

OWP40-1W24V-T

Product Features

- Single-channel 24V constant voltage output, up to 1.66A / 40W
- Wide input voltage range: 120-277Vac
- Extended ambient operating temperature range: -40°C to +60°C
- Built-in over-temperature protection with automatic power derating
- Comprehensive protection: short circuit, overload, overcurrent, and over-temperature
- 50,000-hour lifetime at $t_c = 85^\circ\text{C}$
- 5-year warranty
- Flicker-free output
- Safety according to UL8750 & UL 1310
- Suitable for Dry , Damp & Wet Locations

Application



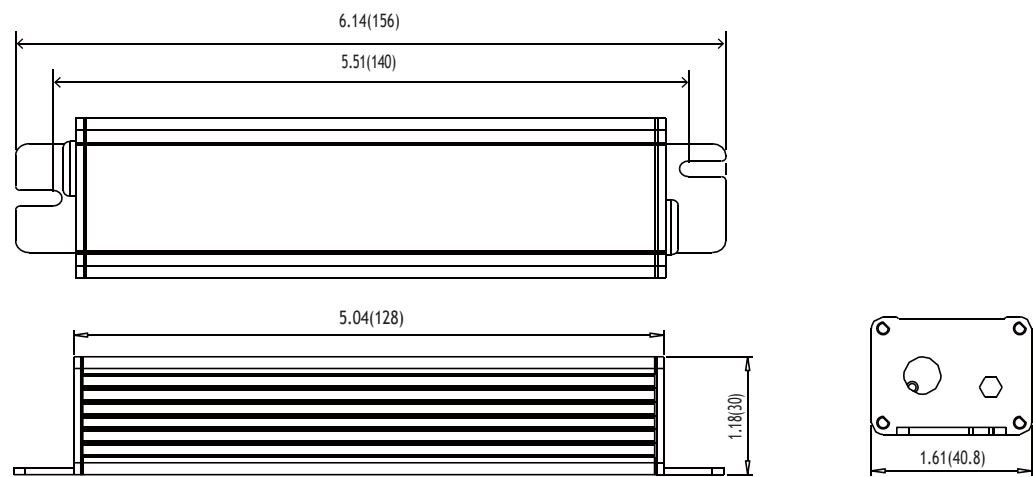
LED Strip Light



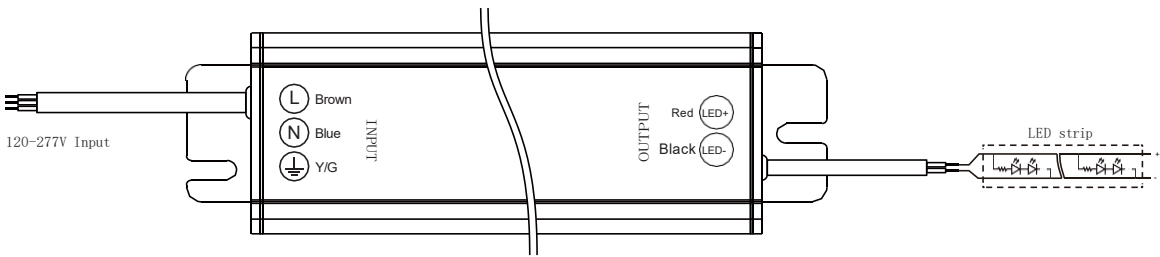
Technical Parameters

Model	OWP40-1W24V-T	
Input	Efficiency	$\geq 85\%$ @120VAC, $\geq 88\%$ @230VAC, $\geq 88\%$ @277VAC, full load
	Voltage	120VAC-277VAC for UL, 220-240V-for CE
	Input voltage range	108VAC-305VAC
	Frequency Range(Hz)	50/60Hz
	AC Current(max)	0.41A@120VAC, 0.21A@230VAC, 0.175A@277VAC, full load
	PF	≥ 0.95 @120VAC, ≥ 0.95 @230VAC, ≥ 0.95 @277VAC, full load
	THD	$< 10\%$ @120VAC, $< 10\%$ @230VAC, $< 10\%$ @277VAC, full load
	Inrush Current(max)	Cold start, 24.6A@120VAC 186us, 30A@230VAC 200us, 30A@277VAC 200us
	No-load power	$< 0.5\text{W}$ (@120VAC-277VAC)
	Turn on Time	$< 0.50\text{s}$ (@120VAC-277VAC)(When the light begins to shine)
Output	Current	1.66A
	Voltage	24VDC
	Voltage Range	24VDC $\pm 3\%$
	Power	40W
	Channel	1
	Overpower Limit	$\geq 135\%$
	Ripple	$\leq 240\text{mV}$ Test condition: pure resistive load, output connected via 15 cm twisted-pair wires, with a 47 μF electrolytic capacitor and a 0.01 μF ceramic capacitor connected in parallel at the load end (20 MHz bandwidth).
