



PIL150BU-C-DT Series PIL150BU-C-ST Series 150W LED Driver



- Dimming Control
- High Efficiency (Up to 93%)
- Active Power Factor Correction
- Constant Current
- Up to 305VAC Operation
- Waterproof to IP67
- Lightning Protection
- Comprehensive Protection Circuitry
- UL8750, UL1012, CSA22.2 No 107.1 & EN61347 Approvals
- SELV

Electrical Specifications

Input

Input Voltage	90-305VAC
Input Frequency	47-63 Hz
Input Current	1.8A @ 100VAC 0.9A @ 220VAC
Inrush Current	75A @ 220VAC/25°C/Cold Start
Power Factor	See table
Leakage Current	1mA @ 277VAC/60Hz
THD	20% maximum

General

Efficiency	See tables
MTBF (MIL-HDBK-217F)	284kHrs @120VAC, 80% load, 25°C
Dimensions	7.83"L x 2.66"W x 1.56"H
Net Weight	2.20 lbs.

Output

Output Voltage	See table
Start Up Delay	2 seconds maximum at 110VAC/220VAC
Line Regulation	±1%
Load Regulation	±3%
Ripple & Noise	10%Io typical pk-pk,
Short Circuit Protection	No damage to unit; auto recovery when fault removed
Overtemperature Protection	Decrease output current mode. When the case temperature reaches 120+/- 10°C, the output current decreases to 50%Io until the case temperature reaches 75°C

Note: All specifications typical at 25°C unless noted.

Environmental

Operating Temp. Ambient	-40°C to +70°C,
Operating Humidity	10% to 100% RH, non-condensing
Storage Temperature	-40°C to +90°C
Operating Temperature Case	-40°C to +90°C

Safety & EMC

Safety Approvals	UL8750 Approved
USA	UL1012
Canada	CSA-C22.2 No. 107.1,
Europe	EN61347-1, EN61347-2-13
EMI	EN55015 (Radiated & Conducted), FCC Part 15 Class B
Harmonic Currents	EN61000-3-2
Voltage Flicker	EN61000-3-3
ESD Immunity	EN61000-4-2; 8kV air; 4kV contact
Radiated Immunity	EN61000-4-3
EFT/Burst	EN61000-4-4
Surge Immunity	EN61000-4-5; (4kV line-line; 6kV line-gnd)
Conducted Immunity	EN61000-4-6
Magnetic Field	EN61000-4-8
Dips / Interruptions	EN61000-4-11
EMI Immunity Lighting	EN61547

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Specifications subject to change.
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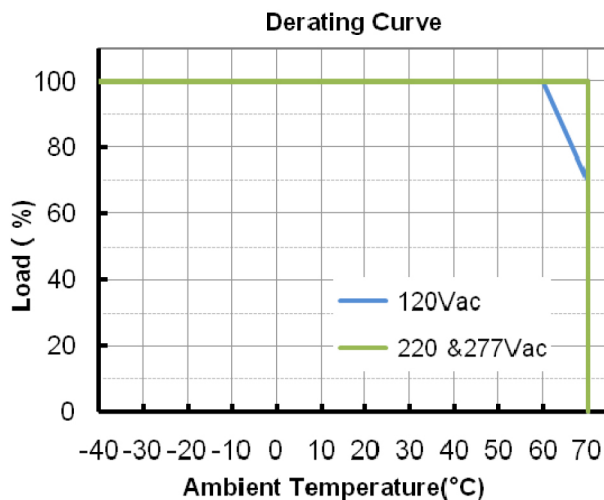
Models and Ratings Chart

Nominal Output Current	Output Voltage Range	Max Output Power	Typical Efficiency	Power Factor		Model Number (Note 2)
				110VAC	220VAC	
530mA	142VDC-283VDC	150W	93.0%	0.99	0.95	PIL150BU-C530-DT
700mA	107VDC-214VDC	150W	92.5%	0.99	0.95	PIL150BU-C700-DT
1050mA	71VDC-142VDC	150W	92.0%	0.99	0.95	PIL150BU-C1050-DT
1400mA	53VDC-107VDC	150W	91.0%	0.99	0.95	PIL150BU-C1400-DT
2100mA	36VDC-71.5VDC	150W	91.0%	0.99	0.95	PIL150BU-C2100-DT
2450mA	31VDC-61.2VDC	150W	91.0%	0.99	0.95	PIL150BU-C2400-DT
2800mA	27VDC-53.5VDC	150W	91.0%	0.99	0.95	PIL150BU-C2800-DT
3150mA	24VDC-47VDC	150W	91.0%	0.99	0.95	PIL150BU-C3150-DT

Note 1: Measured at 220VAC input and full load.

