LDB200

LED Power Supply

Constant Voltage /Current

LDB Series

FEATURES

- **Universal Input: 90-305VAC**
- **Constant Voltage/Current**
- **High Efficiency 93%**
- **IP67 rated**
- **Power Factor: Typical 0.95**
- **OCP, OVP, SCP, OTP**
- **-30 to 70°C deg operation(3)**
- **5 Year Warranty**

The LDB200 series of constant voltage/current LED power supplies can deliver up to 200W output power in an extremely compact package size.

The LDB200 can deliver constant voltage single outputs 24V and 48V outputs in a compact package. At only 35mm high, the LDB200 offers the lowest profile LED driver solution. Furthermore, the LDB200 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
LDB200-024SW	24V	0 - 8.50A	12 - 24V	8.50A	92.5%
LDB200-048SW	48V	0 - 4.25A	24 - 48V	4.25A	93.5%

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, 200W			0.91	A
Inrush Current	240VAC in, 25°C, Cold Start			65	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		20			ms
Short Circuit Protection	Hiccup, Auto Recovery				
Over Voltage Protection	Hiccup, Auto Recovery	105%		130%	V
Over Temp Protection	Hiccup, Auto Recovery,T case	85	92	100	°C

General Specifications

Parameter	Conditions/Description	Min	Nom	Max	Units
Isolation Voltage	Input to Output Input to Chassis	3750 1500			VAC VAC
Efficiency	See individual models		93		%
Safety Agency Approvals	UL8750, CSA C22.2 No.223, EN61347-2-13, EN61347-1				
No load Power Dissipation	Measured at 100VAC and 240VAC			2.0	W
MTBF	Telecordia SR-33, Full Load, 25°C		1,000,000		Hours
Lifetime	T case = 50°C		100,000		Hours
Weight			1		Kg
Operating Temperature	Maximum T case = 80°C. See Note 2	-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

Note 1. Output connected in parallel with 0.1uF ceramic capacitor and 10uF electrolytic capacitor.
Note 2. Maximum allowable case temperature is 80°C
Note 3. Derate output power by 5W/°C above 50°C. Refer to derating curves for line voltage and ambient temperature

excelsys

Europe/Asia
Excelsys Technologies Ltd
27 Eastgate Drive
Eastgate Business Park
Little Island, Cork, Ireland
IRELAND
t: +353 21 4354716
f: +353 21 4354864
e: sales@excelsys.com

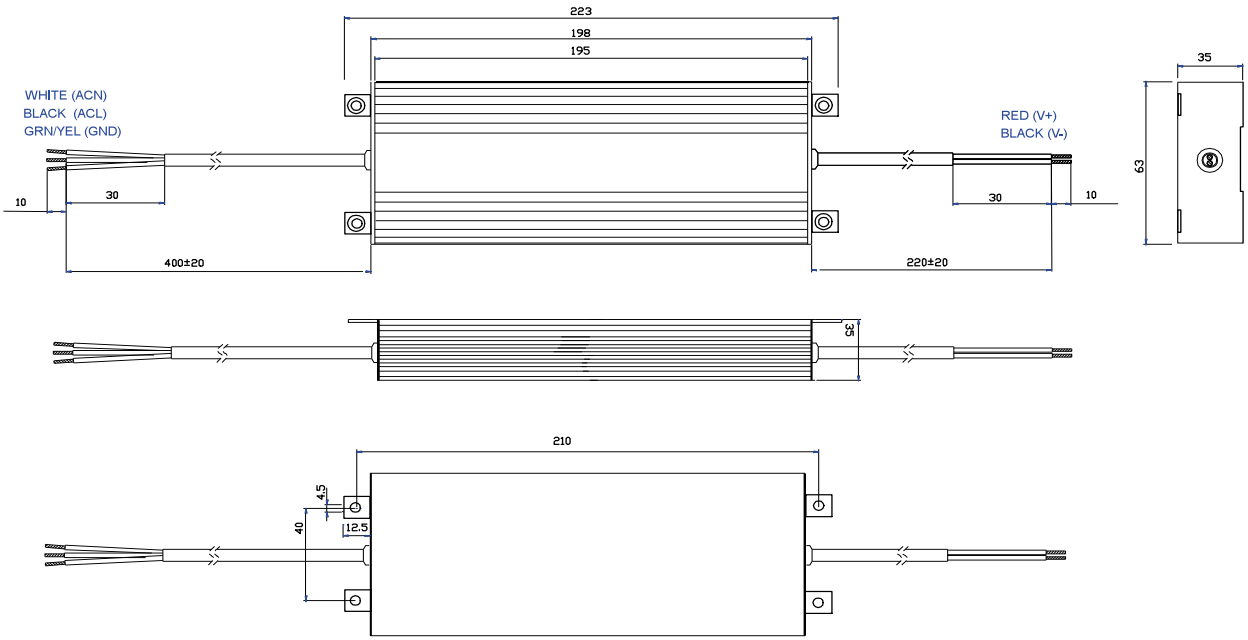
North America
Excelsys Technologies
519 Interstate 30, #309
Rockwall, TX 75087
USA
t: (972) 771 4544
f: (972) 421 1805
e: salesusa@excelsys.com

