

Constant Voltage LED Driver Specification

BN-V48-100P
BN-V48-150P
BN-V48-250P



【Features】

- Slim shape, ultra-thin thickness up to 18mm;
- Above PF0.95, the conversion efficiency can reach 93%;
- No flicker and relevant parameters meet the latest ERP requirements;
- Over current, over temperature, overload, short circuit protection and automatic recovery;
- Certification: CE、CB、RoHS;
- Suitable for office lighting, decorative lighting and home lighting;
- Warranty: 5 years.



【Basic parameters】

Model	Rated Input Voltage	Input Power	Input Current	PF	Output Power Range	Output Voltage	Output Current	Efficiency (typ.)	Cementing product
BN-V48-100P	220-240Vac	≤ 115W	≤ 0.6A	≥ 0.95	0—100W	48VDC	0—2.1A	≥ 92%	N
BN-V48-150P	220-240Vac	≤ 168W	≤ 0.9A	≥ 0.95	0—150W	48VDC	0—3.125A	≥ 92%	Y
BN-V48-250P	220-240Vac	≤ 275W	≤ 1.5A	≥ 0.95	0—250W	48VDC	0—5.21A	≥ 93%	Y

Remark: Test result @230V, 50Hz, Full Load.

【Performance parameters】

category	Item	Technical Norm				
Features	Output Type	Constant Voltage				
	Output Features	Isolation SELV				
	Dimmable Type	Non-dimmable				
	IP Grade	IP20				
	Insulation Class	Class II				
Input	Rated Input Voltage	220-240VAC				
	Range of AC Input Voltage	176-264VAC				
	ON/OFF time	>0.5S(There will be a delay in the quick switch.)				
	Frequency	Rate:50/60Hz, Range:47~63Hz				
	Power Factor	≥0.95, 220-240VAC, Rated Load, see graphs				
	THD	7%	230VAC, Rated Load, see graphs			
	Standby Power Consumption	≤0.5W, @230VAC,NO Load				
	Inrush Current	Model	Ipeak	Ipeak(typ.)	Duration time	240Vac/50Hz, 90-degree phase, full load, cold start-up, duration time measure from 50%Ipk to 50%Ipk
		100W	<50A	<45A	250us	
		150W	<60A	<56A	185us	
	Connected quantity of 16A Breaker	250W	<80A	<76A	310us	
100W		10pcs,16A type B / 17pcs 16A type C				
150W		8pcs,16A type B / 13pcs 16A type C				
	250W	6pcs,16A type B / 8pcs 16A type C				

category	Item	Technical Norm			
Output	Output Voltage	48VDC±2%			
	No load Voltage	48VDC(Float 1.5VDC up and down)			
	Output Voltage Ripple	<480mV _{PK-PK} (0.5%)			
	Overshoot	<105%V _o			
	Line Regulation	±1%			
	Load Regulation	±2%			
	PstLM	≤1.0			
	SVM	≤0.4			
	Start-up Time	≤0.5S (220-240VAC)			
	Efficiency	100W	90% min.	92% typ.	230VAC, Rated Load, at output terminals, see graphs.
150W		90% min.	92% typ.		
250W		91% min.	93% typ.		
Protection	Short Circuit Protection	Auto Recovery			
	Over Current Protection	120%-180%I _o , Auto Recovery			
	Over Voltage Protection	110%-150%V _o , Auto Recovery			
	Over Temperature Protection	90<T _c <110°C, Auto Recovery			
	Insulation voltage	I/P to O/P,3KVac/5mA/1min			
	Insulation resistance	>100M ohm @ 500VDC Leakage current I/P to			
	Leakage current	I/P to O/P < 250μA			
Environment	Ta/Operation Temperature	-25+45°C			
	Ts/Storage Temperature	-40+85°C			
	Tc/Enclosure Temperature For Safety	90 °C			
	Humidity	5%....85%RH			
	Atmosphere	86-108KPa			
Construction	Connection Method	Terminal			
	Cable Terminals	Input	1 terminal block(300V 10A)		
		Output	100W/150W	1 terminal block(300V 10A)	
			250W	2 terminal block(300V 10A)	
	Installation	Independent			
	Input Wire Cross Section	0.75mm ² -1.5 mm ²			
	Output Wire Cross Section	100W/150W	1*0.75mm ² -1.5 mm ²		
		250W	2*0.75mm ² -1.5 mm ²		
	Output Cable Length	Max. 3M			
	Cable diameters range	Input	2.2-4mm or 9.5-10.5mm		
Output & Dimming		2.2-4mm			
Dimension	100W/150W	350*30*18mm (L*W*H)			
	250W	400*40*22mm (L*W*H)			
Standards	Certification	CE,CB			
	Safety Standards	EN61347-2-13:2014/A1:2017,EN62384:2006/A1:2009, EN61347-1:2015,			
	EMC Standards	EN IEC 55015:2019,EN IEC 61000-3-2:2019,EN61547:2009, EN IEC 55015:2019/A11:2019,EN 61000-3-3:2013/A1:2019			
	Performance	EN62384			
	Surge	L-N:2KV			
Others	RoHS	2011/65/EU			
	MTBF	≥250KHours,Ta=25°C(MIL-HDBK-217F)			
	Audible Noise	<25dB @ 10cm distance, 20dB background			
	Life Time (@Ta max)	100W	≥100K Hrs		
		150W	≥55K Hrs		
250W		≥63K Hrs			
Warranty	5 years				