Note 2: Additional suffix may be included to denote variations or modifications to the base product.

Derating Curve



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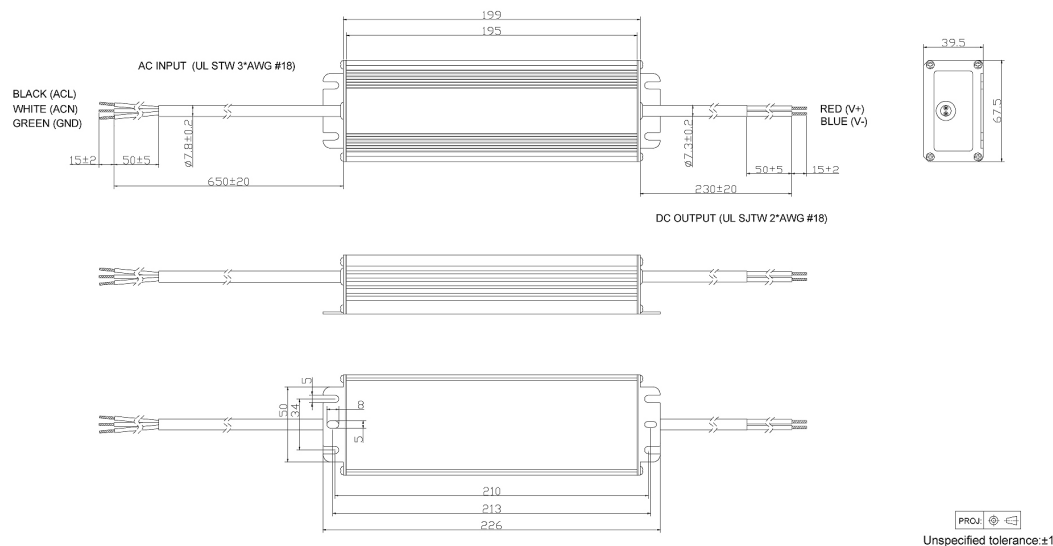
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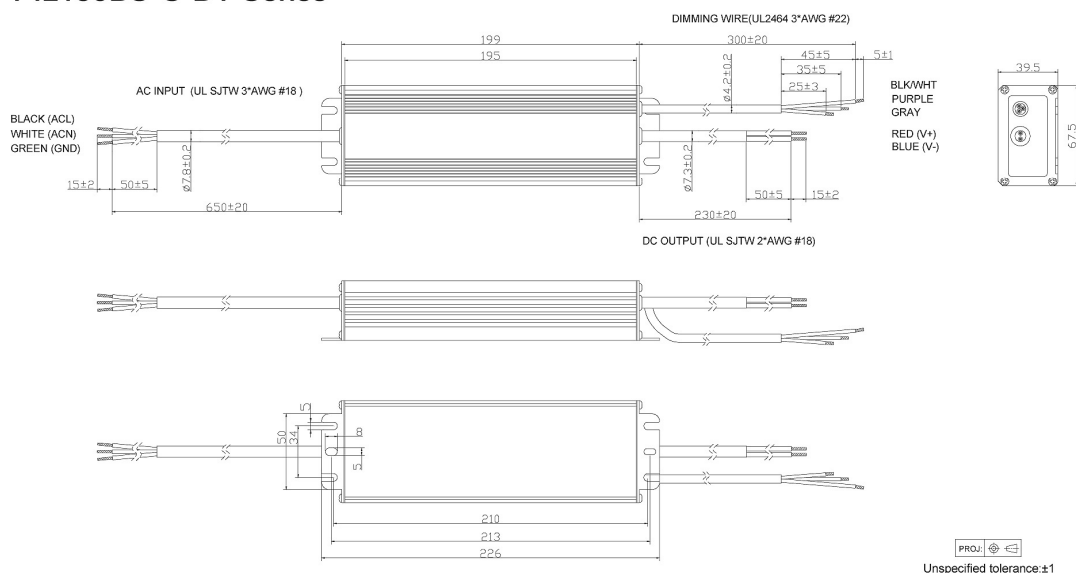


