JUSON 健森实业

150W Constant current + Constant voltage LED Driver LPN-150N

IP65 IP67

✤ Features

- Constant current mode output
- Constant voltage mode output A type
- Metal housing and Class 1 design
- Efficiency ≥90%
- Build-in active PFC function
- High PF,Low-THD
- Working temperature:-50°C~+60°C
- IP65 IP67 for both indoor and outdoor installations

✤ Application

- LED street lighting
- LED high bay lighting
- LED flood lighting
- LED grow lighting
- LED fishing lamp
- LED greenhouse lighting
- LED garden lamp
- LED strip light
- LED decoration lighting

✤ Description

LPN series is a constant current + constant voltage output LED driver. LPN operates from 100~240Vac and offers models with different rated voltage ranging between 24V to 54V. High efficiency up to 89%, with the fanless design, the entire series is able to operate for -50°C ~ +60°C case temperature under free air convection. The design of metal housing and IP67 ingress protection level allows this series to fit both indoor and outdoor applications. LPN-150 series is standard mode, which is equipped with various function options, such as dimming/timing functions, so as to provide the optimal design flexibility for LED lighting system.

✤ Model Encoding

LPN - 150N - 36 ABCDE

- **Function options**
- **Rated Output voltage**
- **Rated wattage**
- **Series Name**

Model	IP Rate	Function	Note
Blank	IP65/IP67	Output constant current fixed	Existing product
A	IP65/IP67	Constant Voltage Mode, output 24V,36V	Existing product
B	IP65/IP67	Constant current Dimming 0-10V	Existing product
C	IP65/IP67	Constant Power	By request
D	IP65/IP67	Constant Power + Timing	By request
E	IP65/IP67	Constant Power +Dimming 0-10V	By request

✣ Constant Voltage

MODEL(Type A)		LPN-150N-24A	LPN-150N-36A
INPUT	VOLTAGE	100-240V	
	FREQUENCY	47-63Hz	
	AC CURRENT	1.7A@100Vac	
	INRUSH CURRENT	＜60A	
	TURN ON TIME	＜5s@100Vac input, cold start,25℃	
OUTPUT	DC VOLTAGE	24V	36V
	RATED CURRENT	6.25A	4.16A
	PFC	＞0.94@full load	
	OPERATION LIFE	5 years	
	HOLD UP TIME	5ms@rated load	
	RISE TIME	＜10s/rated load	
	EFFICIENCY	Rated load,Input@220V,30mins operating, results＞89%	

✣ Constant Current

MODEL		LPN-150N-36□	LPN-150N-48□	LPN-150N-54□
INPUT	VOLTAGE	100-240V		
	FREQUENCY	47-63Hz		
	AC CURRENT	1.7A@100Vac		
	INRUSH CURRENT	＜60A		
	TURN ON TIME	＜5s@100Vac input, cold start,25℃		
OUTPUT	DC VOLTAGE	27-36V	27-48V	27-54V
	RATED CURRENT	Blank:4.16±3% B:0.1-4.16±3%	Blank:3.1±3% B:0.1-3.1±3%	Blank:2.78±3% B:0.1-2.78±3%
	RATED CURRENT(Type C/D/E)	C/D:2.78-5A±3% E:0.1-5A±3%		
	PFC@full load	＞0.92	＞0.92	＞0.94
	OPERATION LIFE	5 years		
	HOLD UP TIME	5ms@rated load		
	RISE TIME	＜10s/rated load		
	EFFICIENCY	Rated load,Input@220V,30mins operating, results＞89%		

PROTECTION REQUIREMENT	SHORT CIRCUIT PROTECTION	No damage to the power supply shall be sustained when operating any output under any line condition, into a short circuit condition for an indefinite period of time. The power supply shall be self – recovering when fault condition remove.
	OPEN CIRCUIT PROTECTION	No damage to the power supply shall be sustained when operating any output under any line condition, into output open circuit condition for an indefinite period of time.
ENVIRONMENTAL CONDITIONS	OPERATING	1.Ambient Temperature:-40℃~+50℃ 2.Relative Humidity: 20%~95% 3.Altitude: 10000ft altitude. 4.Cooling: the heat dissipation adopts natural convection mode, when the power supply is placed vertically or horizontally according to the mechanical shape, it can work normally.
	STOCKAGE	1.Ambient Temperature:-40℃~+80℃ 2.Relative Humidity: 10%~95% 3.Altitude: 10000ft altitude.
	WATERPROOF	IP65/IP67 *IP67 cannot provide hole position for adjust current
RELIABILITY AND QUALITY CONTROL	MTBF	When the supply is operation within any of the limits of this specification the MTBF shall be at least 50,000 hours at 45°C (MIL-STD-217F)
	BURN-IN	Normally, the power supply will be performed a minimum for a 4 hours Burn-In at 60℃ ±5℃ under full load on all power supplies calculate MTBF.
	COMPONENT DERATING	Semiconductor junction temperatures shall not exceed the manufactures maximum thermal rating.

