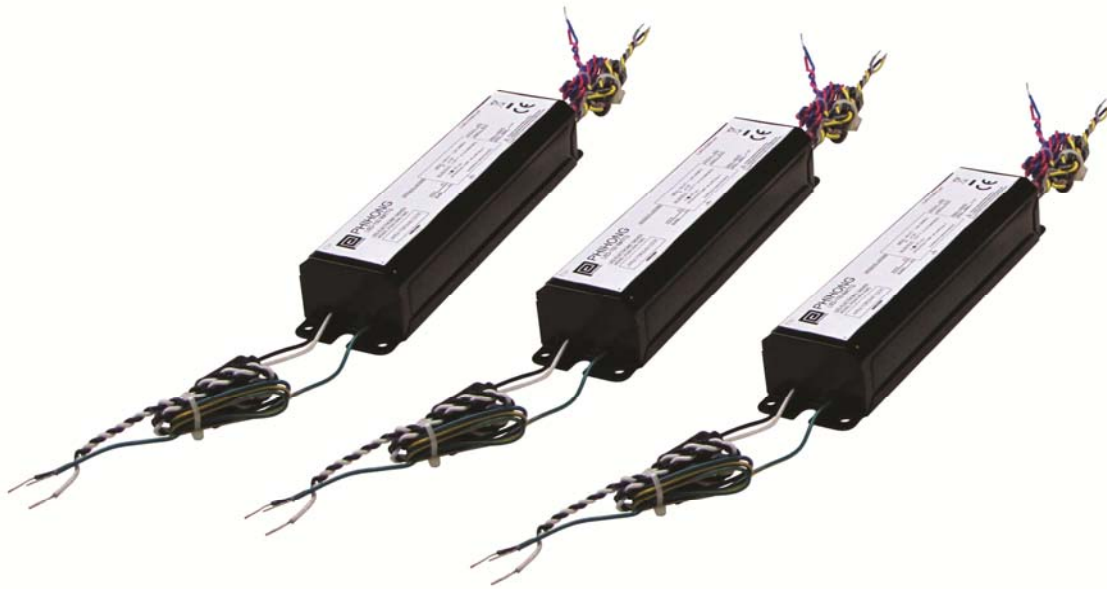




**PHIHONG'S 150W CONSTANT CURRENT DRIVERS WITH  
94% EFFICIENCY  
PROVIDE TRULY ADVANCED PERFORMANCE**



Output Voltage	Output Current	Output Power
0V~425V	0.35A	150W
0V~280V	0.53A	150W
0V~210V	0.7A	150W
0V~140V	1.05A	150W
0V~100V	1.5A	150W
0V~89V	1.68A	150W



PDA150W Series	
Brand Name	Phihong LED Driver
Description	150W, 0-10V Isolated Dimming with 20V Auxiliary Output for Peripherals
Input Voltage	120 ~ 277VAC
Input Frequency	50/60Hz
Safety	CE, UL, RoHS
IP Rating	IP66

**Electrical Specifications:**

Output Power (W)	Output Voltage (V)	Output Current (A)	Tcase Max (C)	Input Current (A)	Input Power (W)	Inrush Current	Max THD (%)	Min Power Factor	Surge Protection (KV)	Part Number
150	0V~425V	0.35	80	1.4A@120VAC 0.6A@277VAC	164	≤ 30A	12	0.9	4.0	PDA150W-S350G-R
150	0V~280V	0.53								PDA150W-S530G-R
150	0V~210V	0.7								PDA150W-S700G-R
150	0V~140V	1.05								PDA150W-S1A0G-R
150	0V~100V	1.5								PDA150W-S1A5G-R
150	0V~89V	1.68								PDA150W-S1A7G-R

**Wiring Diagram**



Input, Output, 0-10V Dimming and Auxiliary use lead-wires. Lead-wires are 18AWG 105C/600V solid Copper.

