SPECIFICATIONS

MDR-701-1400-20-D
(GEN3.4)

Note-

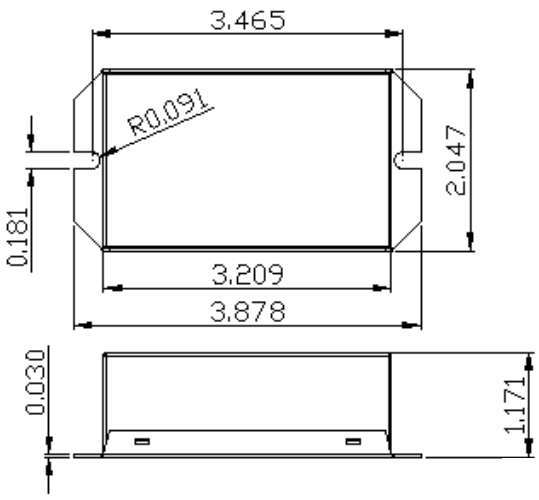
1. UL file: E340871

Features

- ✓ 0-10V & TRIAC/ELV Dimmable in 1
- ✓ Compact size
- ✓ Low profile
- ✓ Constant Current Output
- ✓ Active Power Factor
- ✓ Class 2 compliance
- ✓ 5 Year Warranty
- ✓ Bottom Wire Exits
- ✓ Universal Input (Dim on 120V For TRIAC/ELV & 120/277V For 0-10V)
- ✓ Ultra Slow Ripple
- ✓ Hot Wire Protection

Mechanical and Thermal

Dimensions	L 3.878" × W2.047" × H 1.171"
Weight	245 g
Lead Wire Length	6" (Standard)
Max. Case Operation Temp.	80°C



* Dimension in Inch / Metric

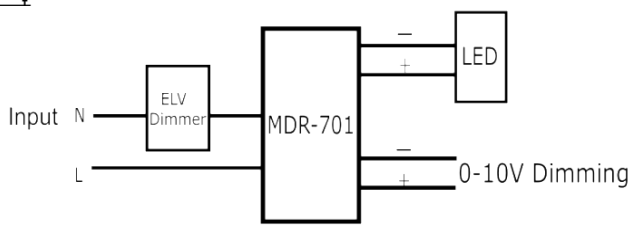
Protection

- Auto-reset electronic short circuit
- Overload protection
- Thermal protection
- Class 2

Environmental Specifications

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

Wiring Diagram



Macron Associate Co. – Power Supply Team

NO.352, Perng-Yi Road, Taiping, Taichung, Taiwan 411

TEL: 886-4-22708357 FAX: 886-4-22767307 Email: macron@macrongroup.com

1. Input – specification

	Units	Minimum	Typical	Maximum	Notes
Input Voltage Range(Vin)	Vac		120-277		
Input Frequency Range	Hz	50	60	63	
Input Power	W		23		
Power Factor(PF)		0.9	>0.9		Nominal LED voltage
Input Current	A	-	-	0.19A@120VAC 0.08A@277VAC	
Inrush Current	A			4 A peak	According to IEC 60555
Total Harmonics Distortion (THD)				< 20%	At nominal input voltage and nominal LED voltage
Efficiency		-	> 78%	-	Efficiency is measured after driver has thermally stabilized + full load
Isolation	Meet UL1310/UL8750 for class 2 isolation power supply				

2. Output - specification

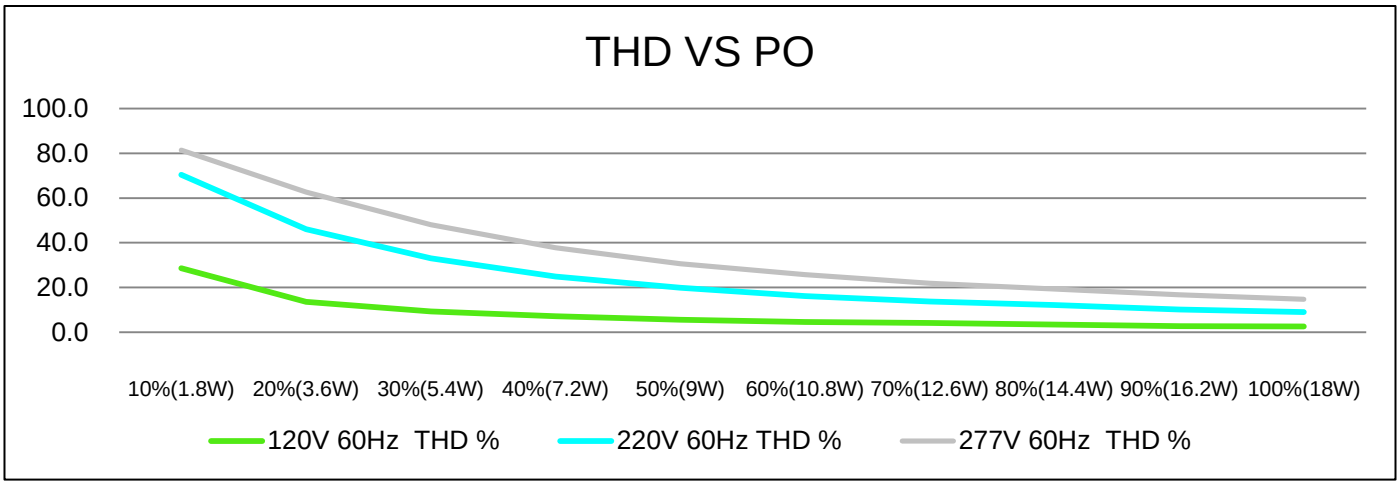
	Units	Minimum	Typical	Maximum	Notes
Output Voltage(Volt)	Vdc	10		13	
Output Current(lout)	mA		1000/1400mA		Adjustable current setting; please refer to the current setting table
Output Current Tolerance	%		±3		
Output Ripple Current	< 20% peak-to-peak of 1000/1400mA				≦20% pk-to-pk of the rated output 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	%	2%		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 2 isolation power supply				
Operation Case Temperation	˚C	-30		80	

