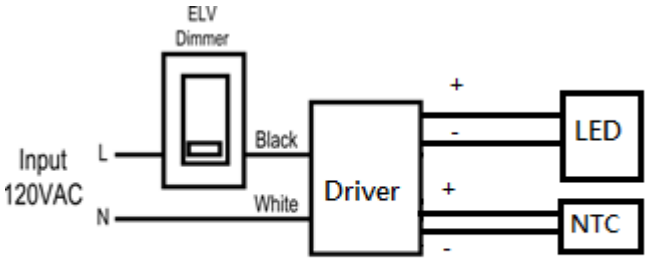
SPECIFICATIONS

Features

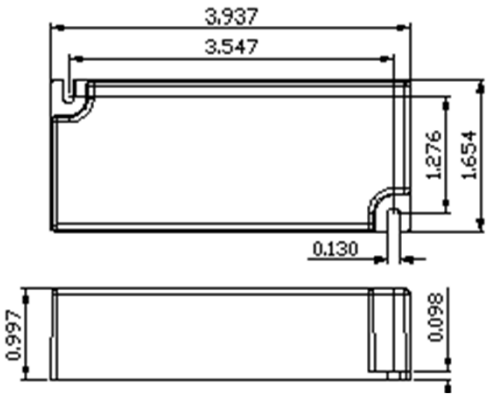
-Work for most 3-wire/ 2-wire dimmer
-Compact size
-Low profile
-Constant Current Output
-Active Power Factor
-Class II compliance
-Restart at lowest dimming setting
-5 Year Warranty

Wiring Diagram



Mechanical and Thermal

Dimensions	L3.937”XW1.654”XH0.997”
Lead Wire Length	See the Note 4.4
Max. Case Operation Temp.	80℃



* Dimension in Inch

Protection

-Auto-reset electronic short circuit
-Overload protection
-Thermal protection
-Class II

Environmental Specifications

-MTBF >100,000 hrs
-RoHS Compliant
-Lead Free SMT process
-Power Factor Correction / Low Load
-FCC Part 15 Class B compliant

Note –

1. UL file No. : E340871

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1. Input - specification

	Units	Minimum	Typical	Maximum	Notes
Input Voltage Range(Vin)	Vac	108	120	132	
Input Frequency Range	Hz	50	60	63	
Input Power	W		14		
Power Factor(PF)		0.9	>0.9		Nominal LED voltage
Input Current	A	-	-	0.17A@120VAC	
Inrush Current	A			4 A peak	According to IEC 60555
Total Harmonics Distortion (THD)				< 20%	At nominal input voltage and nominal LED voltage
Efficiency		-	> 80%	-	Efficiency is measured after driver has thermally stablized + full load
Isolation	Meet UL1310/UL8750 for class Ⅱ isolation power supply				

2. Output - specification

	Units	Minimum	Typical	Maximum	Notes
Output Voltage(Volt)	Vdc	10		17	
Output Current(Iout)	mA		700		
Output Current Tolerance	%		±3		
Output Ripple Current	<50% peak-to-peak of 700mA				≦20% pk-to-pk of the rated output current for all models with Vout max≧32V ≦50% pk-to-pk of the rated output current for all models with Vout max≦30V At nominal LED voltage and nominal input voltage without dimming
Dimming Range	%	6%		100%	Please refer to Dimmer compatibility list
Star-up Time	ms		100		With nominal LED voltage and without dimmer attached
			150		With nominal LED voltage, with an recommended dimmer attached(see dimmer compatibility list) and at the full dimming conduction angle
Isolation	Meet UL1310/UL8750 for class Ⅱ isolation power supply				
Operation Case Temperation	˚C	-30		80C	

3. EMC / Protection / Compliance

Conducted and Radiated EMI		FCC CFR Title 47 Part 15 Class B and EN55022(CISPR 22) Class B compliant	
Immunity Compliance	ESD (Electrostatic Discharge)	IEC61000-4-2	6 kV contact discharge, 8 kV air discharge, level 3
	Electrical Fast Transient	IEC61000-4-4	±2 kV on AC power port for 1 minute, ±1kV on signal/control lines
	Surge	IEC61000-4-5	±1kV line to line/±2kV line to earth on AC power port, ±0.5kV for outdoor cables
Transient Protection	Ring Wave		ANSI/IEEE c62.41-1-2002 & c62.41-2-2002 category A, 2.5kV ring wave

4. LED THERMAL PROTECTTION (NTC) SHARACTERISTIC

The LED Thermal protection feature of the MDR-605-700-13-TT helps to reduce the temperature of the LED module by reducing the output current in case of abnormal temperature conditions.