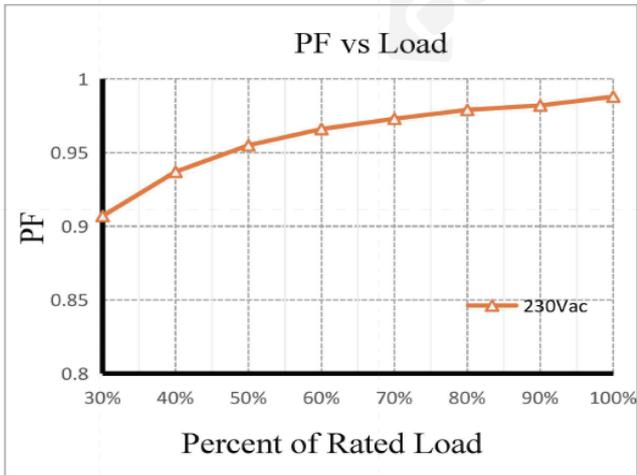
Remark:

- All Parameters, if not specified, are measured at 230VAC/50Hz and 25 °C ambient temperature.
- LED Driver is a component of the luminaires, Luminaires and wire layout will affect the EMC, please check the EMC with end products again.
- Output ripple should be measured at the output end which has with 0.1uF/100V ceramic capacitance and 10uF/100V Aluminum cap acitance connected in parallel. Measured using oscilloscope with bandwidth limited to 20MHz.

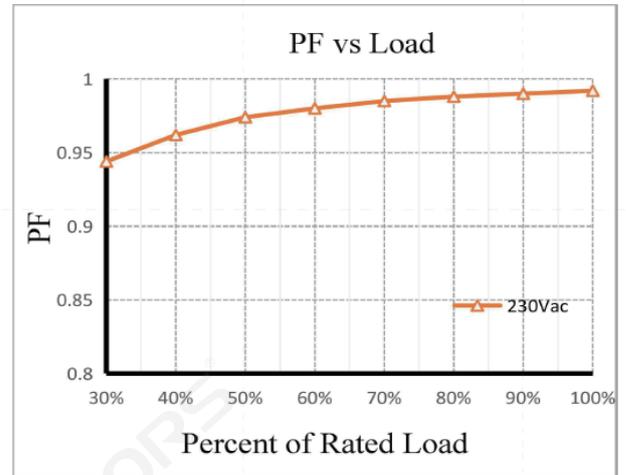
[Graph]