✤ Safety Standards

EN 61347-1, EN 61347-2-13, EN60598 UL 8750/UL1310, UL8750/UL60950	
Insulation resistance	Input to output: 10M OHM at 500 VDC
Dielectric Strength (Hi-Pot)	Primary to Secondary: AC3750V, 10mA, for 1 minute. Primary to GND: AC1500V, 10mA, for 1 minute. Secondary to GND: AC1500V, 10mA, for 1 minute.
Leakage current	Leakage current<1mA when input voltage is 240V
Harmonic current	EN61000-3-2 Class C
EMI STANDARDS	EN55015

✤ Reliability and Quality Control

MTBF	When the supply is operation within any of the limits of this specification the MTBF shall be at least 50,000 hours at 25℃ (MIL-STD-217F)
Aging Test	Normally, the power supply will be performed a minimum for a 4 hours aging test at 35℃ ±5℃ under full load on all power supplies calculate MTBF
COMPONENT DERATING	Semiconductor junction temperatures shall not exceed the manufactures maximum thermal rating

✤ AC/DC Wire

AC Input Line	3 × 1.0mm² H05RN-F/IEC 57 (YZW) Wire L:Brown,N:Blue,PE:Yellow/Green. Wire length: 450±10 mm, the exfoliation is 70 mm, the wire end is 8 mm added tin.
DC Output line	2 × 1.0mm² H05RN-F/IEC 57 (YZW) Wire: V+: Brown V-: Blue. Wire length: 300±10mm, the exfoliation is 50 mm, the wire end is 8 mm added tin.

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✤ International Standards

EMS Standards:EN61547

ESD Standards	
Basic Standard	IEC61000-4-2
Discharge Impedance	330Ω/150pf
Discharge Voltage	Air Discharge: 12 KV (Direct) Contact Discharge : 8 KV (Direct/Indirect)
Polarity	Positive & Negative
Number of Discharge	Contact Discharge:Min,200times in total
Discharge Mode	20pps Discharge
Discharge Period	min 1 second
Performance	Criterion B

Electrical Fast Transient / Burst Immunity Standards	
Basic Standard	IEC61000-4-4
Test Voltage	Power line :1 KV
Polarity	Positive & Negative
Impulse Frequency	5KHz/100KHz
Impulse Wave shape	5/50ns
Burst Duration	15ms/0.75ms
Burst Period	300ms
Test Duration	≥1min
Performance	Criterion B

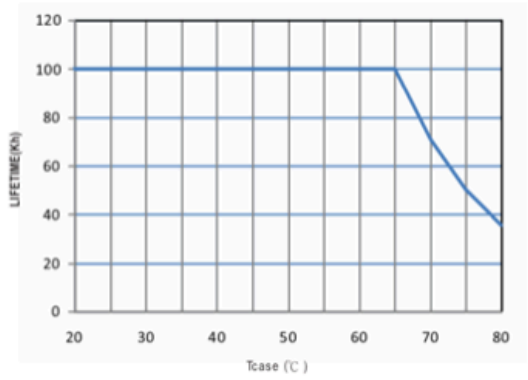
Electrical Fast Transient / Burst Immunity Standards	
Basic Standard	IEC61000-4-5
Polarity	Positive & Negative
Surge Interval	60S
Voltage Surge	4KV(L to N) 6KV(L/N to GND)
Test Times	5 times to each of polarity
Performance	Criterion B

Voltage Dips ,Short Interruptions And Voltage Variations Standards	
Basic Standard	IEC61000-4-11
Test Level %UT	0 & 70%
Drop Mode	Drop
Phase Angle	45o, 90o, 135°, 180o,225o,270o,315o

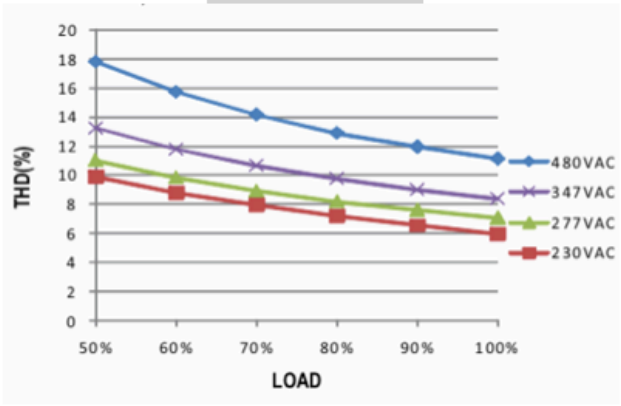
✤ Dimension

Length	Width	Height
198mm	68mm	39mm

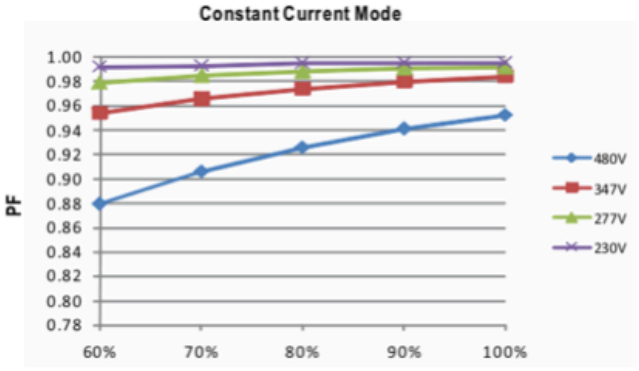
Life-Span



THD



PF



Efficiency VS Load