4.1 The NTC on the LED board is specified as Murata Part# NCP18XW223E03RB

4.2 LED module and driver overheat de-rating:

Area 1 : the temperature on the LED board (e.g. feedback from NTC) is lower than TWARN

There is no action from the driver to the LED driving current related to the overheat protection function (it is full power e.g. IMAX =700mA).

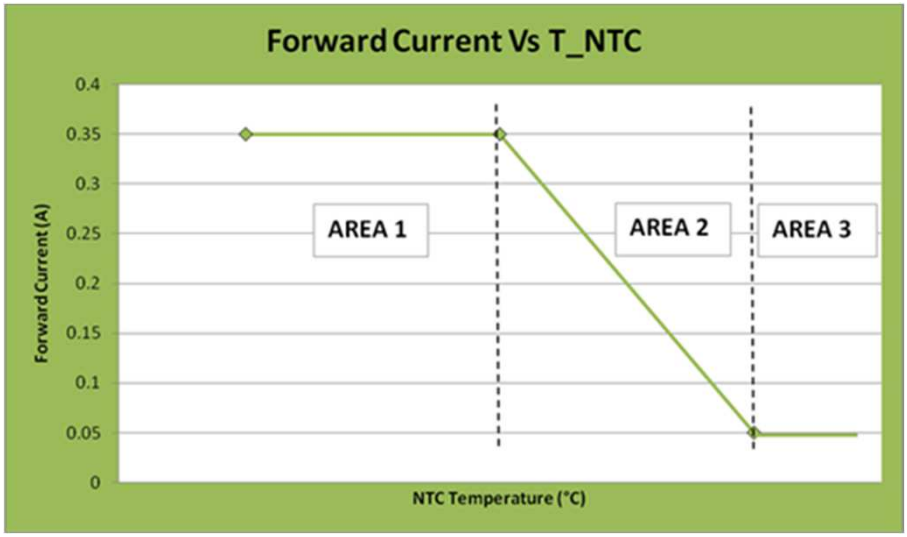
Area 2: the temperature of the LED board is above TWARN but below TOff

The LED driver dims down the current at the LED, according to a linear curve between IMAX and IMIN.

The temperature of the LED board is constantly checked to adjust the current (increase or decrease of the current, if temperature becomes lower than TWARN the current level is back to normal).

Area 3 : the temperature of the LED board is TOff or over

The LED driver switches the current at LED to a specified minimum value e.g. IMIN=0 mA. The temperature of the LED board is constantly checked to adjust the current (can go back to Area 2 if temperature decreases enough).



For graphical illustrations only, the IMAX output current is taken 350mA but in most of our cases the IMAX= 700mA