1. PF VS LOAD Curve:

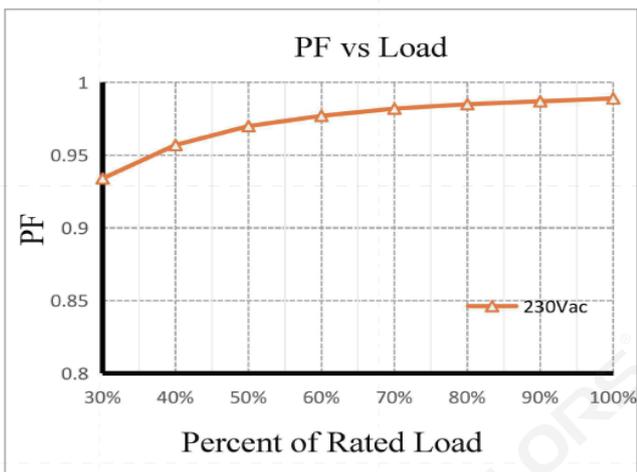
100W:



150W:

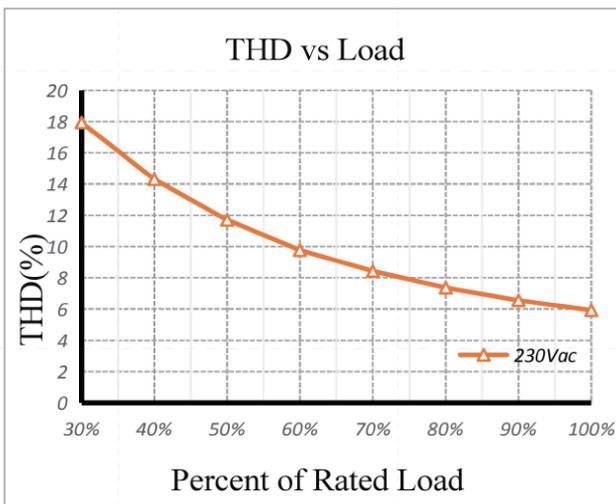


250W:

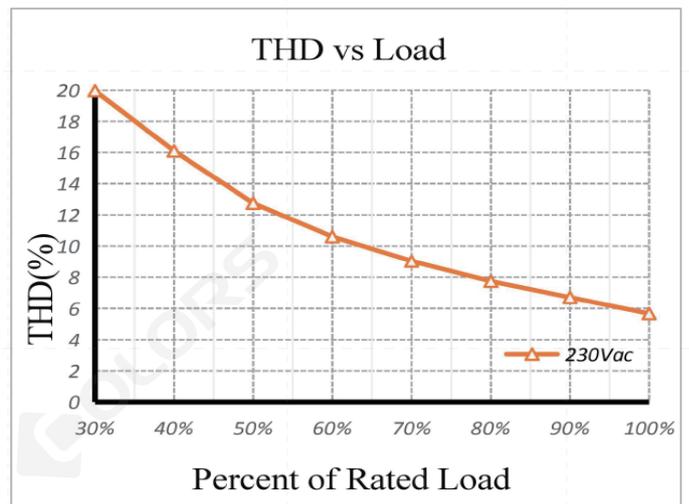


2. THD VS LOAD Curve:

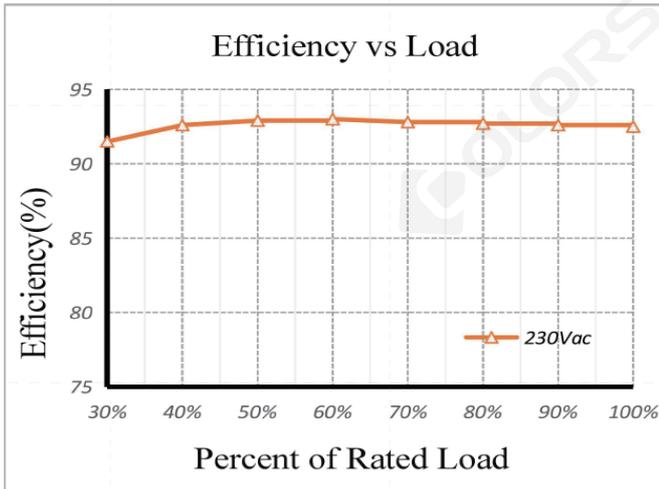
100W:



