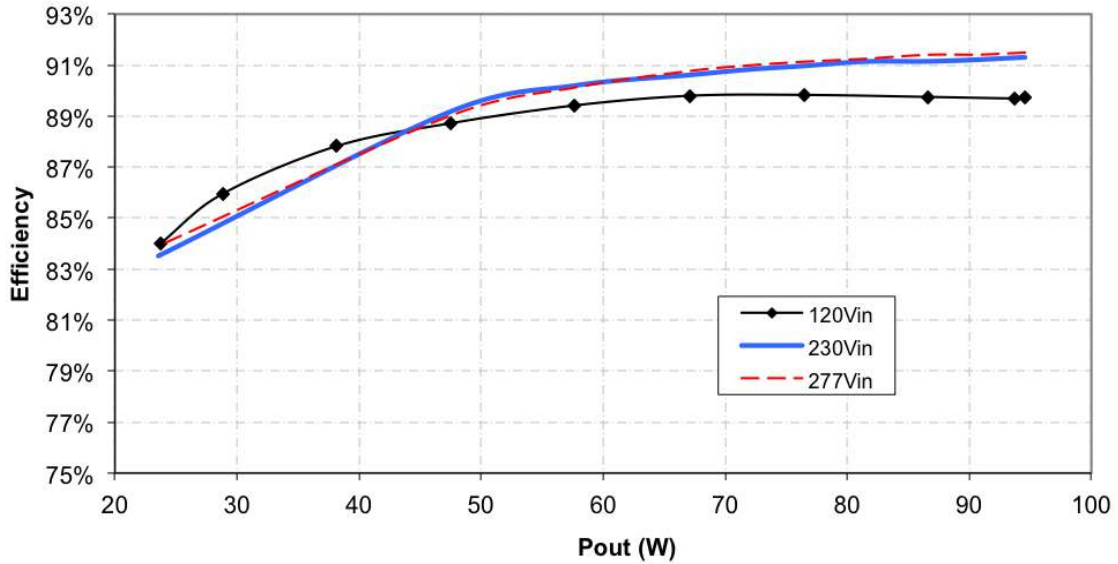
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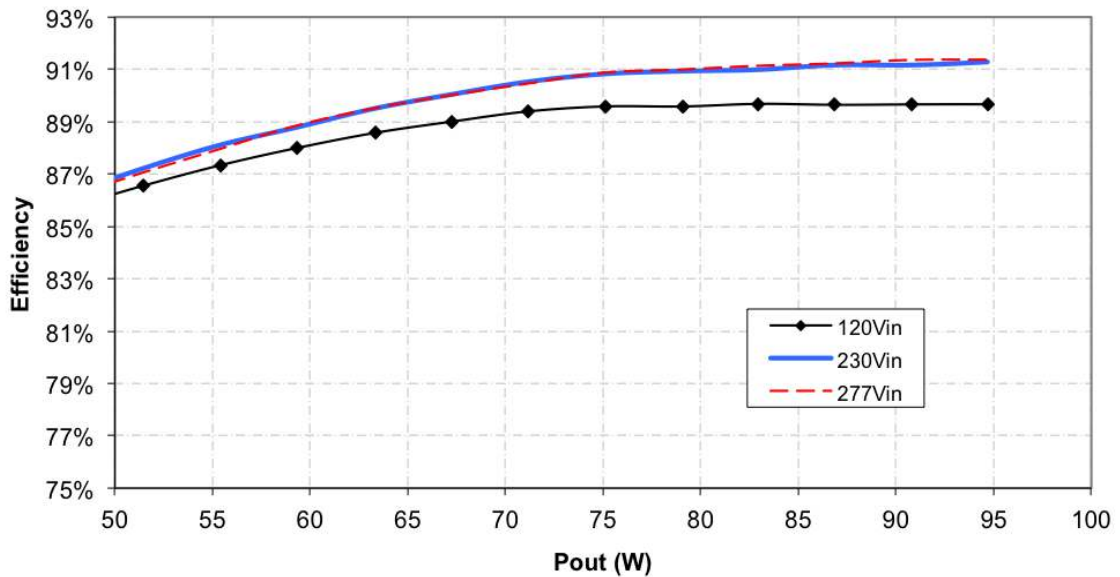
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**EFFICIENCY CURVES**