4.3 Input: 6 inches long

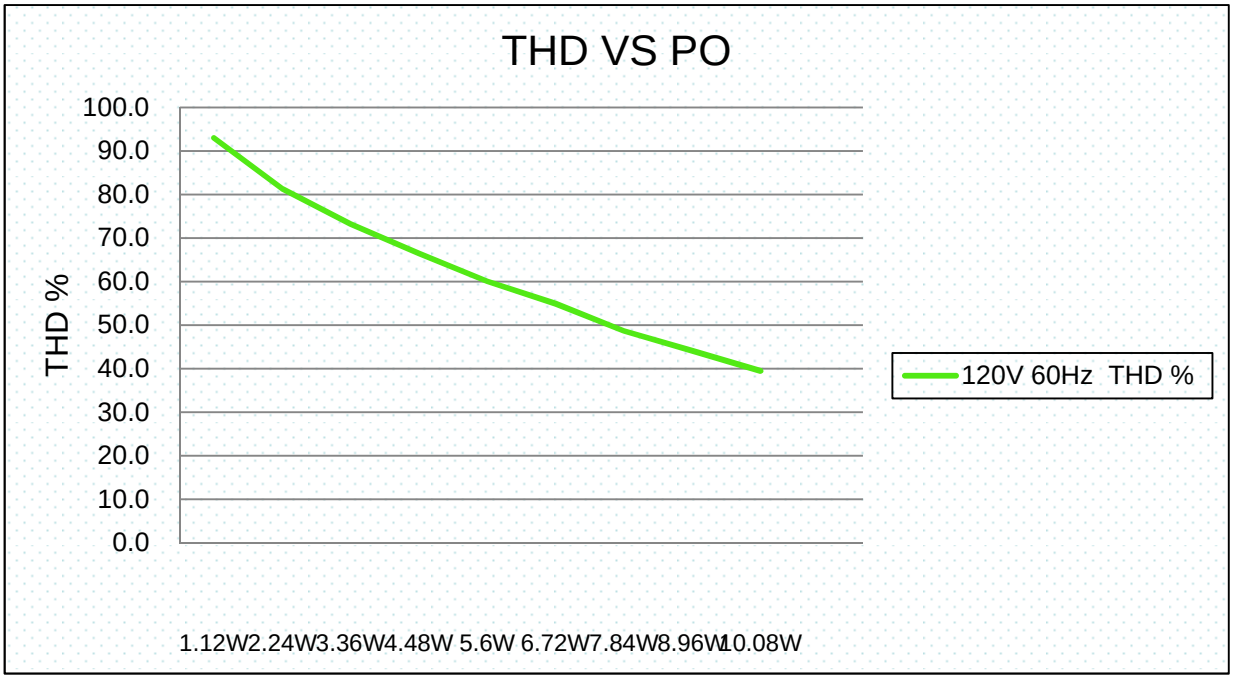
18 AWG stranded- Black and White (Black - hot and White-Neutral), UL 1015

Output: 15 inches long

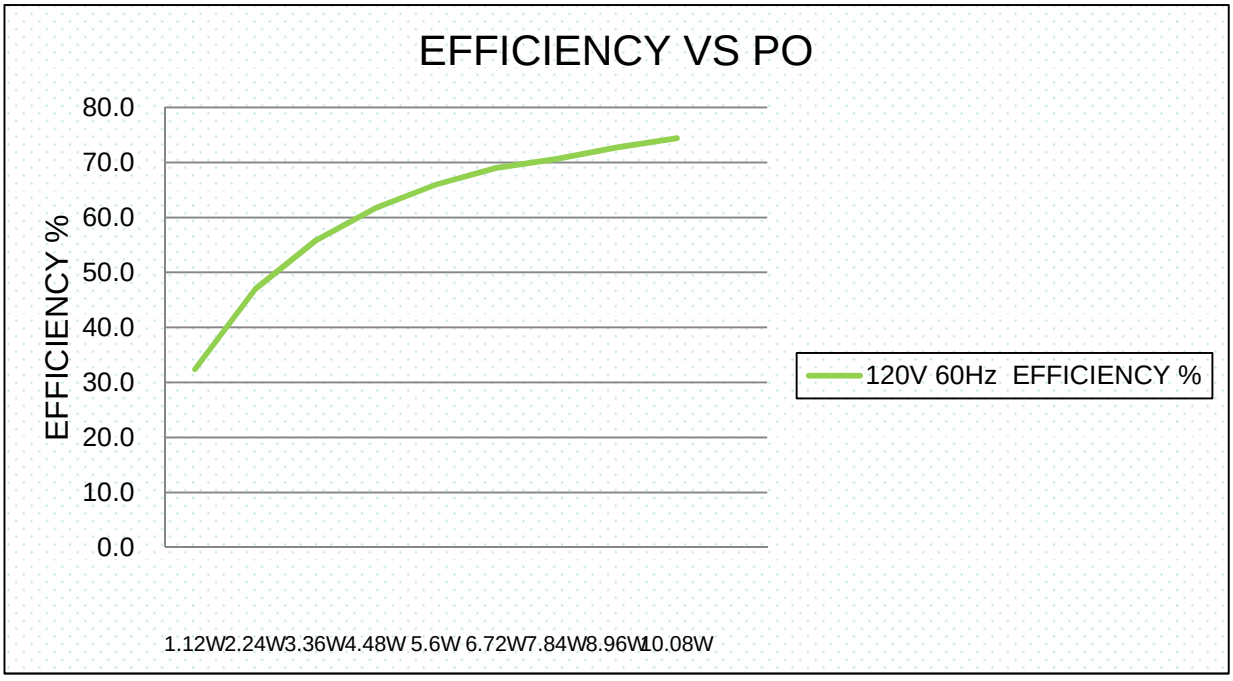
Pin1: Blue (22AWG) LED +VE	22 1C 19ST UL10086 , 200C
Pin2: Brown (22AWG) LED -VE	22 1C 19ST UL10086 , 200C
Pin3: Violet (24AWG) NTC+VE	24 1C 19ST UL10086 , 200C
Pin4: Orange (24AWG) GND	24 1C 19ST UL10086 , 200C