3. EMC / Protection / Compliance

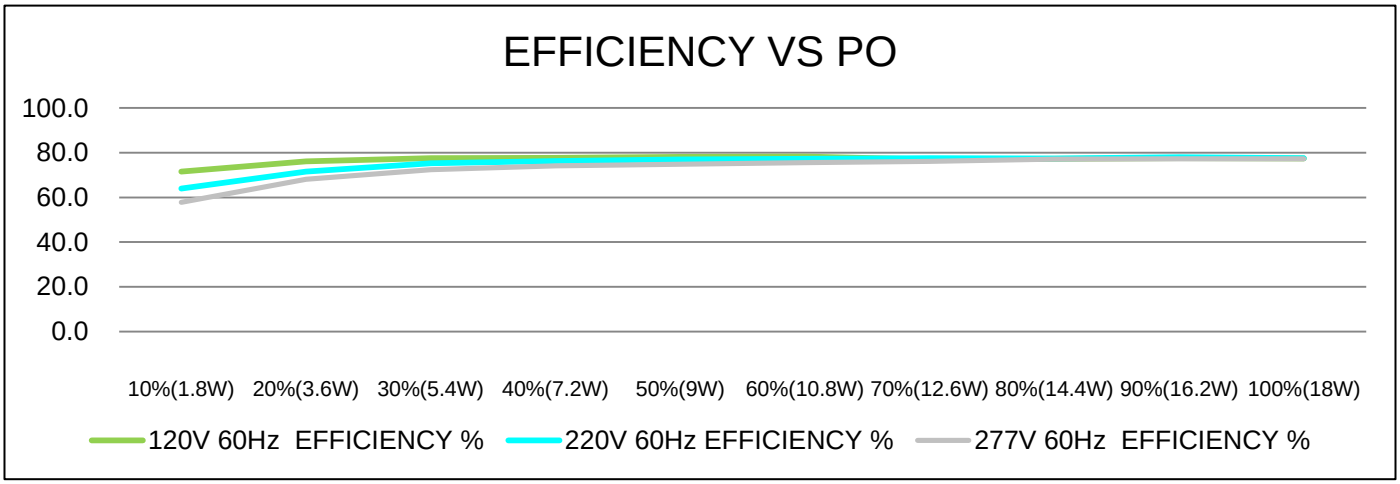
Conducted and Radiated EMI		FCC CFR Title 47 Part 15 Class B and EN55022(CISPR 22) Class B compliant	
Immunity Compliance	ESD (Electrostatic Discharge)	IEC61000-4-2	6 kV contact discharge, 8 kV air discharge, level 3
	Electrical Fast Transient	IEC61000-4-4	±2 kV on AC power port for 1 minute, ±1kV on 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

Electrical Specifications

THD of the driver VS Power Output (W)



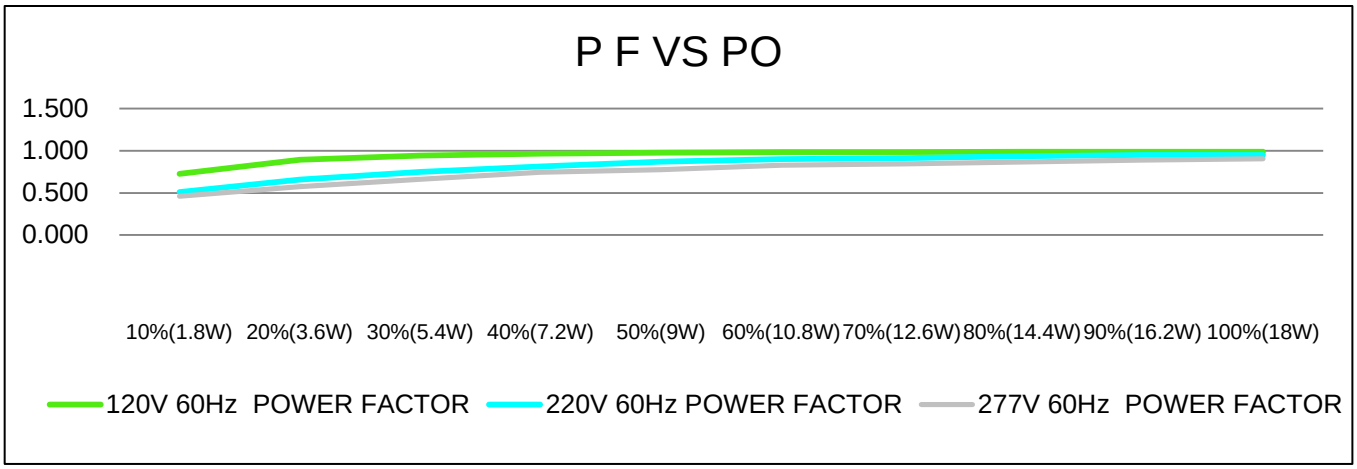
Efficiency of the driver VS Power Output (W)