Efficiency under Constant Voltage



Efficiency under Constant Current



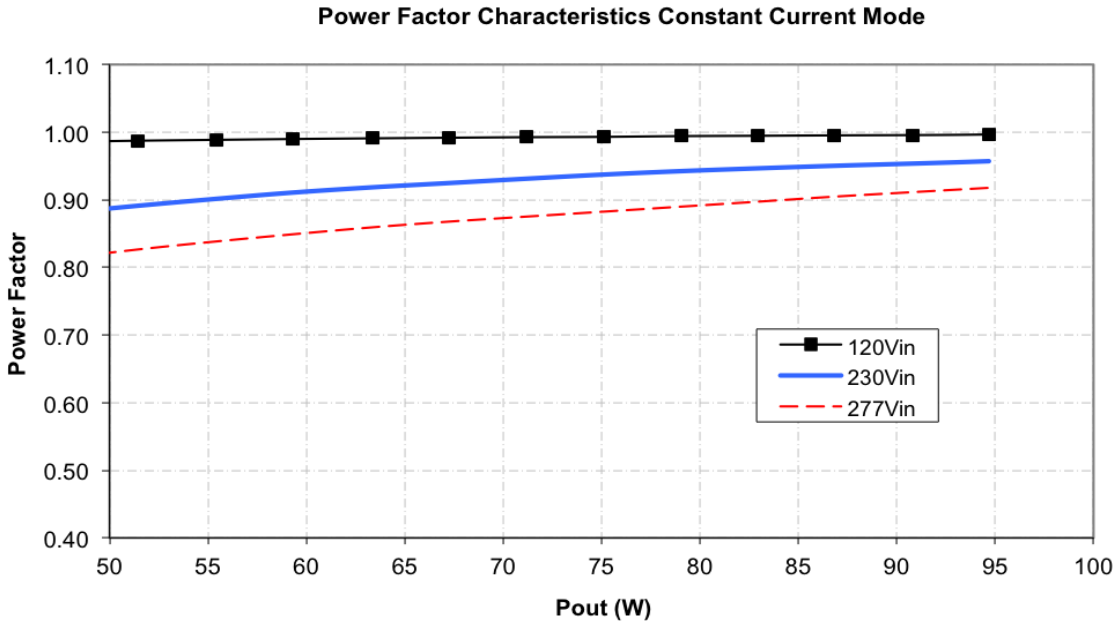
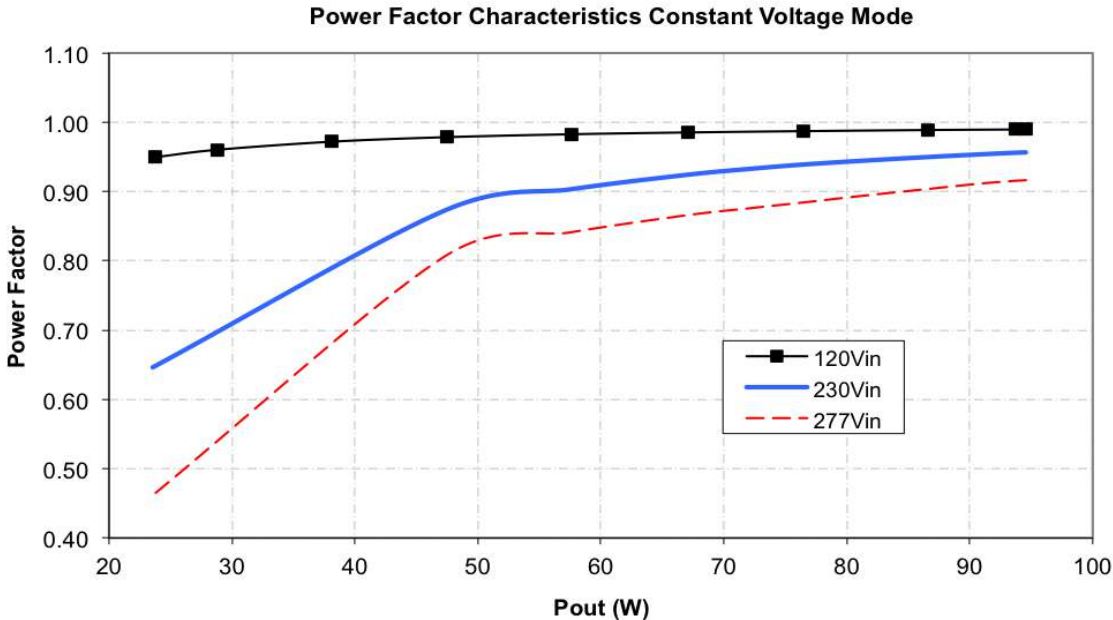
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**POWER FACTOR CHARACTERISTICS**