Electrical Specifications

THD of the driver VS Power Output (W)：



Efficiency of the driver VS Power Output (W)：



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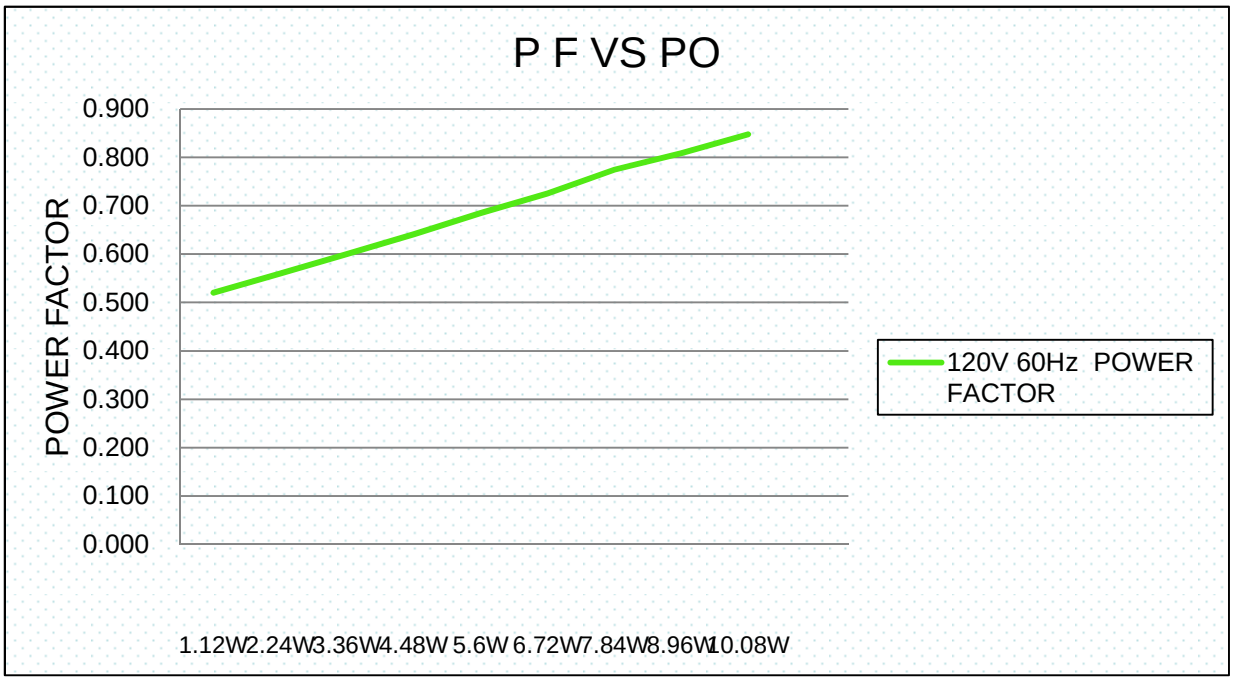
Electrical Specifications

Efficiency of the driver VS Power Output (W)：



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