

LED Driver

JPVO S24 Series

JPVO S24

Highlights & Features

- 24V DC constant voltage design
- High efficiency and reliability
- Wide operating temperature range
- IP67 waterproof rating for outdoor use
- Enhanced short-circuit protection against fire

Safety Standards



Dimensions (L x W x D):

JPVO-030024FB	200 x 60 x 44.5 mm
JPVO-060024FB	200 x 60 x 44.5 mm
JPVO-100024FB	220 x 60 x 44.5 mm
JPVO-150024FB	240 x 60 x 44.5 mm

General Description

The JPVO S24 series constant voltage output LED driver is efficient and reliable. With an operating ambient temperature range of -40°C to +55°C under free air convection, the driver is designed with an IP67 waterproof rating for outdoor LED signage applications. Patented enhanced short-circuit protection prevents water from penetrating the LED module and starting a fire.

Model Information

Model Number	Input Voltage Range	Rated Output Voltage	Rated Output Current
JPVO-030024FB	100 / 200 / 242Vac for JP	24Vdc	1.25A
JPVO-060024FB			2.50A
JPVO-100024FB			4.17A
JPVO-150024FB			6.25A

Model Numbering

JP	V	O	-	□□□	□□□	F	B
Safety Approval PSE	Constant Voltage	Outdoor		Output Power 030-30W 060-60W 100-100W 150-150W	Output Voltage 024-24Vdc	Function F - Fix Output	Variable B - Standard

LED Driver

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Specifications

Model Number	JPVO-150024FB	JPVO-100024FB	JPVO-060024FB	JPVO-030024FB
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Input Ratings / Characteristics

Normal Input Voltage	100 / 200 / 242Vac				
Input Voltage Range	90-266Vac				
Normal Input Frequency	50-60 Hz				
Input Frequency Range	47-63 Hz				
Normal Input Current	100Vac	1.67A	1.15A	0.70A	0.35A
	200Vac	0.83A	0.57A	0.35A	0.18A
	242Vac	0.69A	0.48A	0.30A	0.15A
Efficiency ¹⁾	100Vac	90.2%	88.3%	85.5%	85.7%
	200Vac	92.3%	91.0%	88.3%	87.7%
	242Vac	92.5%	91.2%	88.6%	87.7%
Max Inrush Current	40A/ 250uS @ 100Vac and 90A/ 250uS @ 242Vac at cold start	35A/ 250uS @ 100Vac and 80A/ 250uS @ 242Vac at cold start	30A/ 250uS @ 100Vac and 60A/ 250uS @ 242Vac at cold start	30A/ 250uS @ 100Vac and 60A/ 250uS @ 242Vac at cold start	30A/ 250uS @ 100Vac and 60A/ 250uS @ 242Vac at cold start
Power Factor at 100% load	> 0.95 @ full load				
Total Harmonic Distortion	Meet JIS C 61000-3-2 Class C @ full load				
Leakage Current	< 0.7mA				

1) 100% Load (typical) and tested after 30 minutes warm up.

Output Ratings / Characteristics

Nominal Output Voltage	24Vdc				
Output Current Range	0.1A - 6.25A	0.1A - 4.17A	0.1A - 2.50A	0.1A - 1.25A	
Max. Output Power	150W	100W	60W	30W	
Max. No Load Output Voltage	25.2Vdc				
Output Voltage Tolerance	± 5%				
Line Regulation	± 1%				
Load Regulation	± 5%				
Output Ripple Voltage	< 400mV				
Rise Time	< 100ms				
Start-up Time	< 500ms				

LED Driver

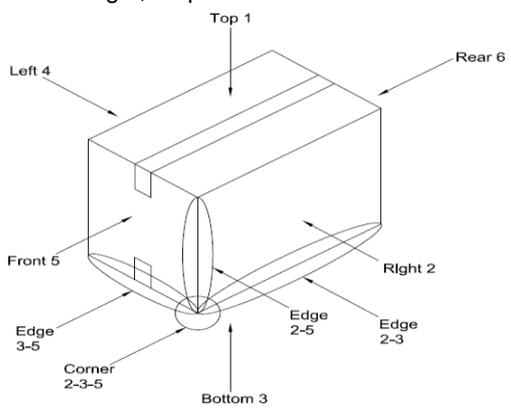
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Mechanical

Casing	Aluminum, Color: Natural			
Dimensions (L x W x H) [mm]	240.0 x 60.0 x 44.5	220.0 x 60.0 x 44.5	200.0 x 60.0 x 44.5	200.0 x 60.0 x 44.5
Unit Weight [kg]	0.825	0.740	0.670	0.670
Cooling System	Convection			
Input Cable	Rubber cable (PNCTF type), Line: Black, Neutral: White, PE: Green/Yellow, cable length 150mm			
Output Cable	Rubber cable (SJOW type), Positive: Red, Negative: Black, cable length 150mm			
Acoustic Noise	Sound Pressure Level (SPL) < 24dBA, 30cm distance			

