LES-100-024-IP67

100W Constant Voltage Driver

Features

- High efficiency up to 89%
- Built-in active PFC function
- No load Power consumption<0.5W
- All-Around Protection: OCP,SCP,OTP
- Compact Metal Case, Free Air Convection
- Waterproof(IP67) and UL Dry/Damp/Wet Location
- Input Surge Protection:4kV line-line,6kV line-earth
- High Reliability & Long Lifetime & 5 Years Warranty

Description

The LES-100-024-IP67 series is a 100W, Constant-Voltage IP67 LED driver that operates from 198-264Vac input with excellent power factor and THD feature. It is created for consisting of LED lamps, lampion, architecture and billboard lights. The high efficiency of these drivers and compact metal case enable them to run cooler, significantly improving reliability and extending product life. To ensure trouble-free operation, protection is provided against input surge, output over voltage, short circuit, and over temperature.

Models

Model	Input Voltage Range	Output Voltage	Output Current Range	Max output Power	Power Factor	Typical Efficiency
LES-100-024-IP67	198~264Vac	24V	0~4.15A	100W	0.95	89%

Note：

1. Test condition：230Vac/50Hz，at full Load;

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Input Specifications

Parameter	Min.	Typ.	Max	Notes
Rated Input Voltage	220V	-	240V	
Range of input voltage	198V	-	264V	
Input Frequency	47Hz	-	63Hz	
Leakage Current	-	-	0.7mA	240Vac
Input Current	-	-	0.6A	198Vac,at full load condition
Inrush Current	-	-	60A	230Vac/50Hz, 90°degree phase, full load, cold start, 50%Ipk~50%Ipk, duration=380μS
No Load Loss	-	-	1W	230Vac/50Hz, no load
Power Factor	0.9	0.95	-	230Vac/50Hz, at full load condition
THD	-	5%	10%	200Vac~240Vac, 75%~100%Load

Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Voltage LES-100-024-IP67	-	24V	-	At full load condition
Output Voltage Tolerance	-5%	-	5%	At full load condition
Total Output Voltage Ripple	-	-	2%	At full load condition, PK-PK
Startup Overshoot Voltage	-	-	10%	At full load condition
Load Regulation	-3%	-	3%	0%~100% Load
Line Regulation	-3%	-	3%	200Vac~240Vac, full load
Startup times	-	0.5S	1S	

Note:

1) All parameters NOT specially mentioned are measured at 220Vac input and 25℃ of ambient temperature.

2) Ripple & Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 μF parallel capacitor.

General Specifications

Parameter	Min.	Typ.	Max.	Notes
Efficiency at 230Vac input: LES-100-024-IP67	87%	89%	-	Measured at full load and steady-state temperature in 25℃ ambient Efficiency will be about 2.0% lower if measured immediately after startup
Efficiency at 200Vac input: LES-100-024-IP67	86%	88%	-	Measured at full load and steady-state temperature in 25℃ ambient Efficiency will be about 2.0% lower if measured immediately after startup
MTBF	-	250,000 Hours	-	Measured at 230Vac input, 80% Load and 25 ℃ ambient temperature (MIL-HDBK-217F)
Ambient Temperature	-40℃	-	+70℃	Refer to derating curve for the details.
Operating Case Temperature for Safety Tc_s	-40℃	-	+90℃	
Operating Case Temperature for Warranty Tc_w	-40℃	-	+75℃	Case temperature for 5 years warranty. Humidity: 10% RH to 100% RH.
Lifetime	-	50,000 Hours	-	Measured at 230Vac input, 100%Load and 75℃ case temperature; See lifetime vs. Case Temperature curve for the details
Storage Temperature	-40℃	-	+85℃	Humidity: 5% RH to 100% RH.
Dimensions	167 X 60 X 34.6 mm			With mounting ear, See Mechanical Outline for the detail
Net Weight	-	540g	-	

Safety Standards

Safety Category	Country / Territory	Standards
CE,TUV	Europe	EN61347-1, EN61347-2-13
CCC	China	GB19510.1, GB19510.14

EMC Compliance

EMC Category	Country / Territory	Standards
CE	Europe	EN 55015, EN 61000-3-2, EN 61000-3-3
		EN61000-4-2,3,4,5,6,8,11
		EN 61547
CCC	China	GB 17743, GB 17625.1

