

## PUP40AT-1WPC

### Summary

PUP40AT-1WPC is a constant current mode output LED driver. The driver supports leading edge (Triac) and trailing edge (ELV) dimmer, 0-10V to achieve a smooth dimming effect.

### Product Features

- Single channel output, output current can be selected by software
- Compatible with TRIAC (forward-phase or leading-edge), ELV (reverse-phase or trailing-edge) and 0-10 V dimmers
- TRIAC and ELV dimming at 120 Vac only
- Class 2 power supply
- Protections: Over load, Over Voltage and short-circuit
- Suitable for indoor LED lighting application

### Application



Down Light



Flicker free



0-10V



TRIAC/ELV



Programming Current



Short Circuit Protection



Over Load Protection



Over Voltage Protection

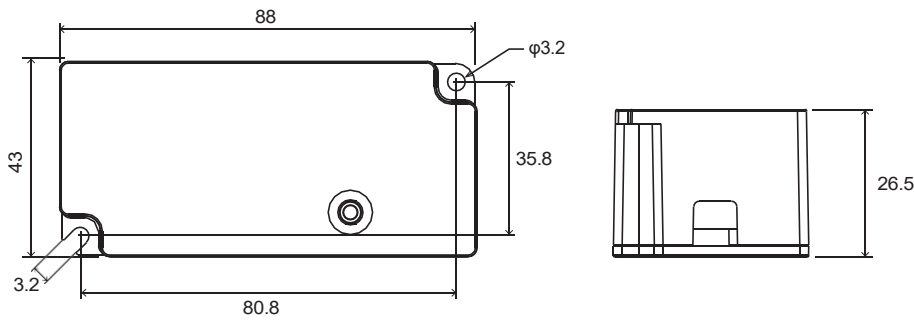


### Technical Parameters

Model	PUP40AT-1WPC	
Input	Efficiency	85%@120VAC, Full load
	Frequency	47-63Hz
	Voltage	120VAC-277VAC
	Current	0.42Amax@120VAC, 0.25A@230VAC, 0.21A@277VAC
	PF	0.95@120VAC, 0.9@277VAC, Full load
	THD(full load)	10%@120VAC, 20%@277VAC, Full load
	Inrush Current	Cold start,6A@120VAC 31us 15A@277VAC 28us
	Standby power	<2.5W
	No load power	<2.5W
	Turn on delay Time	≤ 0.75s, at230Vac (When the light begins to shine)
Output	Current	800-1200mA
	Voltage	9-45V
	Power	36W-40W
	Channel	1
	No load output voltage	59V Max
	Current Accuracy	±5%
	Over power limit	≥120%
	Ripple	≤ 60mA
PWM Frequency	20K Hz	
Protection	Over Voltage	Reduce current protection, restore normal operation after troubleshooting
	Over load	Reduce current protection, restore normal operation after troubleshooting
	Short circuit	No output, self recovery after removing the fault
Function	Dimming type	0-10V, TRIAC/ELV(@120VAC 60Hz)
	Dimming range	0.5%-100%(0-10V) 1%-100%(TRIAC/ELV)
	Dimming curve	0-10V: (Linearity) TRIAC/ELV: (Logarithm)
	Flicker	Flicker free
Safety & EMC	Surge	L-N:2.5KV (ANSI/IEEE C62.41.1-2002 & c62.41.2-2002 category A, 2.5 kV ringwave)
	Withstand Voltage	I/P-O/P: 2000Vac/1min/<5mA O/P-DIM( Signal port ):1500Vac/1min/<5mA
	Safety standards	UL8750/UL1310/CSA25013,CSA class P
	EMI Eission	EN55015,EN61000-3-2 Class C,IEC61000-3-3
	EMC Immunity	FCC class B(120V)/class A(277V)
Others	IP rating	IP20
	Working temp.	(-20-+50) °C [-4°F-122°F]
	Relative humidity	20-90% RH
	tc	90°C [ 194°F ]
	Lifetime	50,000h@tc:85°C [ 185°F ]
	Warranty Condition	5 years
	Switch cycle	>25,000 times
	Material	PC
	Dimension	88*43*26.5mm (3.46*1.69*1.04 Inch)(L*W*H)
	Pack Information	N.W: 173g(0.38 lb)±5%/PCS; 100PCS/ Carton; 17.8kg(39.2lb)±5%/ Carton; Carton Size: 398x210x208mm(15.7*8.26*8.19 Inch)(L*W*H)