Environment

Ambient Temperature	Operating	-40°C to +55°C
	Storage	-40°C to +85°C
Maximum Case Temperature	+85°C	
Lifetime Ambient Temperature	+45°C	
Relative Humidity	Operating	10 to 90% RH (Non-Condensing)
	Storage	5 to 95% RH (Non-Condensing)
Drop Test (Non-Operating)	<p>40cm height, drop to concrete floor as below drawing, total 10 times.</p> 	
Vibration (Non-Operating)	5Hz to 10 Hz (1G); 30 min per axis for all X, Y, Z direction	
Packing	10pcs per carton	

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Protections

Over Voltage Protection	Yes, Latch mode	
Overload / Overcurrent Protection	When the LED module is overloaded or overcurrent, the LED driver output will switch from 24V to constant current control mode, and the LED driver will stop working when the output voltage drops by 10 - 20%.	
Short Circuit Protection	Yes, Latch mode	
Over Temperature Protection	Yes, Latch mode	
Ingress Protection classification	IP67	

Reliability Data

Lifetime	50,000 hrs. @ lifetime ambient temperature
MTBF	500,000 hrs. @ 40°C ambient temperature as per Telcordia SR-332

Safety Standards / Directives

Electrical Safety	PSE	PSE Clause 2, Interpretation on Ministerial Ordinance establishing Technical Requirements Appendix 12: J61347-1(2022), J61347-2-13(H29) Appendix 4 of the Enforcement Regulations (AC Electric Appliances)	
Galvanic Isolation	Input to Output	3,000Vac	
	Input to Case	1,500Vac	
	Output to Case	500Vac	

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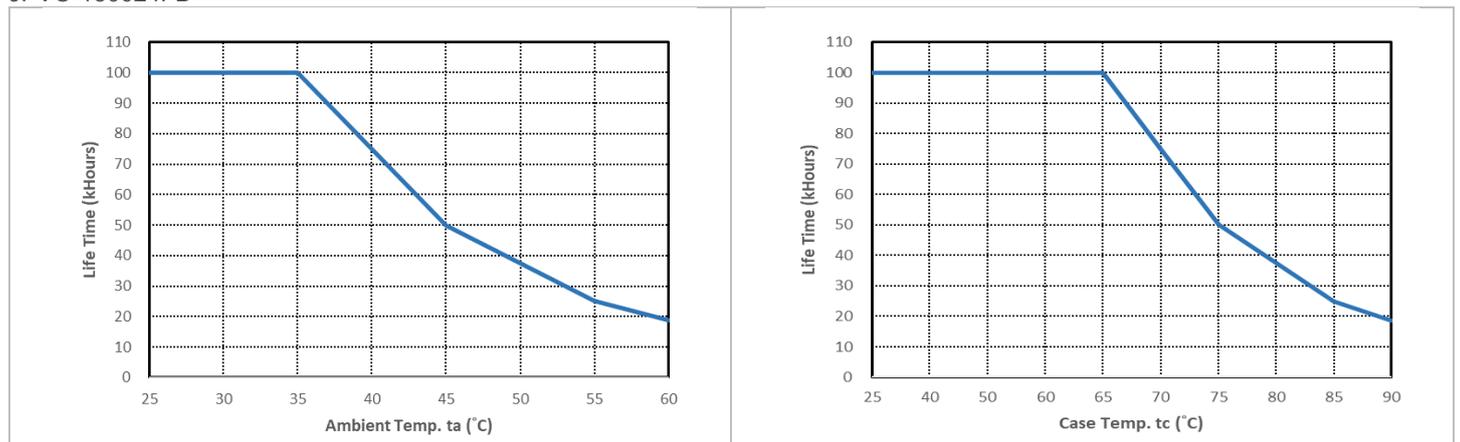
Emissions (CE & RE)	Compliance to J55015(H29)	
Electrostatic Discharge	JIS C 61000-4-2	ESD, Air Discharge: 15kV Contact Discharge: 8kV Criteria A ¹ or B ²
Radiated Field	JIS C 61000-4-3	RS, Criteria A ¹ 80MHz-1GHz, 3V/m with 1kHz Sine Wave / 80% AM Modulation
Electrical Fast Transient / Burst	JIS C 61000-4-4	EFT 2kV Criteria A ¹ or B ²
Surge	JIS C 61000-4-5	Differential Mode: 2kV; Common Mode: 4kV 1.2/50µs, 8/20µs Combination Wave with 2ohms (L-N), 12ohms (L-PE & N-PE) source impedance Criteria B ²
Conducted Disturbance	JIS C 61000-4-6	150kHz-80MHz, 3Vrms, Criteria A ¹)
Power Frequency Magnetic Fields	JIS C 61000-4-8	3A/Meter, Criteria A ¹)
Voltage Dips	JIS C 61000-4-11	100% dip; 0.5 cycle; Self Recoverable 30% dip; 10 cycle; Self Recoverable Criteria A ¹ or B ²
Harmonic Current Emission	JIS C 61000-3-2	Class C @ 100 / 200 / 242Vac, full load condition
Voltage Fluctuation & Flicker	JIS C 61000-3-3	P _{st} ≤ 1.0; d _{max} ≤ 4%; P _{It} ≤ 0.65; d _c ≤ 3.3%; T _{max} ≤ 500ms

1) Criteria A: Normal performance within the specification limits

2) Criteria B: Temporary degradation or loss of function which is self-recoverable