Mechanical Outline Drawing

PIL150BU-C-ST Series



PIL150BU-C-DT Series



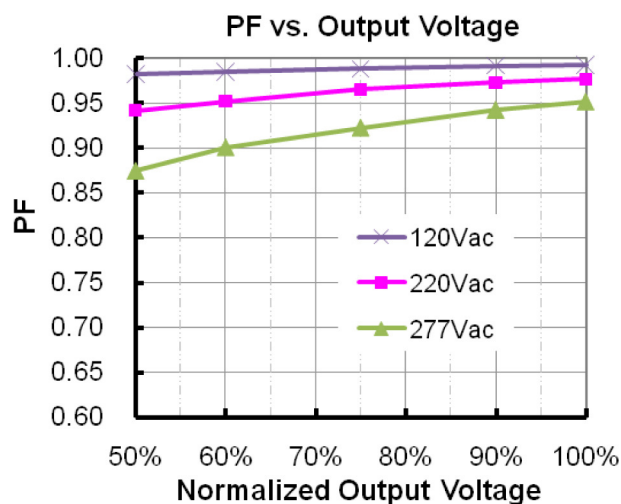
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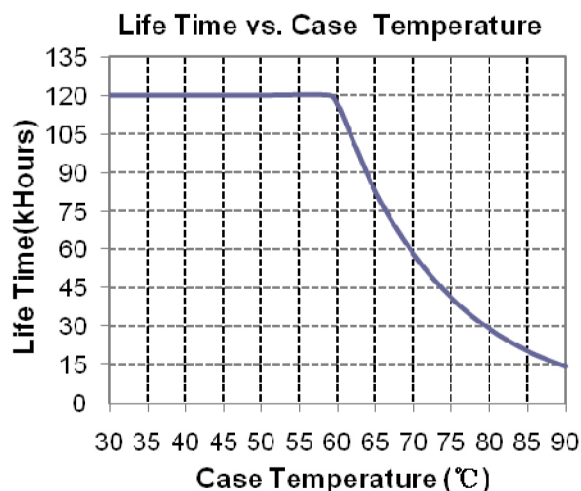
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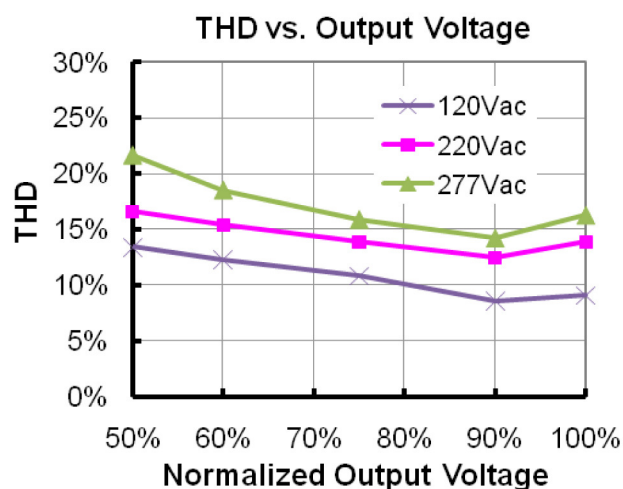
Power Factor Characteristics



