PUP20AT-1WPC

Summary

PUP20AT-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

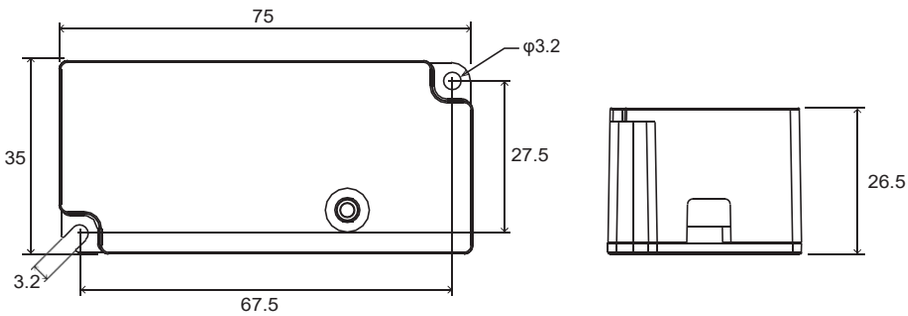
c UL us LISTED LED DRIVER E490914

Technical Paramaters

Model	PUP20AT-1WPC	
Input	Efficiency	78%@120VAC, Full load
	Frequency	47-63Hz
	Voltage	120VAC-277VAC
	PF	0.95@120VAC, 0.9@277VAC, Full load
	THD(full load)	10%@120VAC, 20%@277VAC, Full load
	Current	0.3Amax@120VAC, 0.18A@277VAC
	Inrush Current	Cold start,8A@120VAC 80us
	No load power	<2.5W
Output	Current	350-700mA
	Voltage	9-45V
	Power	16W-20W
	Channel	1
	No load output voltage	59V Max
	Frequency	--KHz Min PWM
	Current Accuracy	±5%
	LF current ripple(<120Hz)	5%
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
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)
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
Others	IP rating	IP20
	Working temp.	(-20~+50) [-4°F~122°F]
	Relative humidity	20~90% RH
	tc	85 [185°F]
	Lifetime	50,000h@tc:80 [176°F]
	Switch cycle	>25,000 times
	Material	PC
	Dimension	75*35*26.5mm (2.95*1.38*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

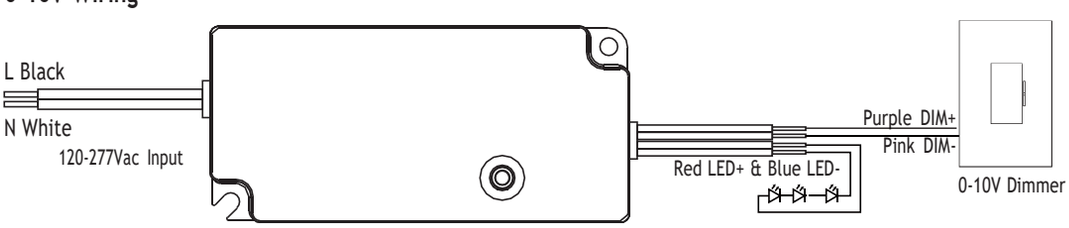
Dimension(mm)