Lifetime VS Ambient Temperature

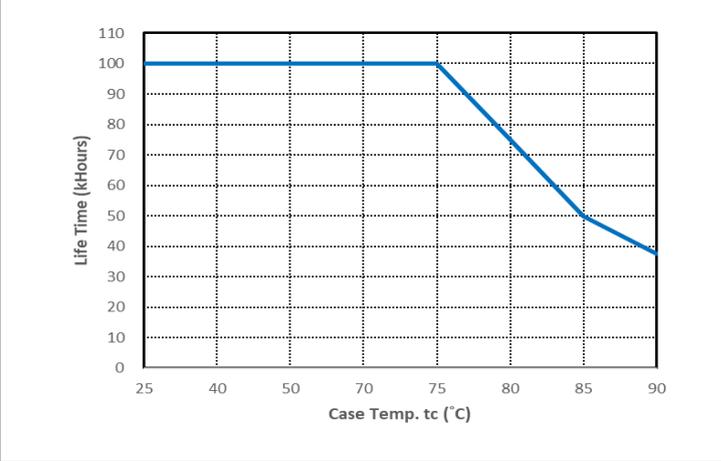
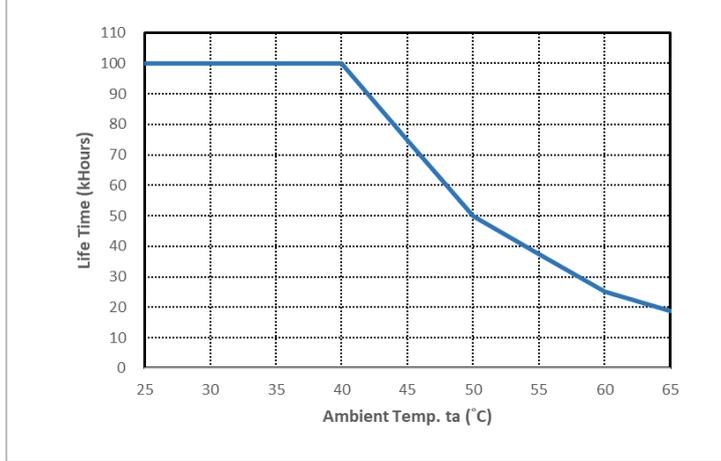
JPVO-150024FB



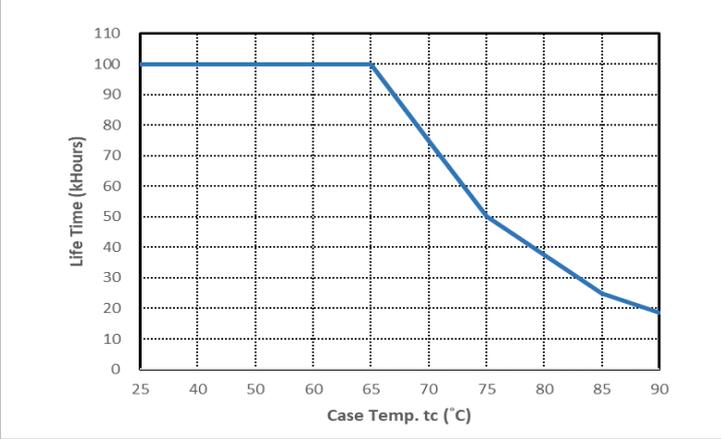
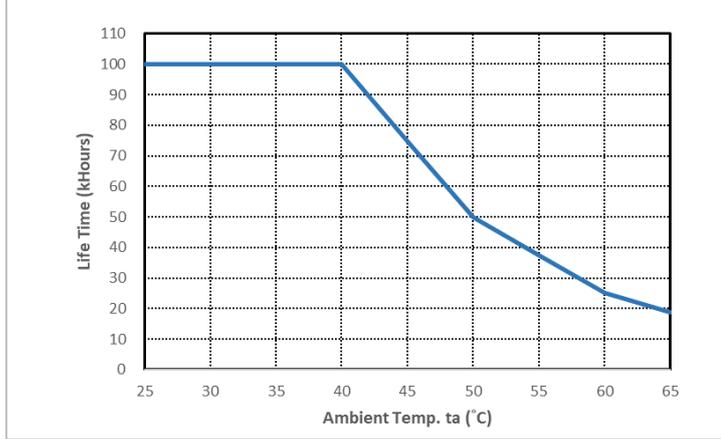
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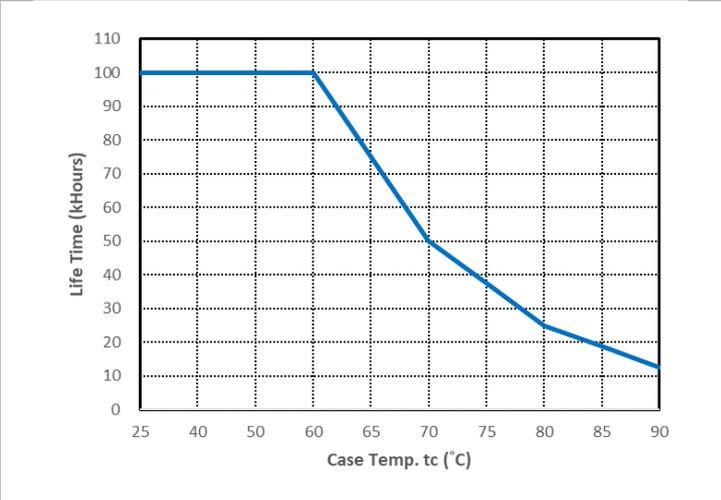
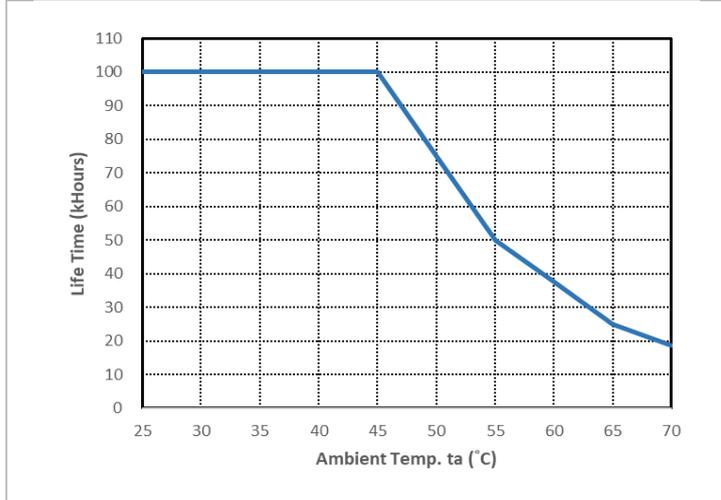
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JPVO-060024FB