**LED Power  
100W**



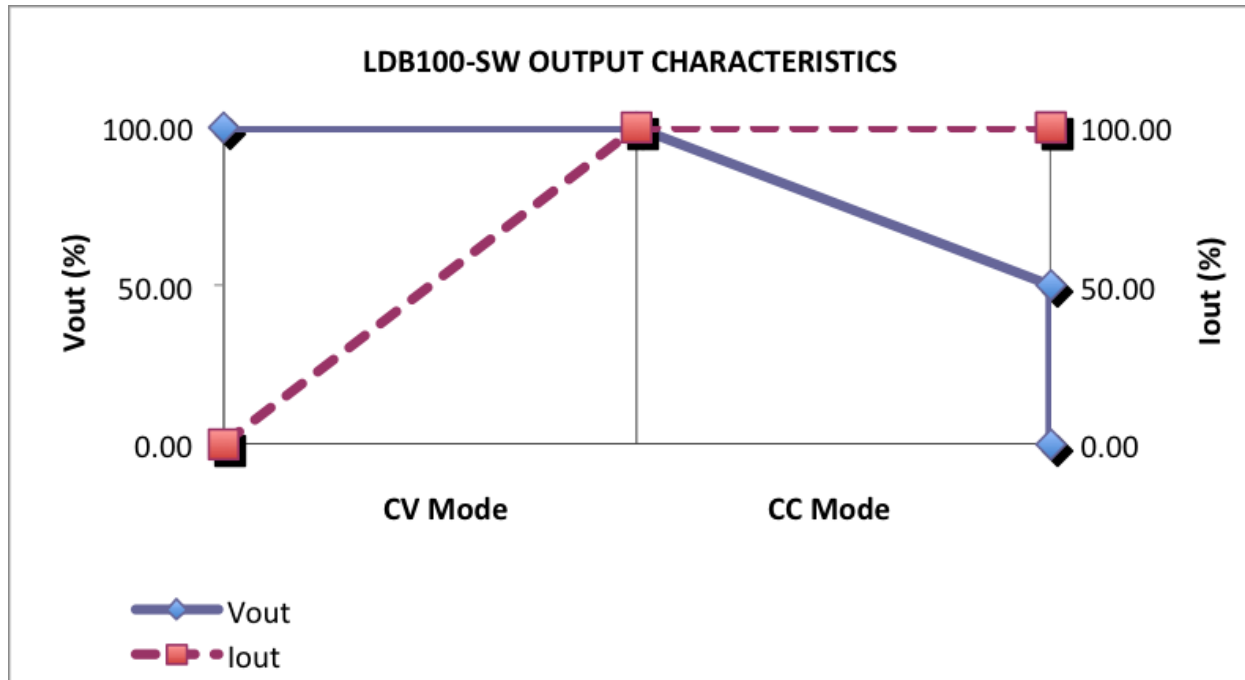
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For more information on the Constant Voltage/Constant Current characteristics of the LDB100 series LED Driver see our LED Driver Application Note 1:

#### Driving LEDs & how to choose the correct LED power supply

On our website:

[http://www.excelsys.com/technical\\_support/application.html](http://www.excelsys.com/technical_support/application.html)

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