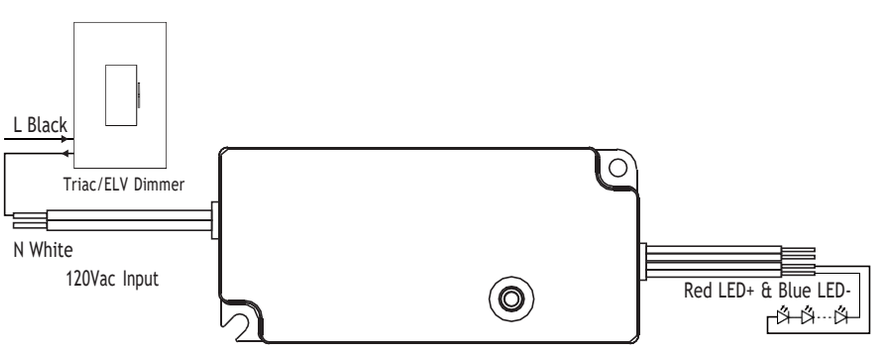
Wring Diagram

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

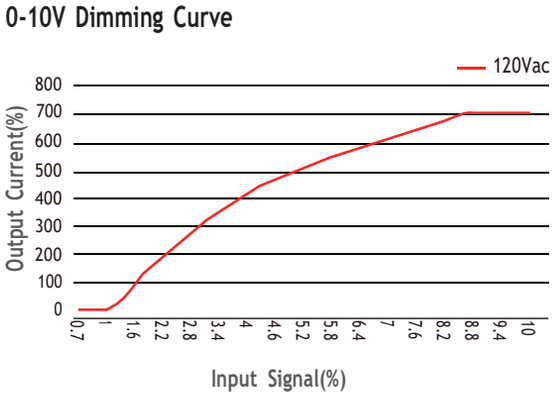
0-10V Wiring



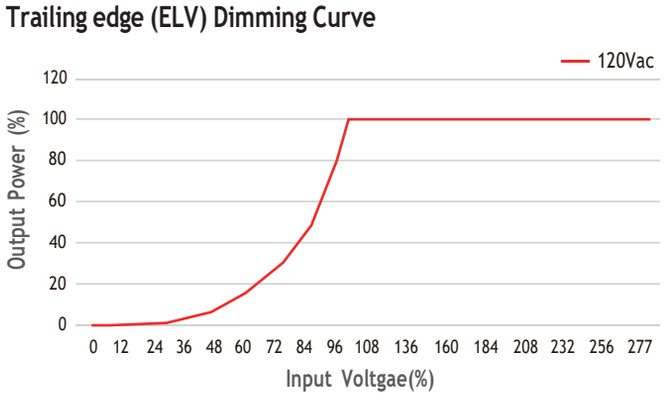
Triac/ELV Wiring



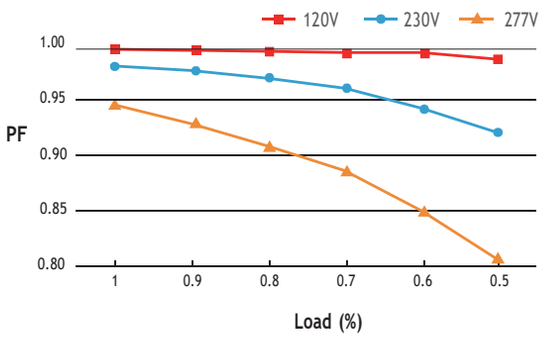
0-10V Dimming Curve



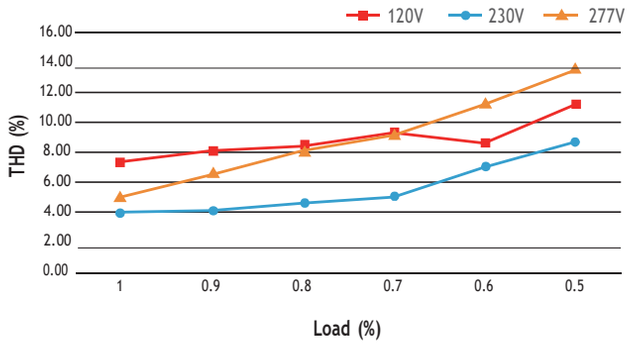
Trailing edge (ELV) Dimming Curve



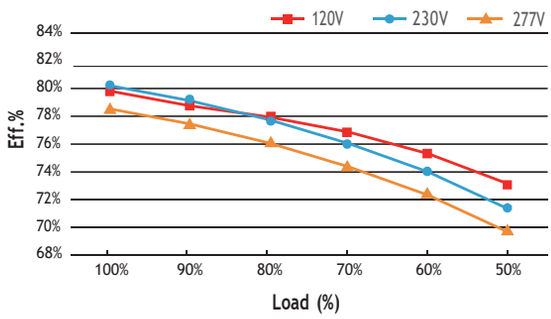
PF vs Load Curve



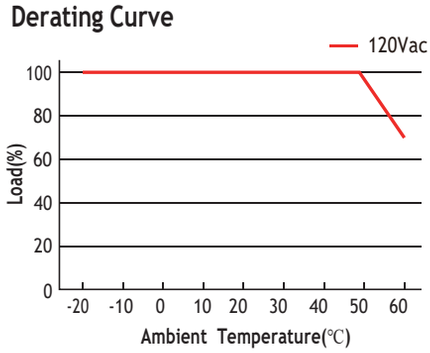
THD vs Load Curve



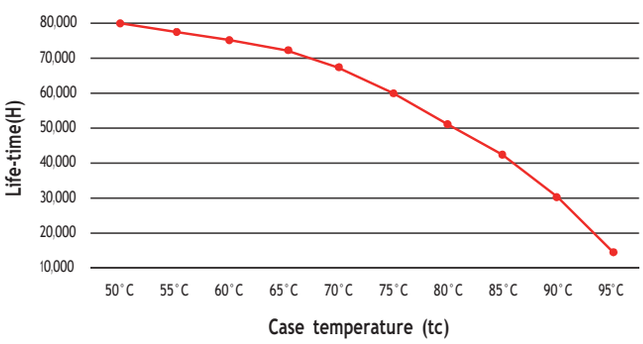
Efficiency vs Load Curve



Derating Curve



Life-time vs. case temperature



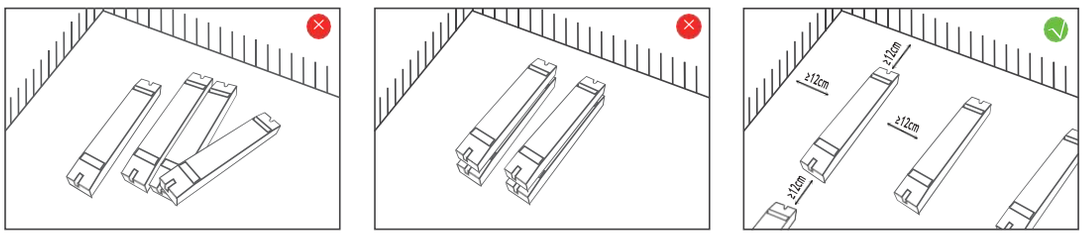
The life-time of the led driver is shown in the figure above
(calculated based on the 90% survival rate).
The relation of tc ta temperature depends also on the luminaire design.

Max. quantity of drivers per miniature circuit breaker

Specification item	Value	Value	Condition
Inrush current I_{peak}	4A (120V)	8A (277V)	Input Voltage120V/277V
Inrush current T_{width}	8us (120V)	14us (277V)	Input Voltage120V/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	33pcs	55pcs	C10	33pcs	55pcs
B13	43pcs	72pcs	C13	43pcs	72pcs
B16	53pcs	88pcs	C16	53pcs	88pcs
B20	66pcs	111pcs	C20	66pcs	111pcs
			D16	53pcs	88pcs

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- 2.5mm² 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.