EMC					
Parameter	**Standard Tessted 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), White(N) and Green/Yellow (E) 400±20mm
SJTW 18AWG

OUTPUT CABLE
Red (+V) and Black (-V) 220±20mm
SJTW 18AWG

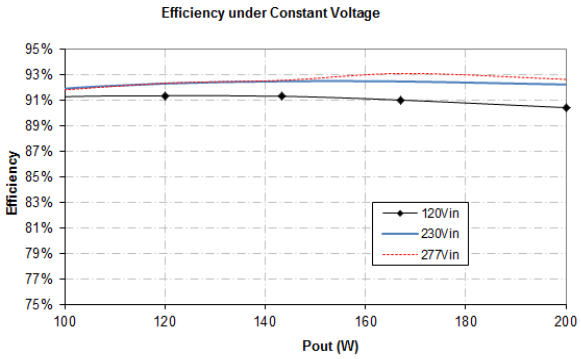


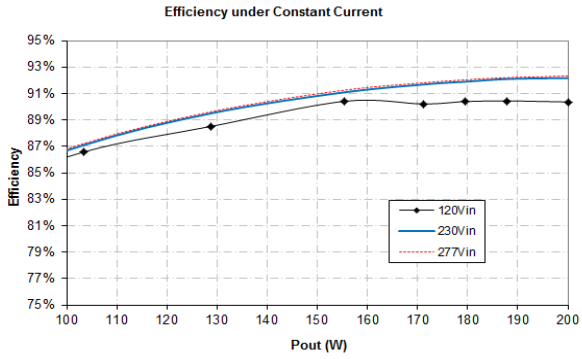
excelsys

Europe/Asia
Excelsys Technologies Ltd
27 Eastgate Drive
Eastgate Business Park
Little Island, Cork, Ireland
IRELAND
t: +353 21 4354716
f: +353 21 4354864
e: sales@excelsys.com

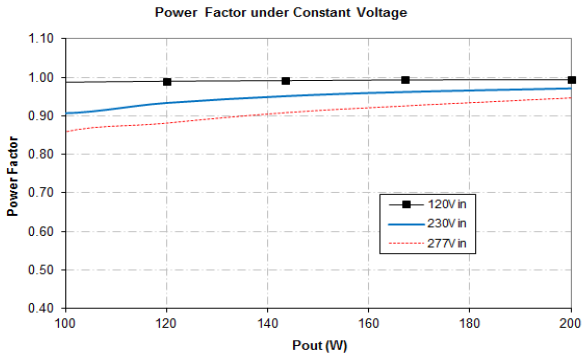
North America
Excelsys Technologies
519 Interstate 30, #309
Rockwall, TX 75087
USA
t: (972) 771 4544
f: (972) 421 1805
e: salesusa@excelsys.com