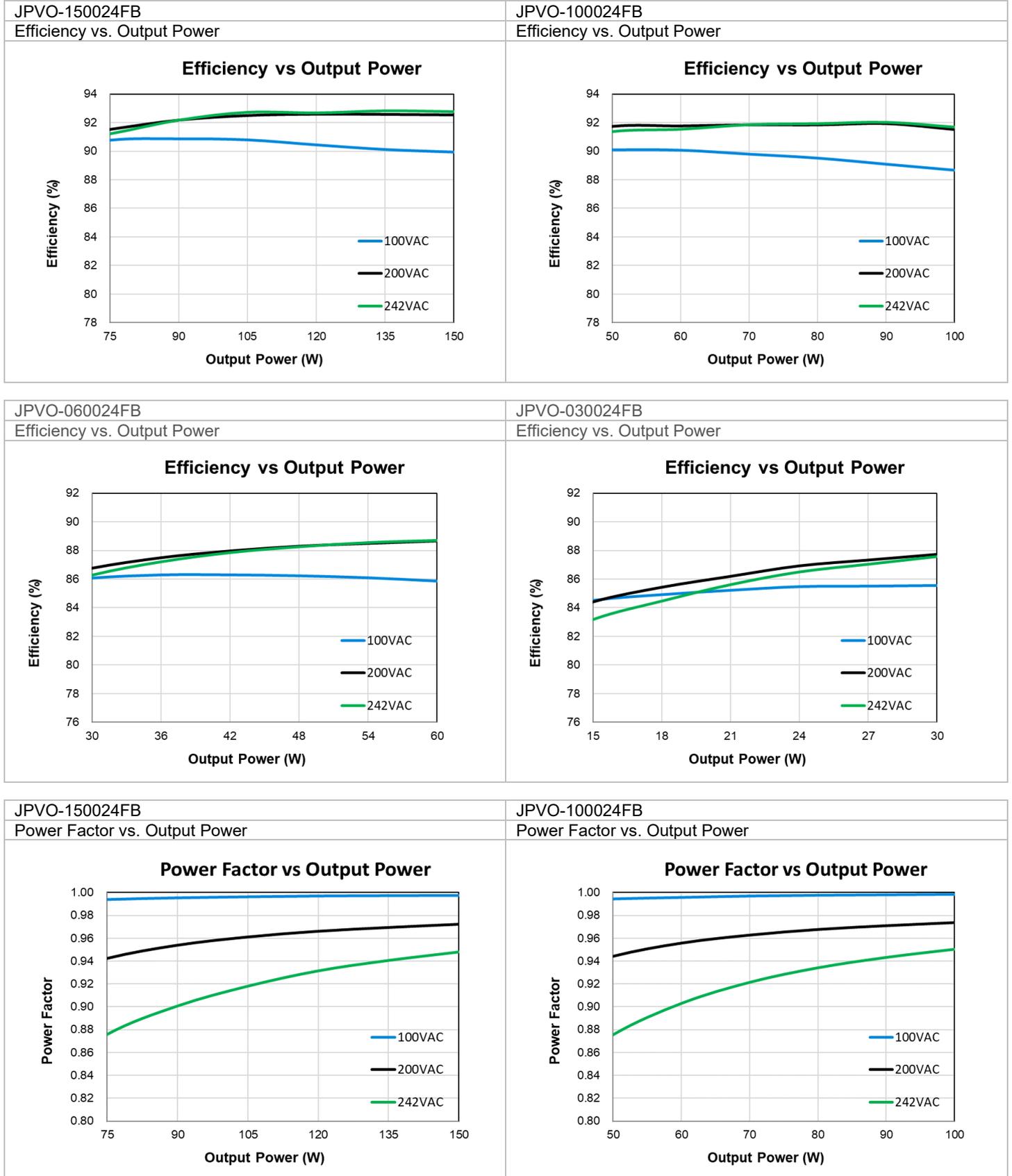
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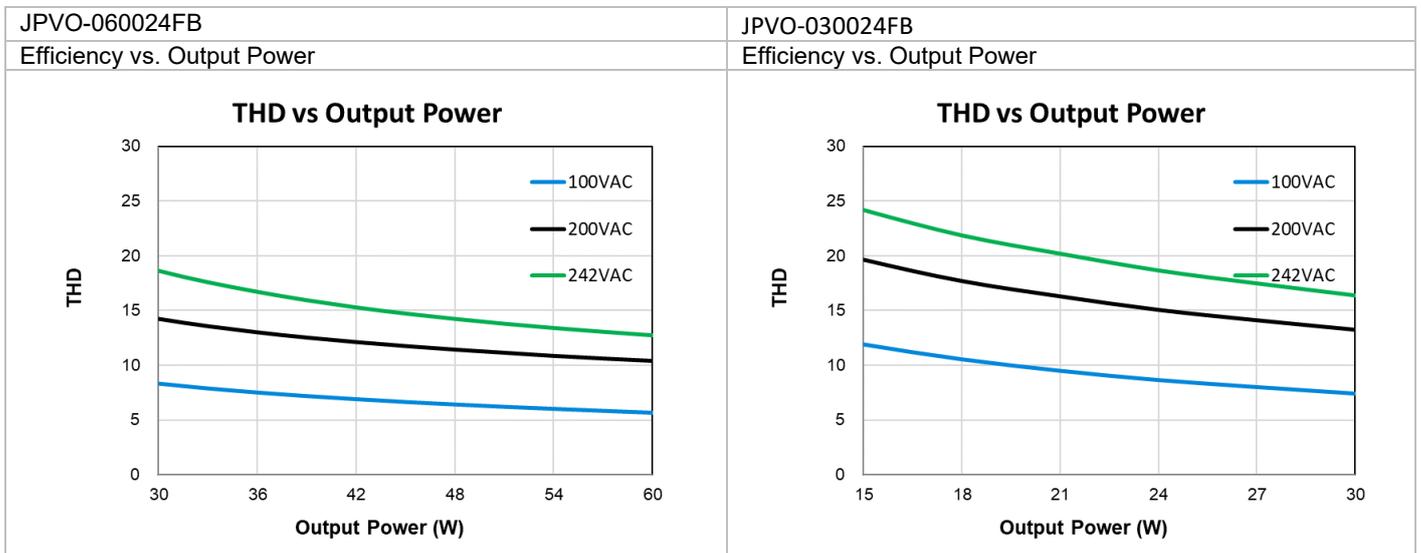