Life Time vs. Case Temperature Curve



Total Harmonic Distortion



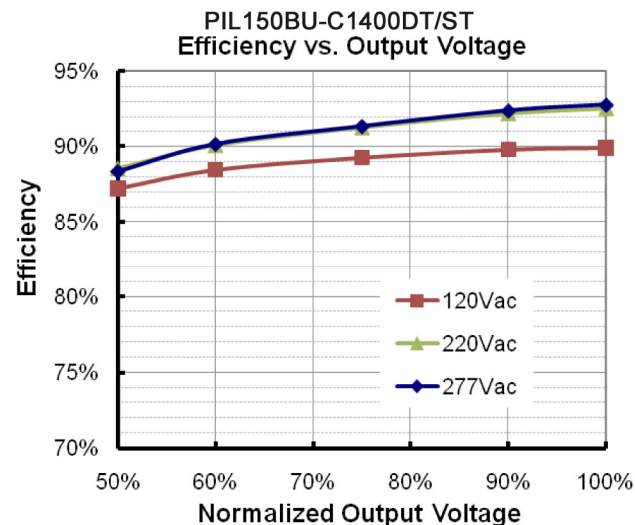
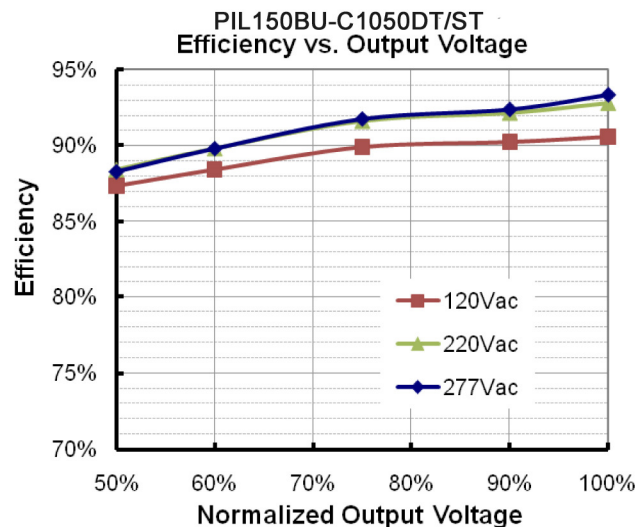
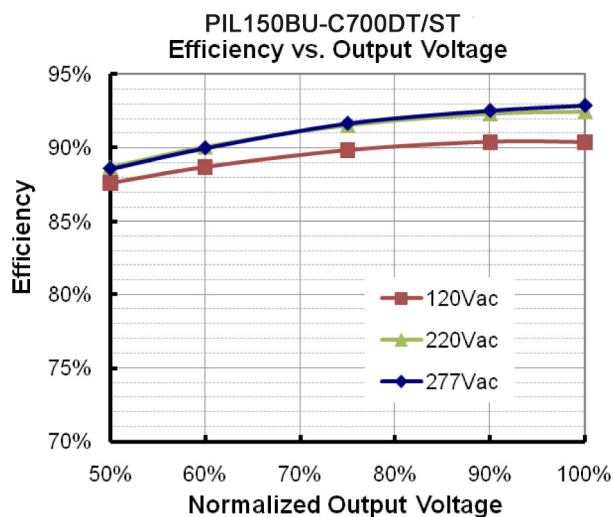
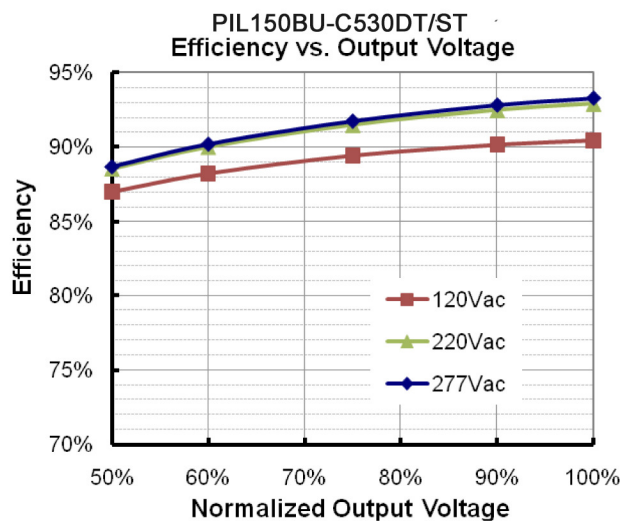
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Efficiency vs. Load