Remark: Use only within an enclosure

## Dimension(mm)



## Wiring Diagram

Plastic case

All material to be ROHs compliant to Directive 2002/95/EC

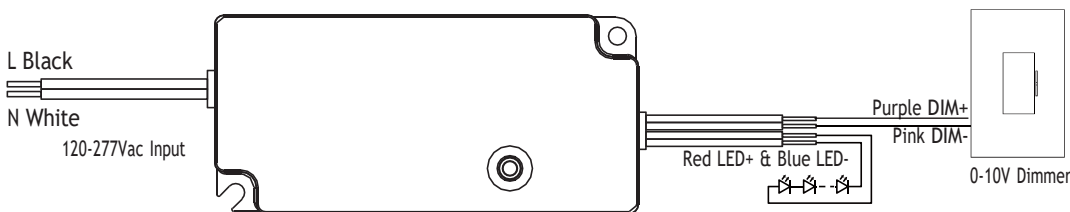
Wires to be Stranded with UL approval

Input: Black & White: 150mm , 18AWG

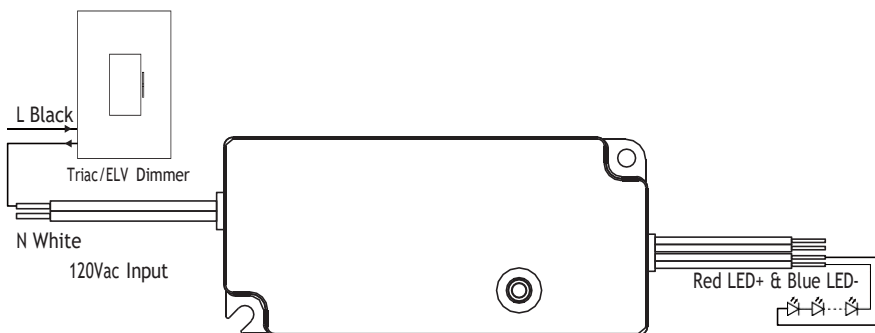
Output: Red & Blue: 150mm , 18AWG

Dimming: Purple & Pink: 160mm , 20AWG

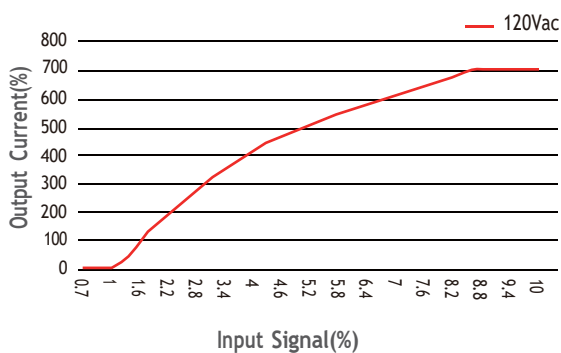
## 0-10V Wiring



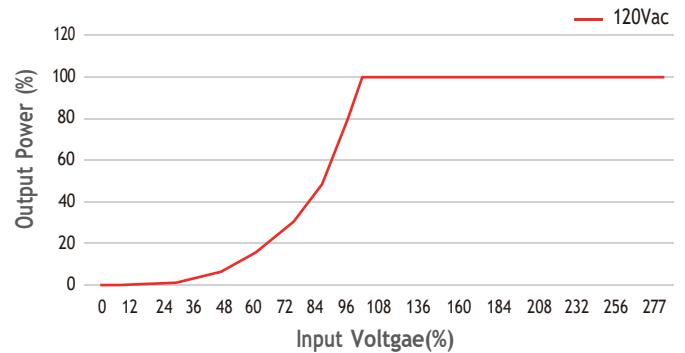
## Triac/ELV Wiring



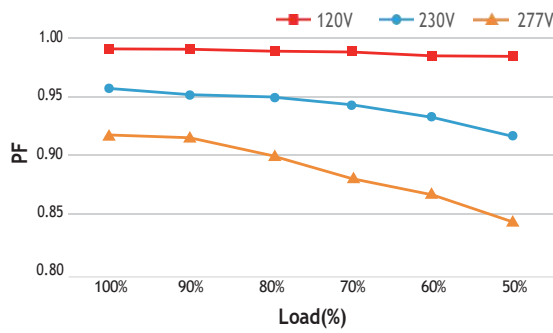
## 0-10V Dimming Curve



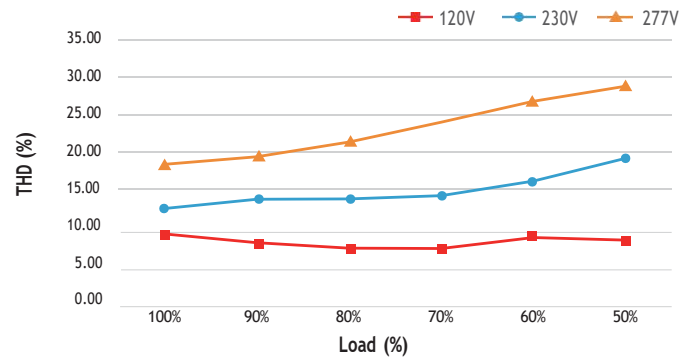
## Trailing edge (ELV) Dimming Curve



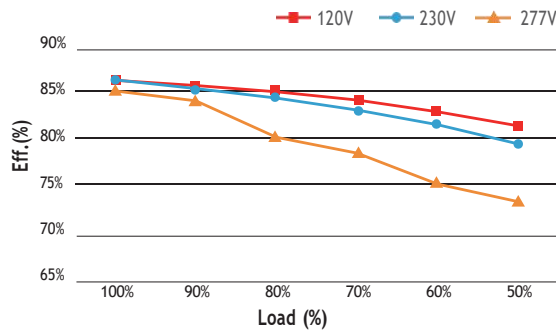
### PF vs Load Curve



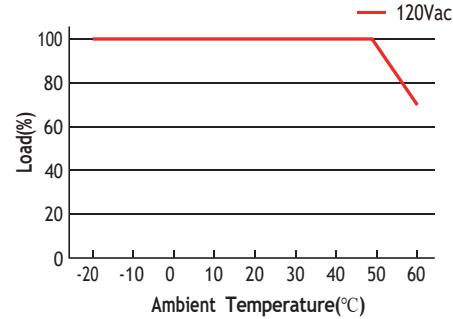
### THD vs Load Curve



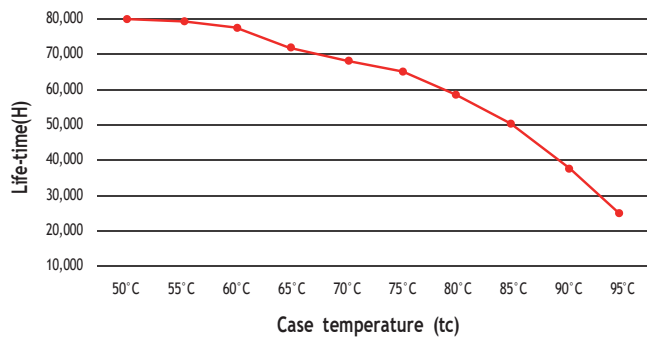
### Efficiency vs Load Curve



### Derating Curve



### Life-time vs. case temperature



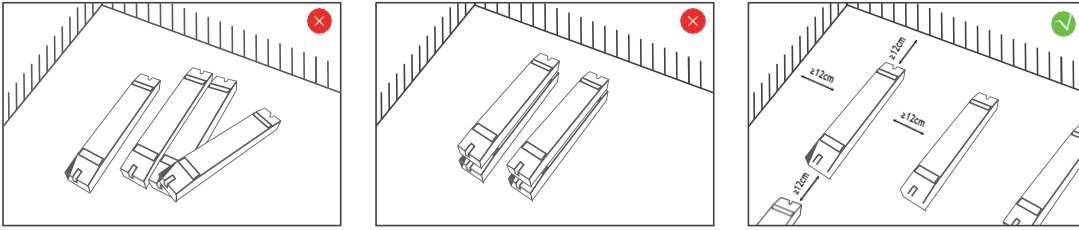
The life-time of the led driver is shown in the figure above (calculated based on the 90% survival rate).  
The relation of  $t_c$  to temperature depends also on the luminaire design.

### Max. quantity of drivers per miniature circuit breaker

Specification item	Value	Value	Condition
Inrush current $I_{peak}$	6A (120V)	15A (277V)	Input Voltage 120V/277V
Inrush current $T_{width}$	31us (120V)	28us (277V)	Input Voltage 120V/277V, measured to 50% $I_{peak}$

MCB	Input Voltage 120V Drivers	Input Voltage 277V Drivers	MCB	Input Voltage 120V Drivers	Input Voltage 277V Drivers
B10	23pcs	45pcs	C10	23pcs	45pcs
B13	30pcs	59pcs	C13	30pcs	59pcs
B16	38pcs	74pcs	C16	38pcs	74pcs
B20	47pcs	93pcs	C20	47pcs	93pcs
			D16	38pcs	74pcs