Note：

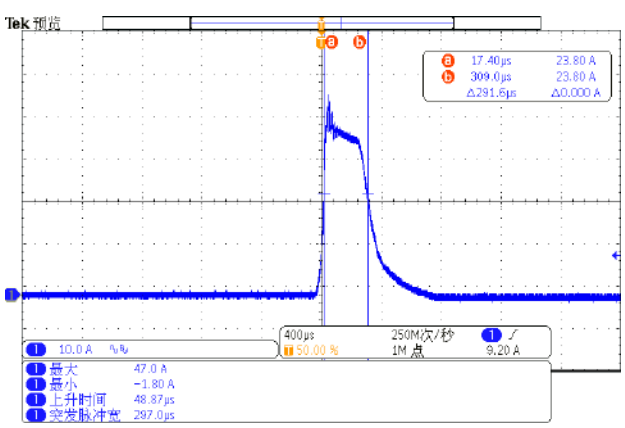
1) This LED driver meets the EMI specifications above, but EMI performance of a lighting fixture also depends on the other devices on the fixture.

2) To perform electric strength (hi-pot) testing, the "GDT ground disconnect" (nut and metal lock sheet) on the driver end-cap should be removed temporarily to prevent the internal gas discharge tube from conducting (as allowed by IEC 60598-1 Clause 10.2). After testing is completed, these items must be reinstalled to restore lineto-earth surge protection and secure the end cap.

Protection Functions

Parameter	Min.	Typ.	Max.	Note
Over Load Protection	110%	-	150%	Hiccup, Auto Recovery
Short Circuit Protection	-	-	-	Hiccup, Auto Recovery
Over Voltage Protection	-	-	-	Latch, Auto Recovery after power off and restart
Over Temperature Protection	-	-	-	Hiccup, Auto Recovery

Curve



▲Inrush Current Waveform

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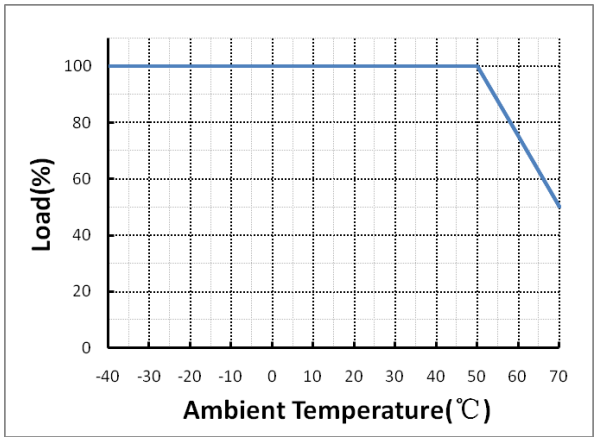
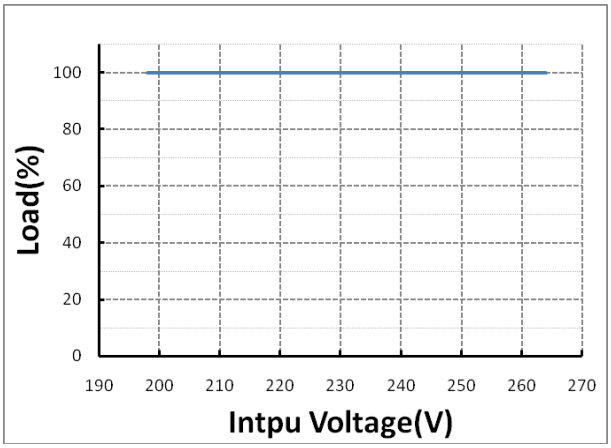
▲Derating