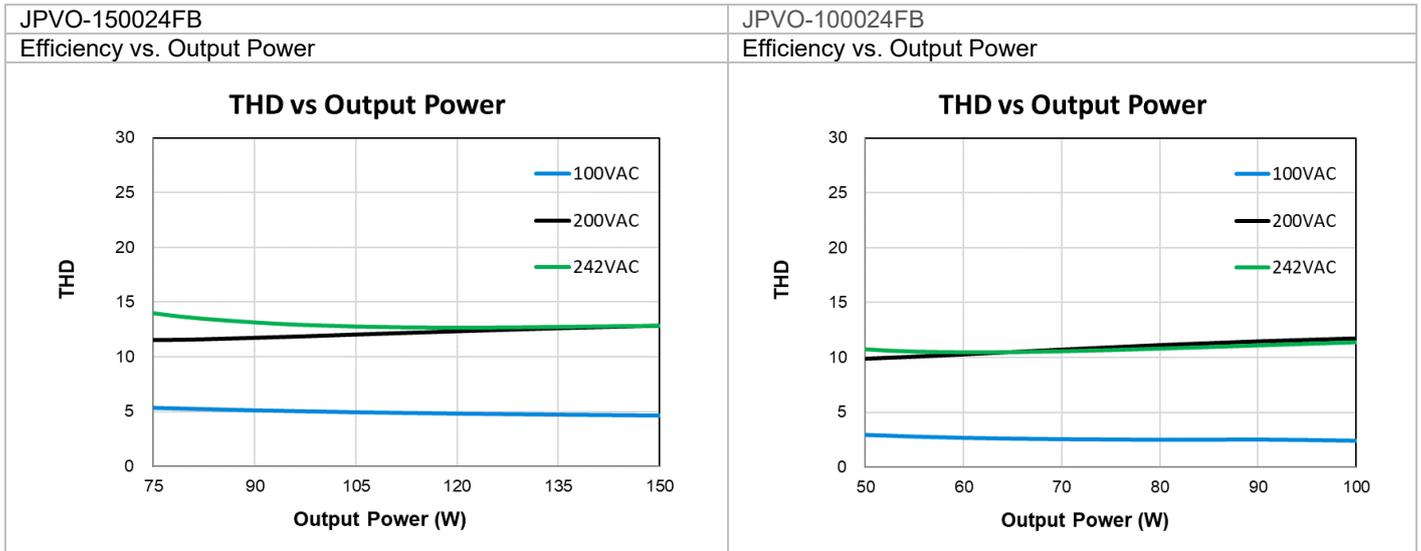
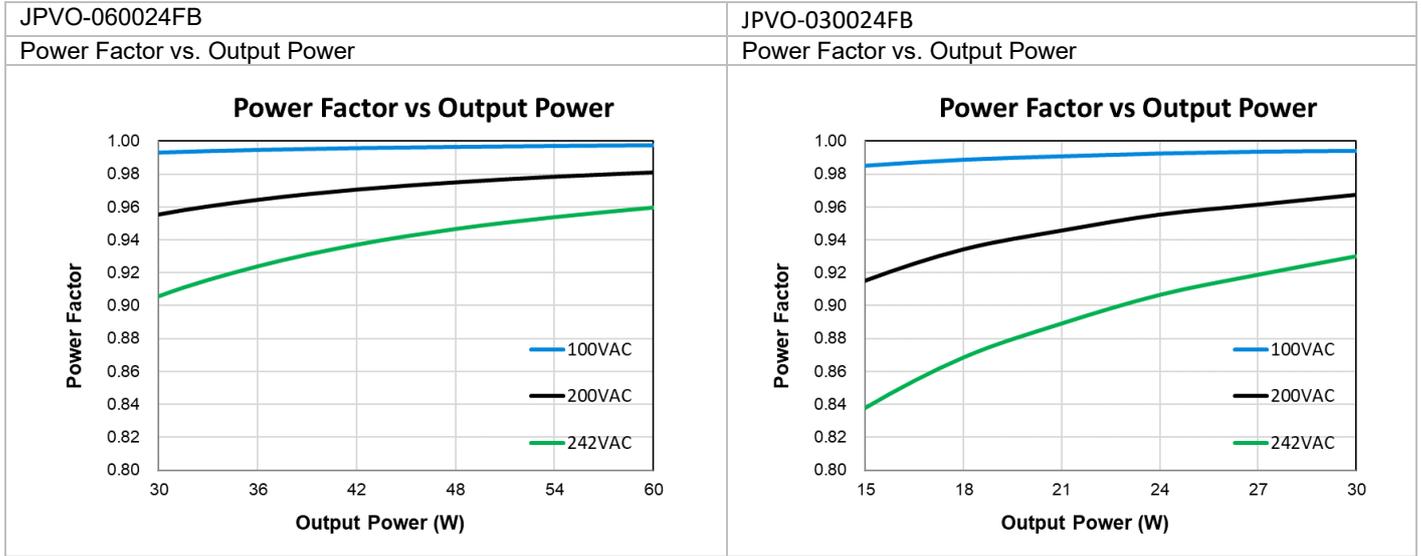
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Performance Curve