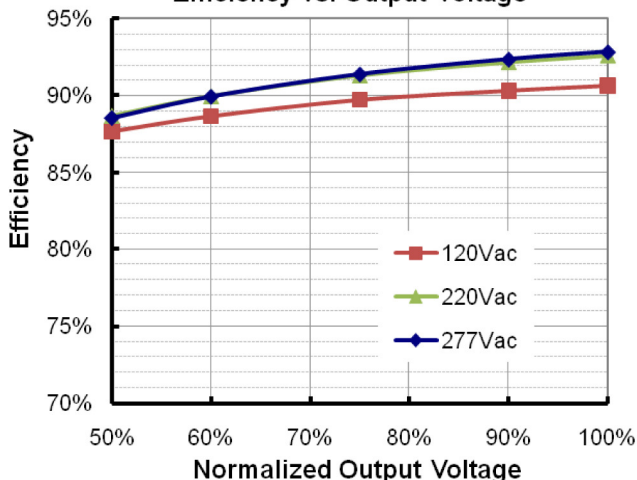
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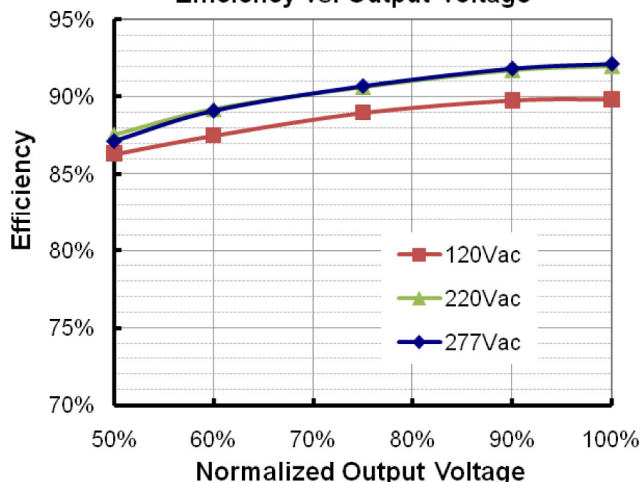
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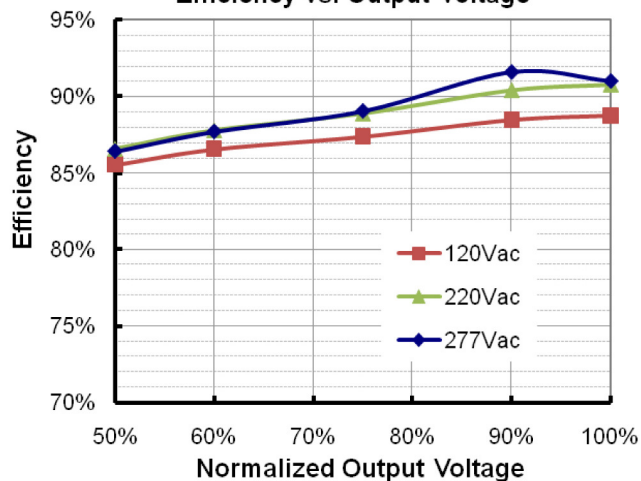
PIL150BU-C2100-DT/ST
Efficiency vs. Output Voltage



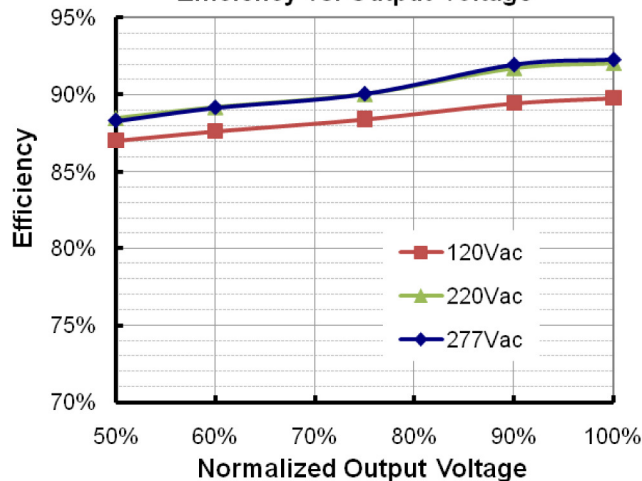
PIL150BU-C2450-DT/ST
Efficiency vs. Output Voltage