Protection	Short Circuit	Output shut down, auto-recover after fault cleared.
	Overload	Current reduction hiccup protection, auto-recover after fault cleared.
	Overcurrent	Current reduction hiccup protection, auto-recover after fault cleared.
	Overtemperature	Power reduces to 50% at 70-80°C ambient (t_c 90-100°C); auto-recovery when temperature drops.
Safety&EMC	Surge	L-N: 6kV, L-PE: 6kV, N-PE: 6kV
	Withstand Voltage	I/P-O/P: 3000Vac/1min/ $< 5\text{mA}$ I/P-PE:1500Vac/1min/ $< 5\text{mA}$ O/P-PE:500Vac/1min/ $< 5\text{mA}$
	Safety standards	EN61347-1, EN61347-2-13, UL8750, UL1310, UL879
	EMI	EN55015@230VAC, FCC Part 15 Class B@120/277VAC
	Insulation Resistance	5M Ω
Others	Working Temp.	-40°C~+60°C (-40°F~140°F)
	Storage Temp., Humidity	-40°C~85°C (-40°F~185°F), 20-95%RH
	t_c	90°C (194°F) for safety & 85°C (185°F) for life
	Material	Metal
	IP Rating	IP67
	Lifetime	50,000h@ t_c :85°C (185°F)
	Warranty Condition	5 years
	Switch Cycle	25,000 times
	Dimension	156*40.8*30mm(L*W*H) 6.14*1.61*1.18 in
	Packing(weight)	Net weight: 350g(0.77 lb) $\pm 5\%$ /PCS; 30 PCS/Cartron;11.0kg(24.3lb) $\pm 5\%$ /Cartron; Carton Size: 392x202x204mm(15.44x7.96x8.32in)(L*W*H)

Dimension Inch (mm)



Wiring

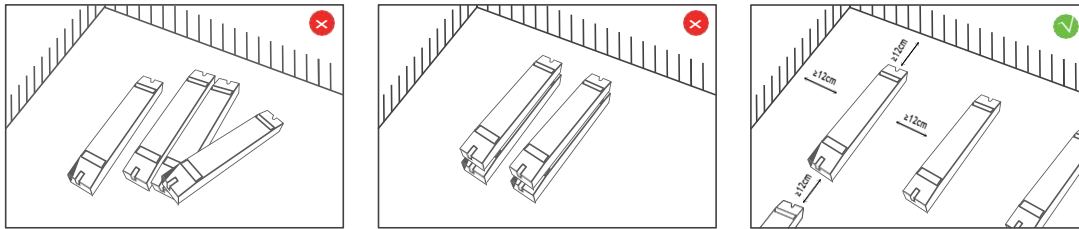


Max. quantity of drivers per miniature circuit breaker

Specification item	Value	Value	Condition
Inrush current I _{peak}	24.6A (120V)	30A (277V)	Input Voltage 120V/277V
Inrush current T _{width}	186us (120V)	200us (277V)	Input Voltage 120V/277V, measured ta 50% I _{peak}