**Standard Lead Length**

Color	In.	Cm.
Black	10	25
White	10	25
Blue	10	25
Red	10	25
Gray	10	25
Violet	10	25
Yellow	10	25

**Maximum Wiring Distance (at Full Load)**

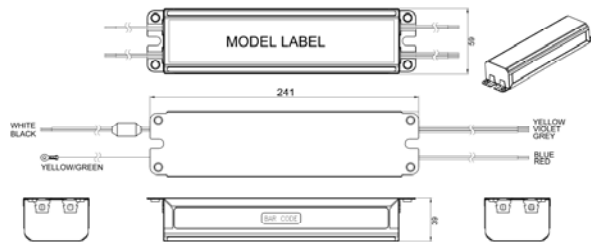
Wire Size (AWG)	Distance (Feet)
26	8
24	13
22	21
20	34
18	54
16	85
14	137
12	210
10	357

Dimming Method	Dimming Range	Min. Output Power (W)
0-10V	2%~100%	1.0



Length:	241mm (9.49in)
Width:	59mm (2.32in)
Height:	39mm (1.54in)
Weight	1043g (2.3lbs)

**Dimension Diagram**



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<b>IP Rating</b>	<b>IP66</b>

## **Installation & Application Notes:**

### Section I – Physical Characteristics

- 1.1 LED Driver shall be installed inside an electrical enclosure.
- 1.2 Wiring inside electrical enclosure shall comply with 600V/105°C rating or higher.

### Section II – Performance

- 2.1 LED Driver complies with UL standard UL8750
- 2.2 LED Driver has Class A sound rating.
- 2.3 LED Driver has a minimum ambient operating temperature of -40°C.
- 2.4 LED Driver has a life expectancy of 50,000 hours at Tcase of ≤80°C.
- 2.5 LED Driver has a life expectancy of 100,000 hours at Tcase of ≤65°C.
- 2.6 LED Driver has a typical self rise of 25°C at maximum load in open air without heat sink.
- 2.7 LED Driver maximum allowable case temperature is 80°C – see product label for measurement location.
- 2.8 LED Driver reduces output power to LEDs if max allowable case temperature is exceeded.
- 2.9 LED Driver has a failure rate of ≤0.01% per 1,000 hours at Tcase ≤70°C.
- 2.10 LED Driver tolerates sustained open circuit and short circuit output conditions without damage.
- 2.11 LED Driver complies with the requirements of the Federal Communications Commission (FCC) rules and regulations, Title 47 CFR Part 15 Non-Consumer (Class B).

### Section III – UL Conditions of Acceptability (File E321253)

When installed in the end-use equipment, the following are among the considerations to be made:

- 3.1 The equipment shall be installed in compliance with the enclosure, mounting, spacing, casualty and segregation requirements of the ultimate application.
- 3.2 Consideration should be given to measuring the temperatures on electronic components of power circuits and transformer windings when the unit is installed in the end-use equipment based upon mounting orientation, operating ambient and ventilation.
- 3.3 These drivers should be used within the recognized ratings.
- 3.4 The driver is suitable for use in “DAMP” and “DRY” locations.
- 3.5 The maximum available output parameters from the (0-10V) dimming circuit provided on LED driver model PDA150W Series were tested in accordance with supplement (SB) of UL935 and was found permissible for connection via Class 2 wiring.
- 3.6 When the drivers are installed in the end-use application, the case temperature should not exceed the temperature limit specified.
- 3.7 The maximum measured leakage current was 0.2mA while connected to a 277V source of supply.

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**Electrical Specifications**

**Input:**

**AC Input Voltage Range**  
90VAC to 305VAC

**AC Input Frequency**  
47~63Hz

**Maximum Input Current**  
≤ 2A

**Leakage Current**  
0.5mA maximum at 277VAC Input

**Inrush Current**  
≤ 30A

**OUTPUT:**  
**Power Factor**  
≥ 0.9

**Ripple and Noise**  
≤5% of the Output Current

**Efficiency (Typical)**  
94% at 230~ 277VAC  
92% at 120VAC

**Turn-on Delay Time**  
<1s maximum at nominal AC Power ON

**Environmental:**  
**Temperature**

Operation	-40 to +85°C (*)
Non-operation	-40 to +85°C
Operating Humidity	10 to 95%
(*) Case Temperature	<80°C

**Dimming Function**  
**Dimming Control**  
0-10VDC

**Dimming Grounding**  
Dim(-) and Vout(-) must never be connected together to ensure proper operation and isolation requirements

**Aux Grounding**  
Aux return and Dim return are common

**EMC**

EN55015/CISPR 15/FCC 47 Part 15/18 Class A

**Immunity**

IEC61000-4-2  
IEC61000-4-3  
IEC61000-4-4  
IEC61000-4-5  
IEC61000-4-6  
IEC61000-4-8  
IEC61000-4-11  
IEC61000-3-2      Class C