150W:

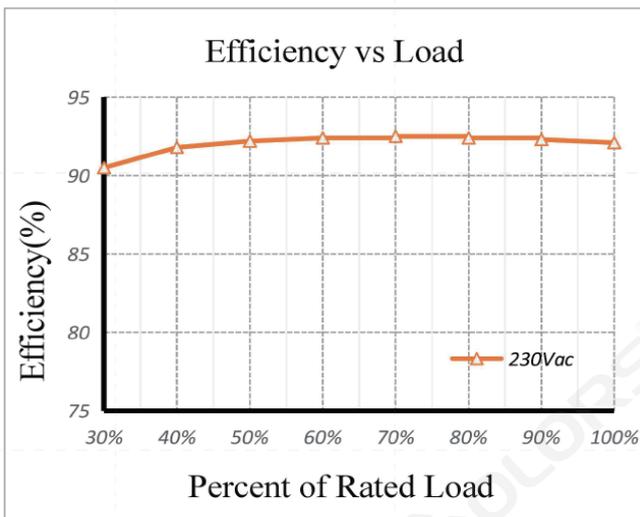


250W:

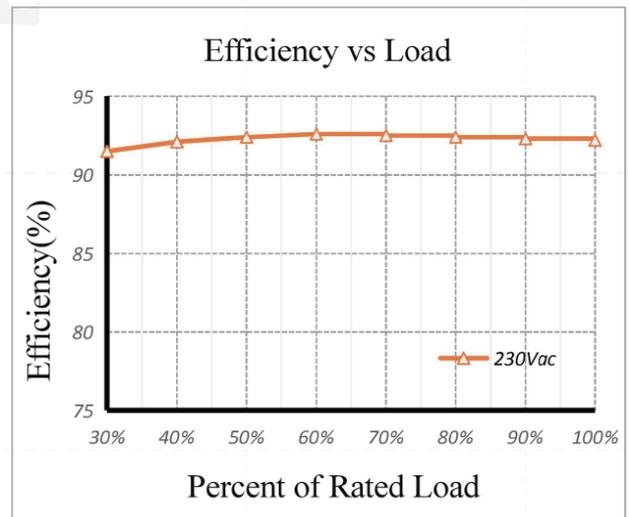


3. Efficiency VS LOAD Curve:

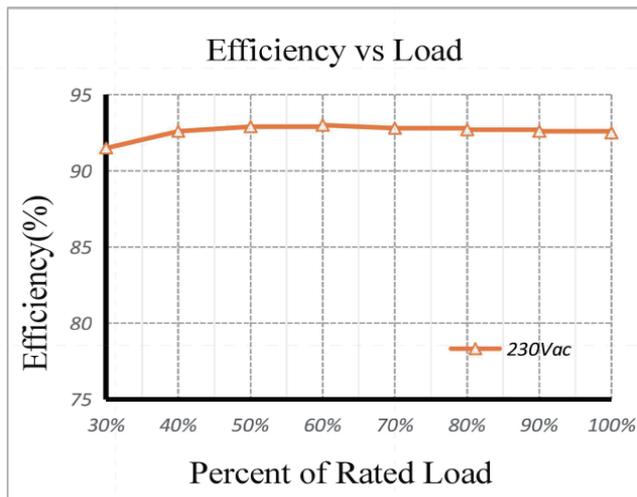
100W:



150W:

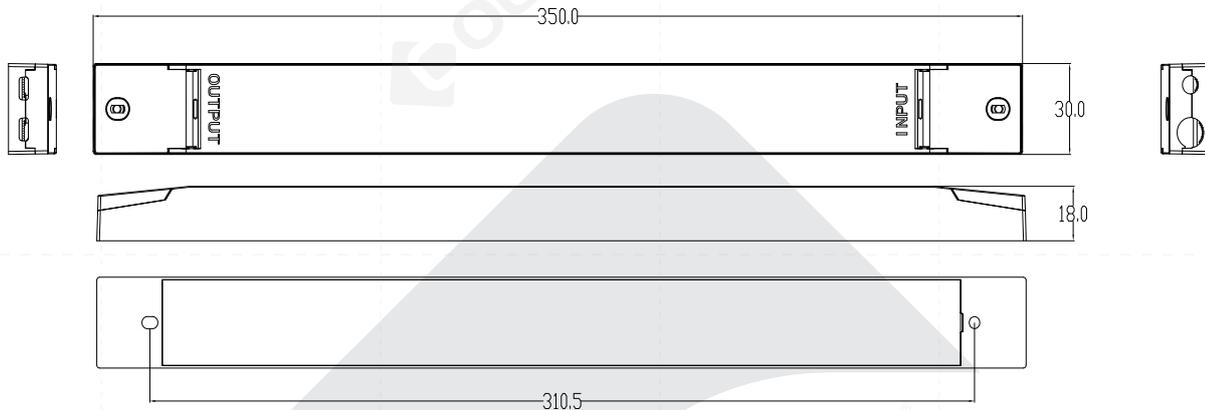


250W:

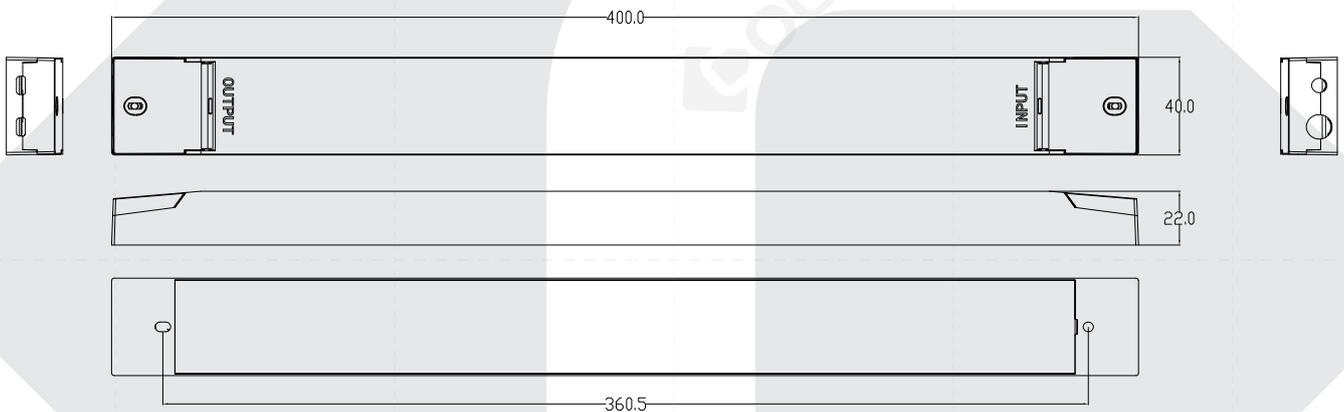


[Dimension] :

1. 100W/150W: L350*W30*H18mm (Unit: mm)



2. 250W: L400*W40*H22mm (Unit: mm)



[Packing information] :

Packing way	Model	Carton L*W*H(mm)	Pcs/Carton	Net weight/ Pcs(kg)	Net weight/ Carton(kg)	Gross weight / Carton(kg)
With white box and manual	BN-V48-100P	450*240*200	60	0.21	12.6	13.12
	BN-V48-150P	450*240*200	60	0.309	18.54	19.06
	BN-V48-250P	450*240*200	30	0.535	16.05	16.57

[Wiring instructions] :

- All connections must be kept as short as possible to ensure good EMI behaviour.
- Mains leads should be kept apart from LED Driver and other leads (ideally 5 - 10 cm distance).
- Advice the length of the output wires should not exceed 3 m.
- Secondary switching is not permitted (Except for constant voltage)
- Incorrect wiring can damage LED modules.
- The wiring must be protected against short circuits to earth (sharp edged metals parts, metal cable clips, louver, etc).