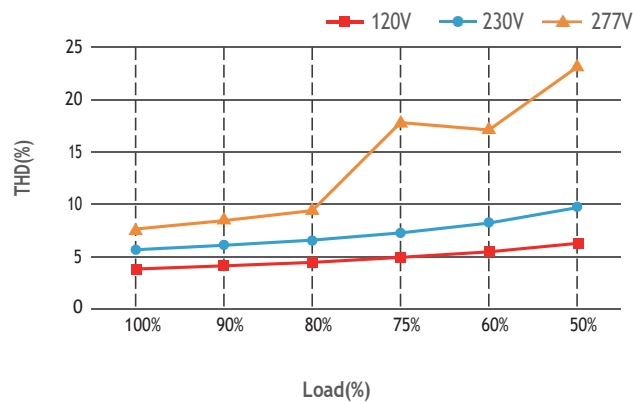
MCB	Input Voltage 120V Drivers	Input Voltage 277V Drivers	MCB	Input Voltage 120V Drivers	Input Voltage 277V Drivers
B10	17pcs	13pcs	C10	24pcs	22pcs
B13	23pcs	17pcs	C13	31pcs	29pcs
B16	28pcs	21pcs	C16	39pcs	36pcs
B20	35pcs	27pcs	C20	48pcs	45pcs
			D16	39pcs	72pcs

Installation Precautions

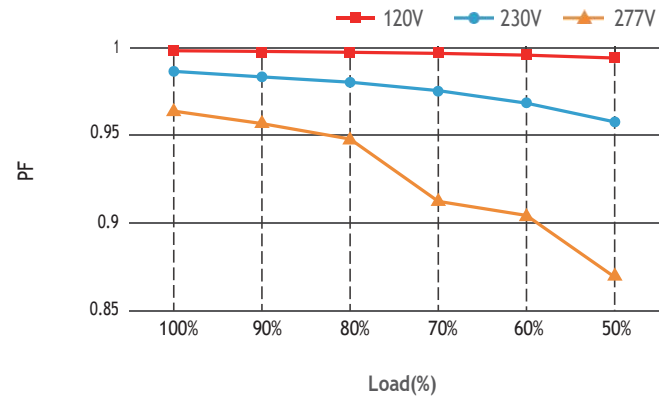


Please do not stack the products. The distance between two products should be $\geq 12\text{cm}$ so as not to affect heat dissipation and the lifespan of the products.