**Output Over Current Protection**

The power supply will withstand continuous output overload

**Short-Circuit Protection**

The PSU will withstand a short circuit across the outputs without damage

**Over Voltage Protection**

Output is protected from no load and over voltage conditions

**Dielectric Withstand (Hi-pot) Test**

Primary to secondary: 4242VDC for 1 minute, 5.5mA

**Insulation Resistance**

Primary to secondary: >5M Ohm 500VDC, 1 Minute

**Lifespan**

50K Hours at full output power, 50°C ambient, Tcase <80°C

**Wire Connections**

Position	Terminal Color	Specification
Line	Black	AWG18 Solid Wire
Neutral	White	AWG18 Solid Wire
Ground	Green/Yellow	AWG18 Solid Wire
Vout+	Red	AWG18 Solid Wire
Vout-	Blue	AWG18 Solid Wire
Dim+	Violet	AWG18 Solid Wire
Dim-	Grey	AWG18 Solid Wire
Aux	Yellow	AWG18 Solid Wire

**Warranty**

5 Years

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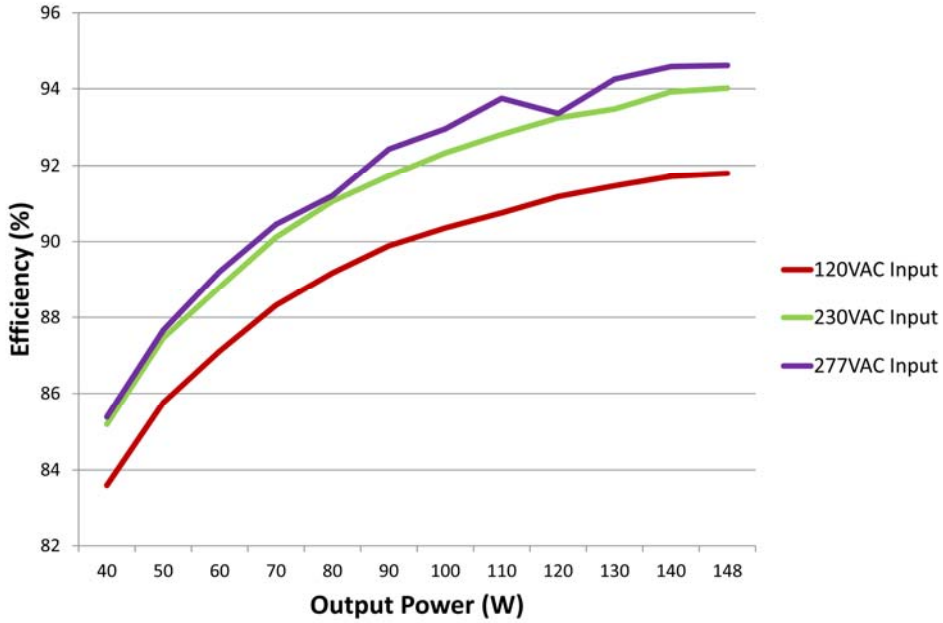
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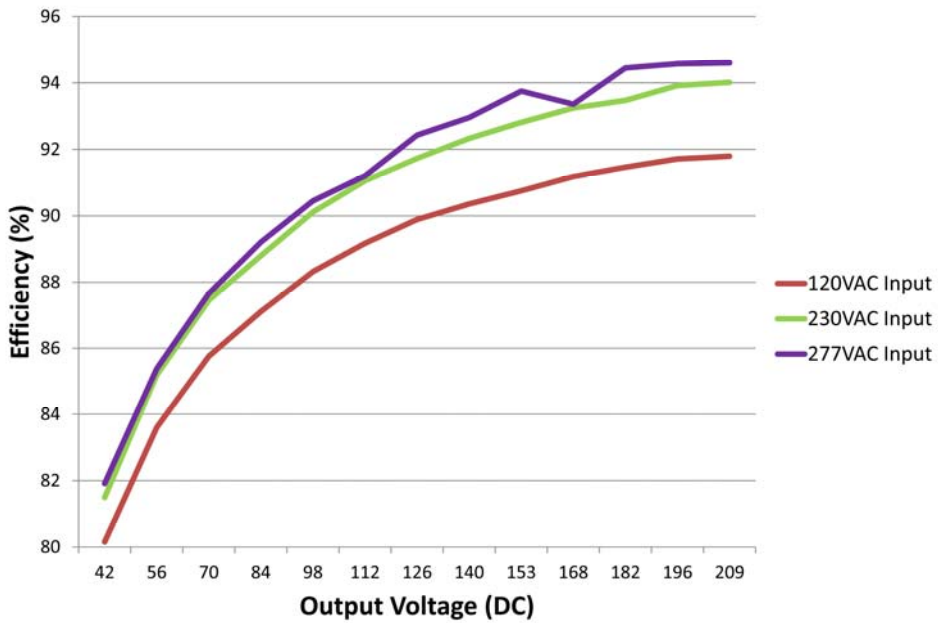