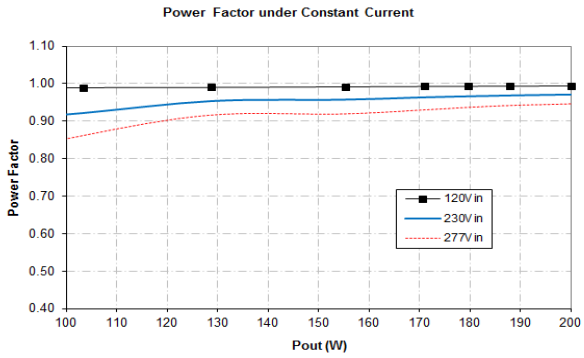
EFFICIENCY CURVES



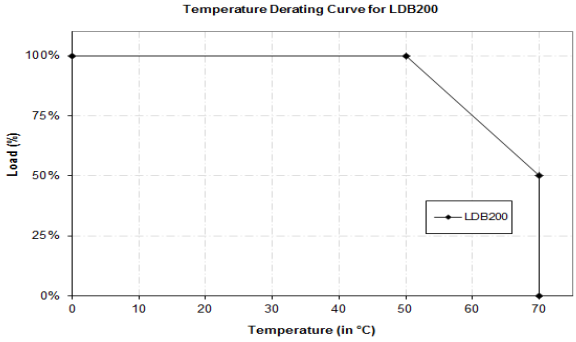


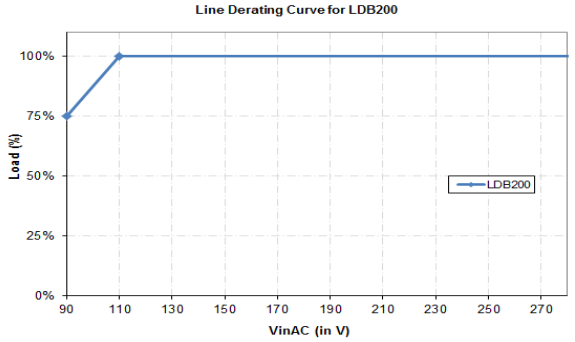
POWER FACTOR CHARACTERISTICS





DERATING CURVES



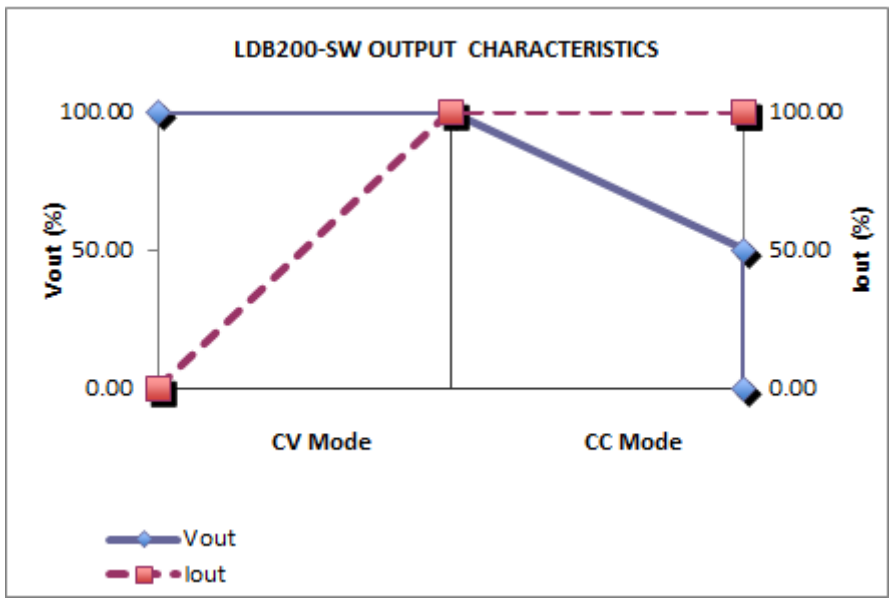


excelsys

Europe/Asia
Excelsys Technologies Ltd
27 Eastgate Drive
Eastgate Business Park
Little Island, Cork, Ireland
IRELAND
t: +353 21 4354716
f: +353 21 4354864
e: sales@excelsys.com

North America
Excelsys Technologies
519 Interstate 30, #309
Rockwall, TX 75087
USA
t: (972) 771 4544
f: (972) 421 1805
e: salesusa@excelsys.com

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	Maximum Output Power in All Modes
LDB200-024SW	24V	0 - 8.50A	12 - 24V	8.50A	200W
LDB200-048SW	48V	0 - 4.25A	24 - 48V	4.25A	200W



For more information on the Constant Voltage/Constant Current characteristics of the LDB200 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

excelsys

Europe/Asia
Excelsys Technologies Ltd
27 Eastgate Drive
Eastgate Business Park
Little Island, Cork, Ireland
IRELAND
t: +353 21 4354716
f: +353 21 4354864
e: sales@excelsys.com

North America
Excelsys Technologies
519 Interstate 30, #309
Rockwall, TX 75087
USA
t: (972) 771 4544
f: (972) 421 1805
e: salesusa@excelsys.com