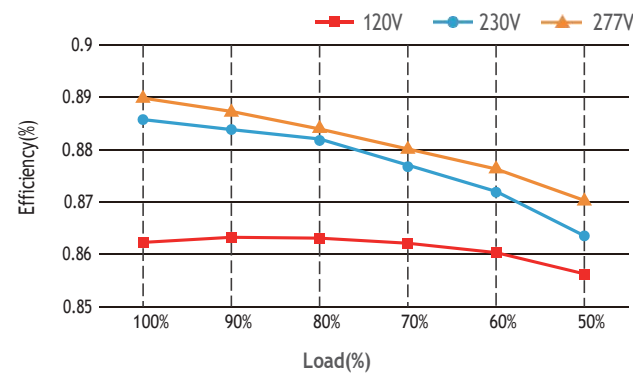
THD vs Load



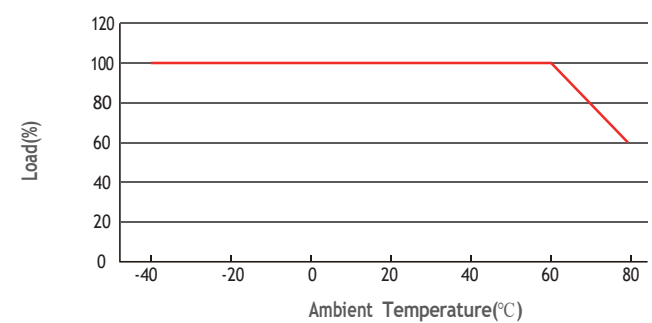
PF vs Load



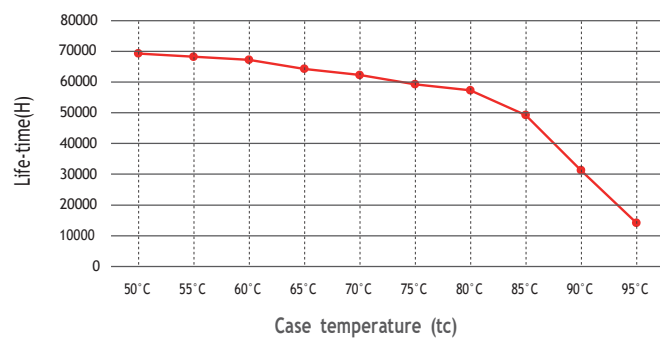
Efficiency vs Load



Derating Curve



Life-time vs. case temperature



The lifetime of the LED driver is shown in the figure above (calculated based on 90% reliability).

The relationship between t_c and t_a also depends on the luminaire design

Cautions

This product must be installed and adjusted by a qualified professional.		
1	Confirmation of installation conditions	· Waterproof and Protection: Install in a suitable location according to the waterproof and protection requirements of the power supply. Products without waterproof function should be protected from direct sunlight and rain. When installing outdoors, please use a waterproof box for protection. · Heat dissipation requirements: The drive power supply should avoid exposure to high temperature environments. Please ensure that the working environment temperature is within the recommended range. To ensure proper heat dissipation of the drive power supply, a well ventilated area should be selected for installation. Good heat dissipation conditions can help extend product lifespan.
2	Power check	· Before use, check the product parameters and confirm that the output voltage and current of the LED power supply meet the requirements
3	Safe wiring	· Use cables that meet the specifications to ensure that the cross-section of the wire matches the requirements of the driving power supply. Solid cables typically measuring 0.75-2.5 mm², (Please refer to the silk screen printing or wiring diagram in the instruction manual for specific wire diameter requirements). · If the power supply (metal casing) is installed on a grounded lighting component or equipment, the power supply needs to be grounded. · Avoid hot-plugging. Disconnect the power before connecting the LED load, then restart the driver.
4	Wiring confirmation	· Before power on debugging, ensure that the wiring is secure and avoid poor contact to prevent unstable current or equipment damage.
5	Repair suggestions	· If the product malfunctions, please do not repair it without authorization. If you have any questions, please contact the supplier or sales team for assistance.

※ The contents of this manual are updated without prior notice. If the function of the product you are using is inconsistent with the instructions, the function of the product shall prevail. Please contact us if you have any questions .

Warranty Agreement

1. Warranty periods from the date of delivery : 5 years.
2. Free repair or replacement services for quality problems are provided within warranty periods.

Warranty exclusions below:

The following situations are not covered by the free warranty or replacement service:

1. Exceeding the warranty period.
2. Damage caused by human factors such as high voltage, overload, and improper operation.
3. The appearance of the product is severely damaged or deformed.
4. Normal wear and tear or aging during regular product use.
5. Damage caused by natural disasters or force majeure factors.
6. The quality inspection label of the product is damaged (QC PASS).
7. No contract or valid invoice proof signed with EUCHIPS has been provided.

※ Remedies: Repair or replacement is the only remedy provided by EUCHIPS to the customer, and EUCHIPS shall not be liable for incidental damages arising from repair or replacement, unless within the scope of applicable law.

※ Adjustment of Warranty Terms: EUCHIPS reserves the right to modify or adjust the warranty terms, which shall be published in writing.

Revision history

Change date	Version	Item	From	To
2026.08.01	V1.0	First release		