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**Efficiency vs Output Power**



**Efficiency vs Output Voltage**



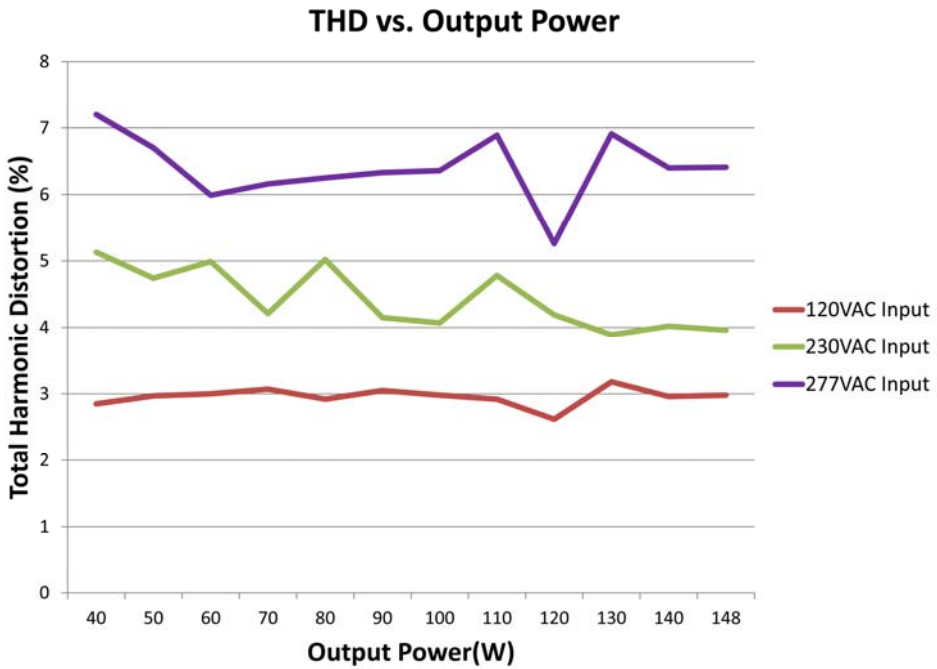
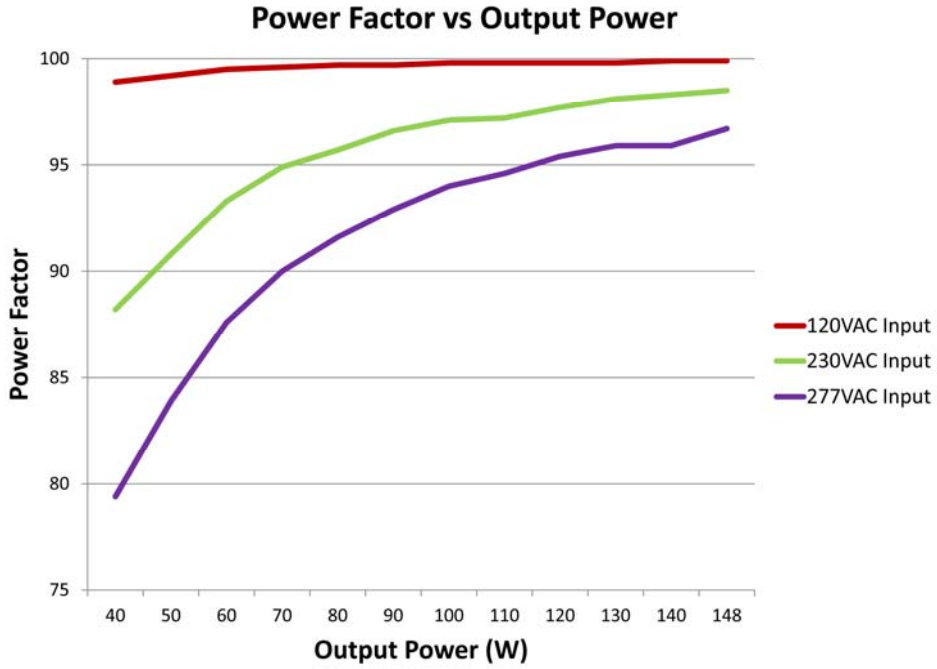
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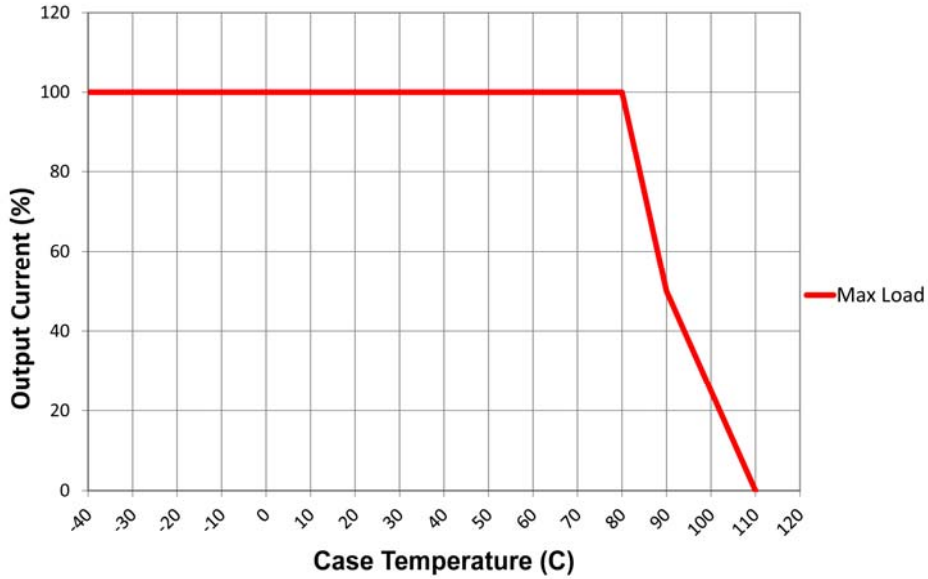