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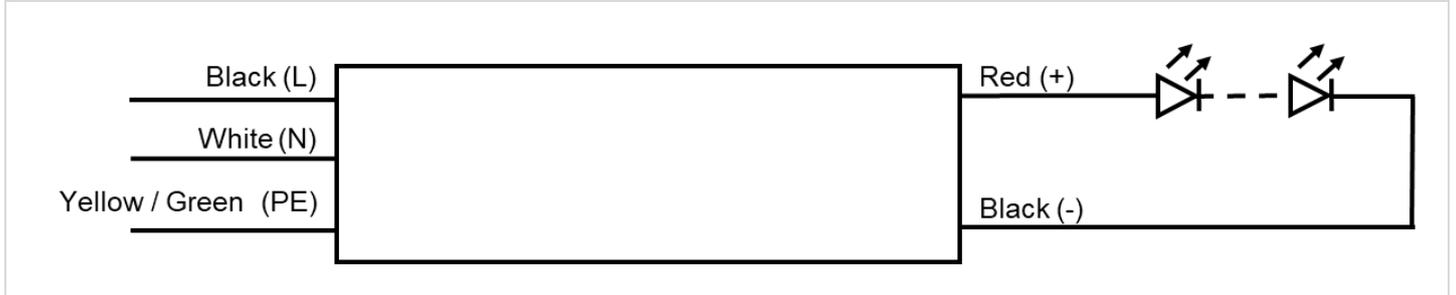
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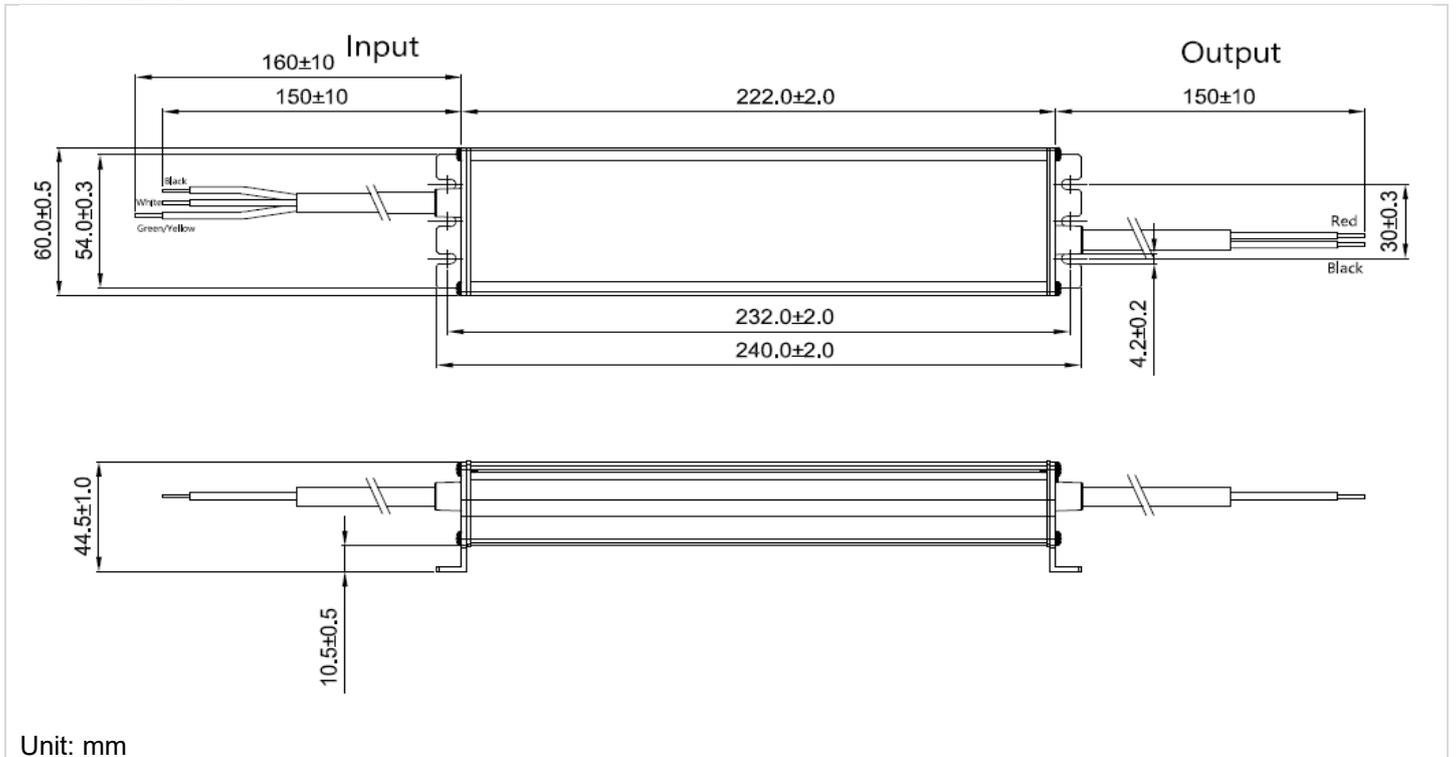
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Wiring Diagram