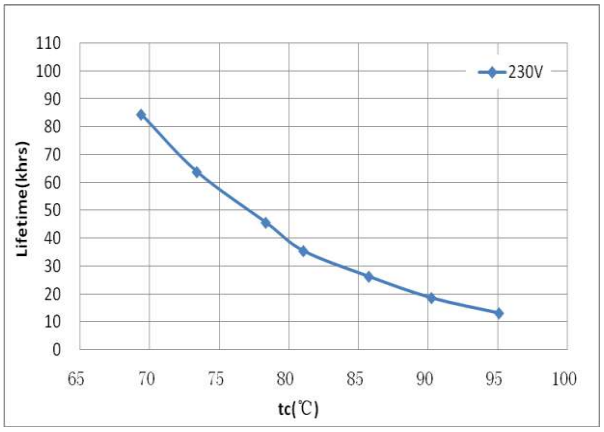
Output Power-Temperature



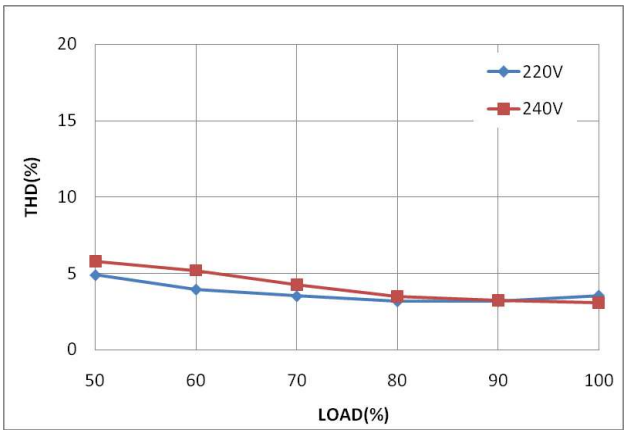
Output Power-Input Voltage



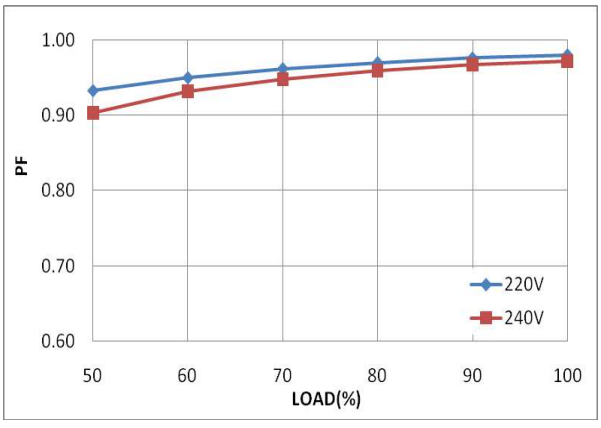
▲Lifetime



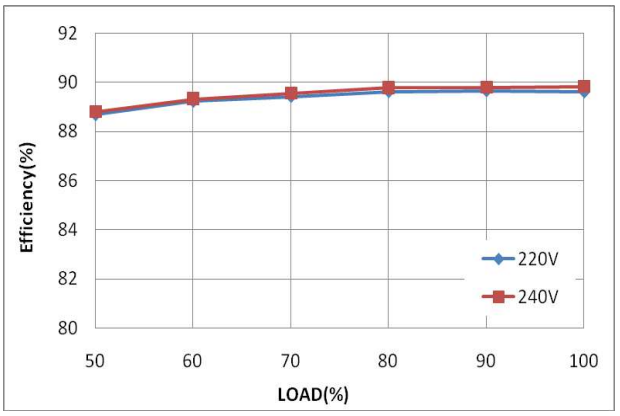
▲Total Harmonic Distortion



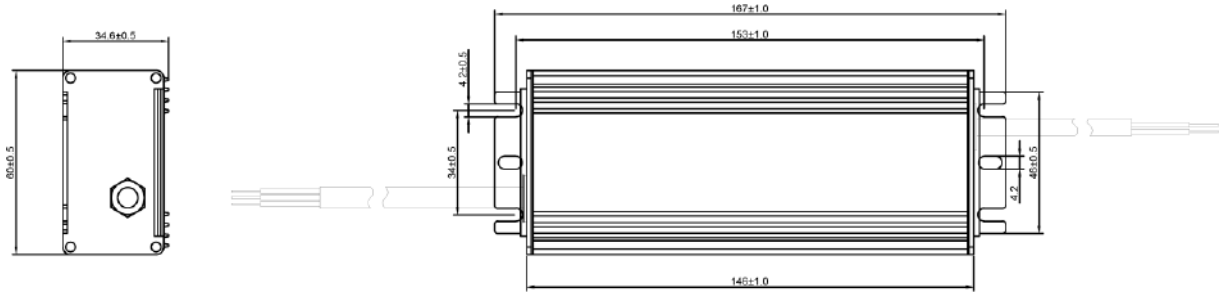
▲Power Factor



▲Efficiency



Mechanical Outline



Note：Wire length of input and output can be changed as customer's requirement

TYPE	Total Length	Outside Color	Inside Wires Color	Wire Model/Diameter
Input wire	0.65M	Black	Brown/Blue/(Yellow/Green)	H05RN-F/3X1.0mm^2
Output wire	0.30M	Black	Red/Black	H05RN-F/2X1.0mm^2