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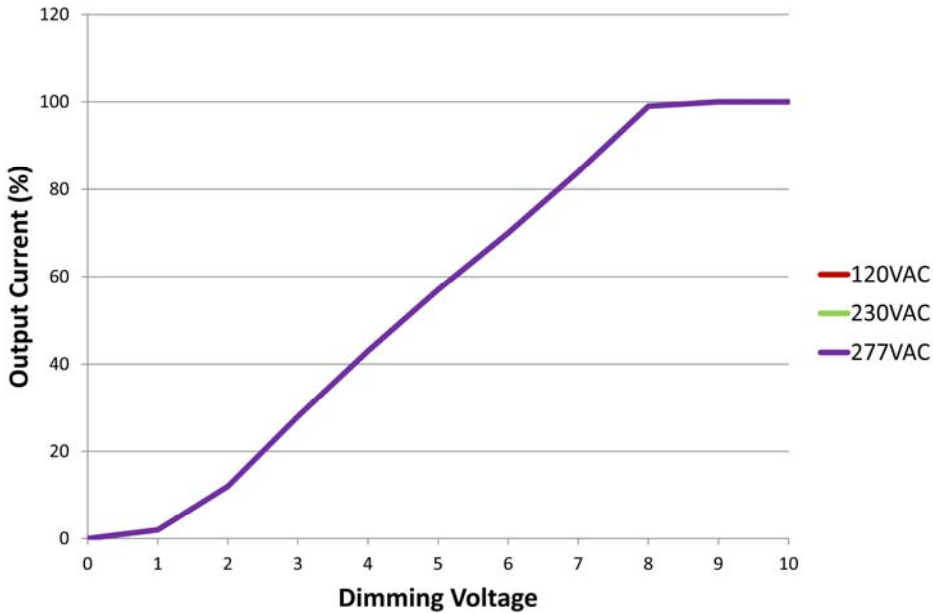


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**Output Current vs. Case Temperature**



**Output Current vs Dim. Voltage**



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