PIL150BU-C2800-DT/ST
Efficiency vs. Output Voltage



PIL150BU-C3150-DT/ST
Efficiency vs. Output Voltage



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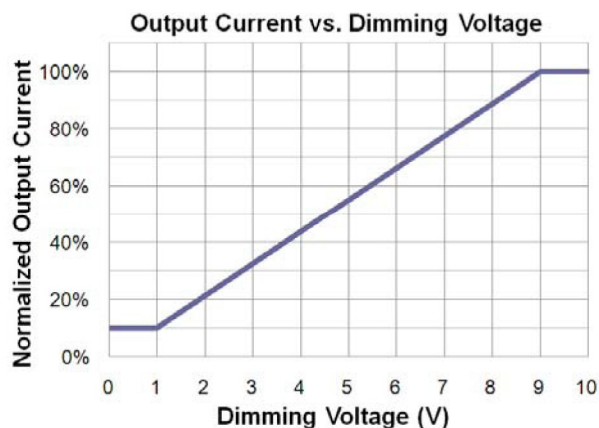
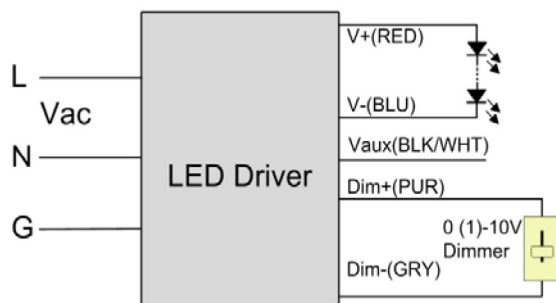
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Dimming Control

Parameter	Min.	Typ.	Max.	Notes
12V output voltage (Vaux)	10 V	12 V	13 V	
Vaux source current	-	-	20 mA	
Absolute maximum voltage Range on the 0~10V input pin	-20 V	-	20 V	
Source current on 0~10V input pin	100 uA	140 uA	180 uA	

The dimmer control is operated from an input signal of 0 – 10 Vdc. Recommended implementations are provided below.

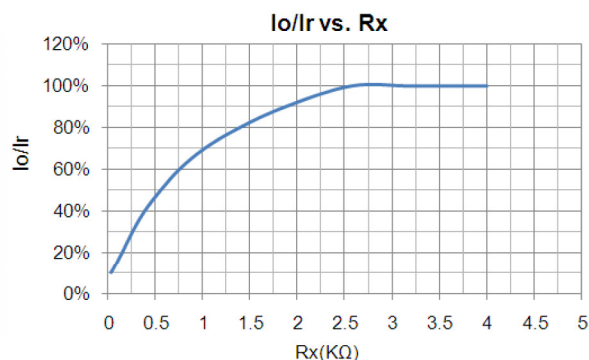
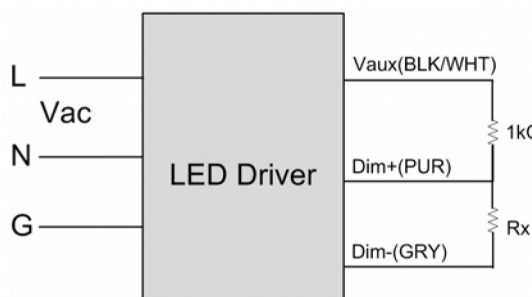


Implementation 1: DC Input

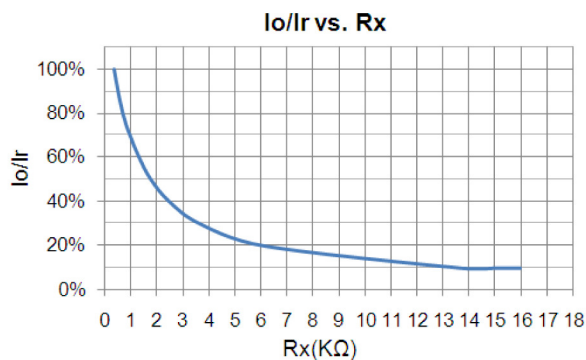
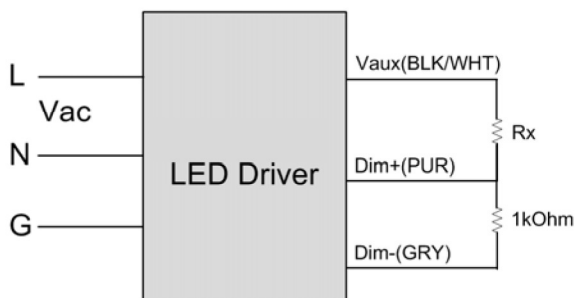
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Implementation 2: External Resistor



Implementation 3: External Resistor

Notes:

1. The dimmer can also be replaced by an active 0-10V voltage source signal or passive components like resistors and zener.
2. The dimming signal is allowed to be less than 1V, when it is between 0 and 1V, the output level is 10%.
3. Do NOT connect the Gray Wire (dim-) and Blue Wire (V-) together.
4. The dimming section is not isolated from output.
5. If 0-10V dimming is not used, Dim + can be either open or connected to Vaux.

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