Dimensions

JPVO-150024FB

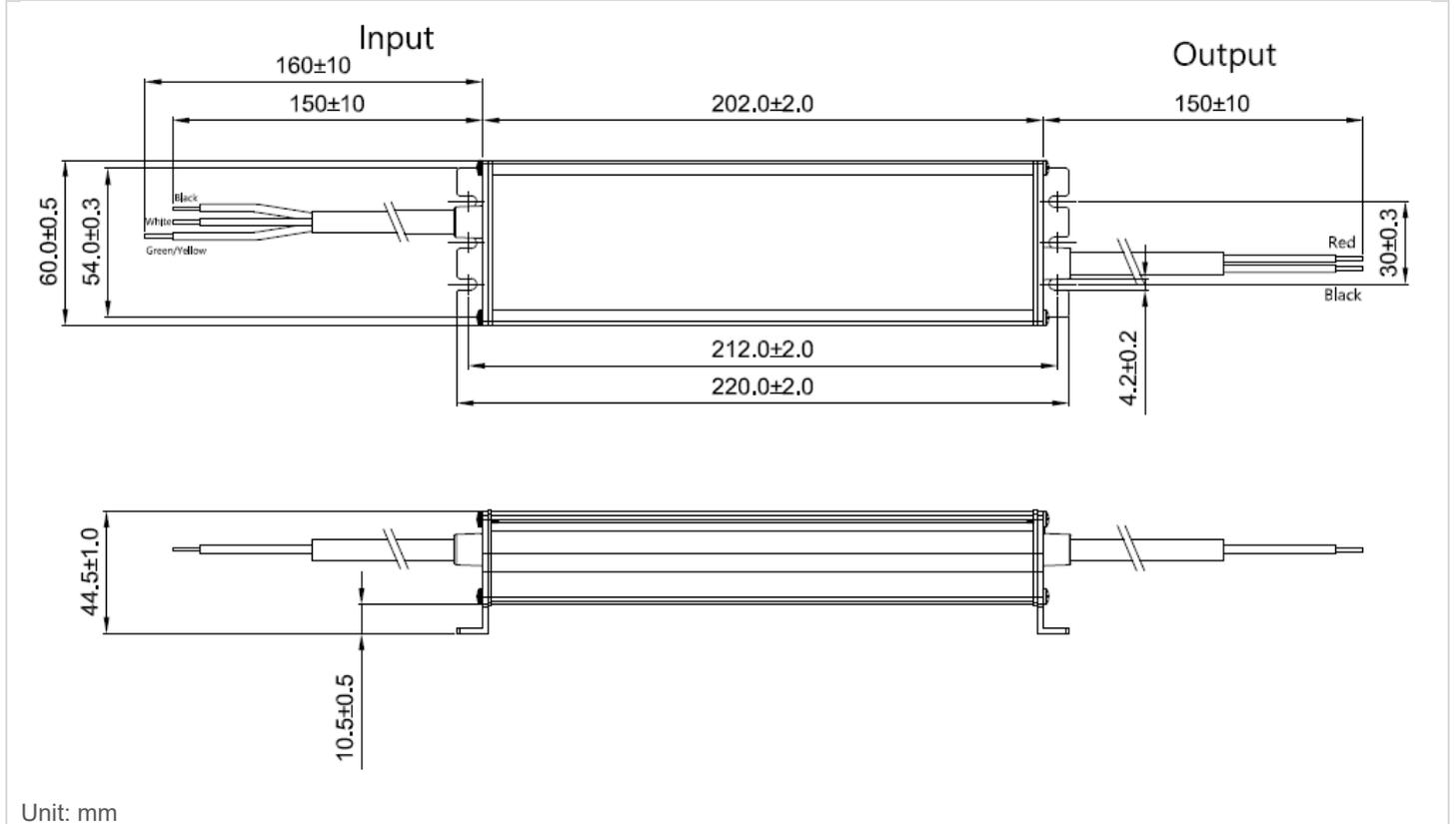


Unit: mm

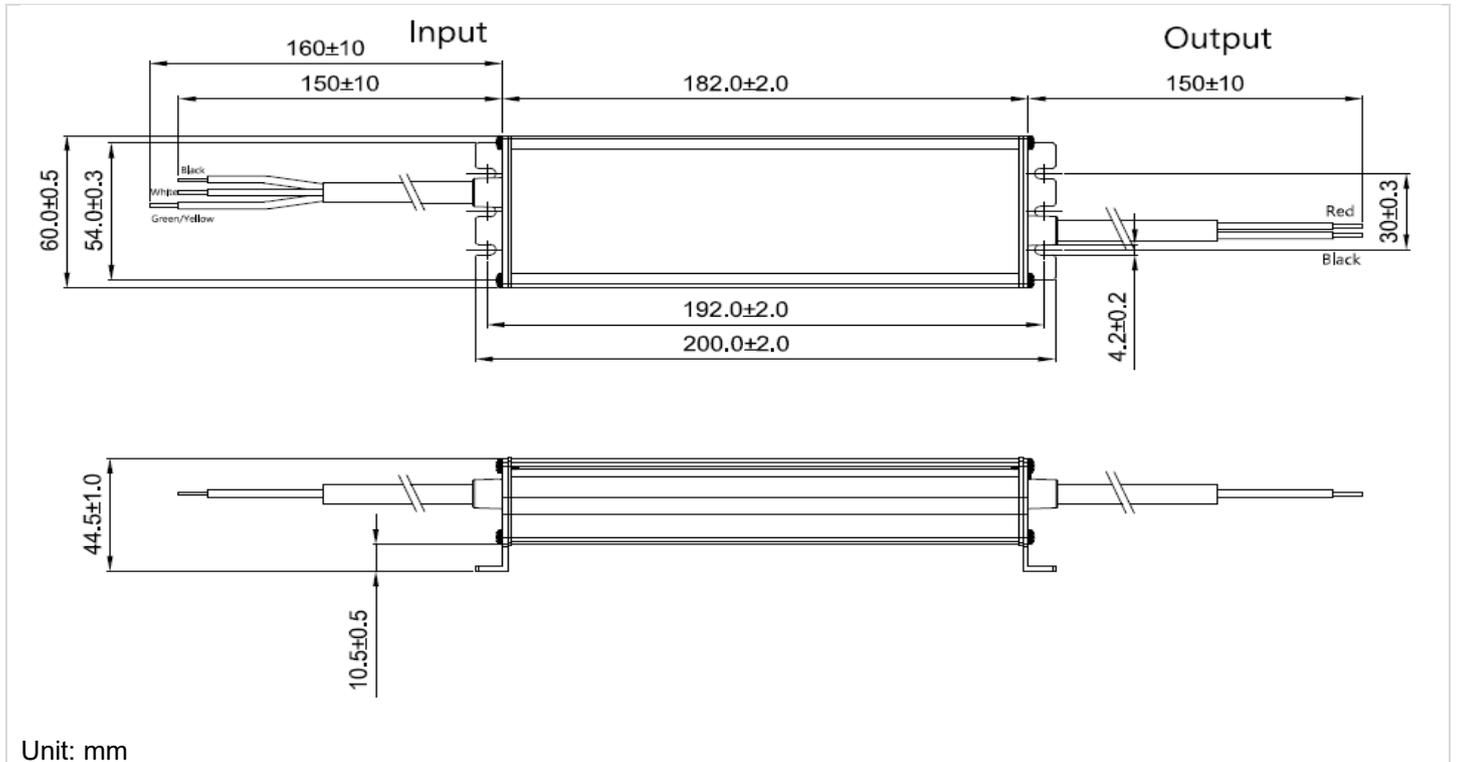
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Others

Warranty Policy

Please reach out our [Warranty Policy](#) should you require any further clarification.

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