## Installation Precautions



Please do not stack the products. The distance between two products should be >12cm so as not to affect heat dissipation and the lifespan of the products.

## Cautions

1. This product should be installed by qualified personnel.
2. This product is non waterproof, need to avoid sun and rain. In case of outdoor use, please ensure it is mounted in a water proof enclosure.
3. Good heat dissipation conditions extend product life. Please install the product in a well-ventilated environment.
4. Please make sure LED power supply output voltage, current is used to meet the product requirements.
5. Please ensure that adequate sized cable is used from the controller to the LED lights to carry the current. Please also ensure that the cable is secured tightly in the connector.
6. Due to safety concerns, PVC or rubber cord of 0.75- 2.5mm<sup>2</sup> is recommended for input and output terminal(s)(excluding signal terminals). Flat power cord is not suitable. Ensure all wire connections and polarities are correct before applying power to avoid any damages to the LED lights.
7. In case of malfunction, do not repair it yourself.

※ 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:

1. Beyond warranty periods.
2. Any artificial damage caused by high voltage, overload, or improper operations
3. Products with severe physical damage.
4. Damage caused by natural disasters and force majeure.
5. Warranty labels and barcodes have been damaged.
6. No any contract signed by EUCHIPS.

- Repair or replacement provided is the only remedy for customers. EUCHIPS is not liable for any incidental or consequential damage unless it is within the law.
- EUCHIPS has the right to amend or adjust the terms of this warranty, and release in written form shall prevail