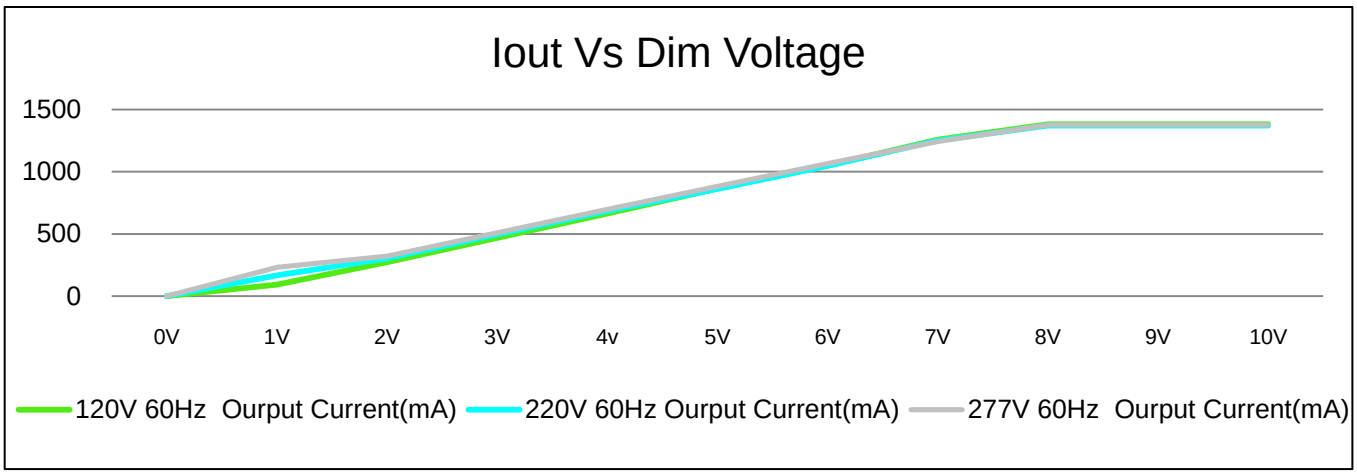
Macron Associate Co. – Power Supply Team
NO.352, Perng-Yi Road, Taiping, Taichung, Taiwan 411
TEL: 886-4-22708357 FAX: 886-4-22767307 Email: macron@macrongroup.com

Electrical Specifications

Power Factor VS Power Output (W):



0-10V Dim Voltage(V) VS Output Current

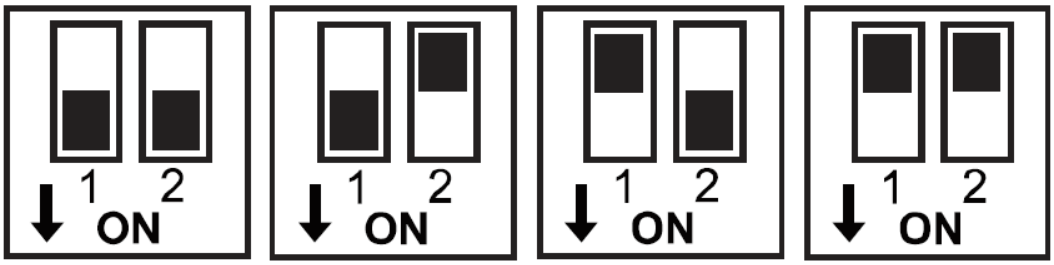


Macron Associate Co. – Power Supply Team
NO.352, Perng-Yi Road, Taiping, Taichung, Taiwan 411
TEL: 886-4-22708357 FAX: 886-4-22767307 Email: macron@macrongroup.com

Current Settings：

LED Current Tolerance over temperature and component variations is ≦5% at any level.

The output current of the driver can be adjusted using the two dip switches provided on the top of the driver. The below pictures shows the switch positions required to set the current to different levels.



1400mA **1400mA** **1000mA** **1000mA**

The driver will be shipped out of factory with both switches set to ON (1400mA).

Macron Associate Co. – Power Supply Team

NO.352, Perng-Yi Road, Taiping, Taichung, Taiwan 411

TEL: 886-4-22708357 FAX: 886-4-22767307 Email: macron@macrongroup.com

LED DRIVER THERMAL DE-RATING (NTC)

LED driver overheat de-rating:

Area 1 : the NTC temperature on the LED driver is lower than 90℃

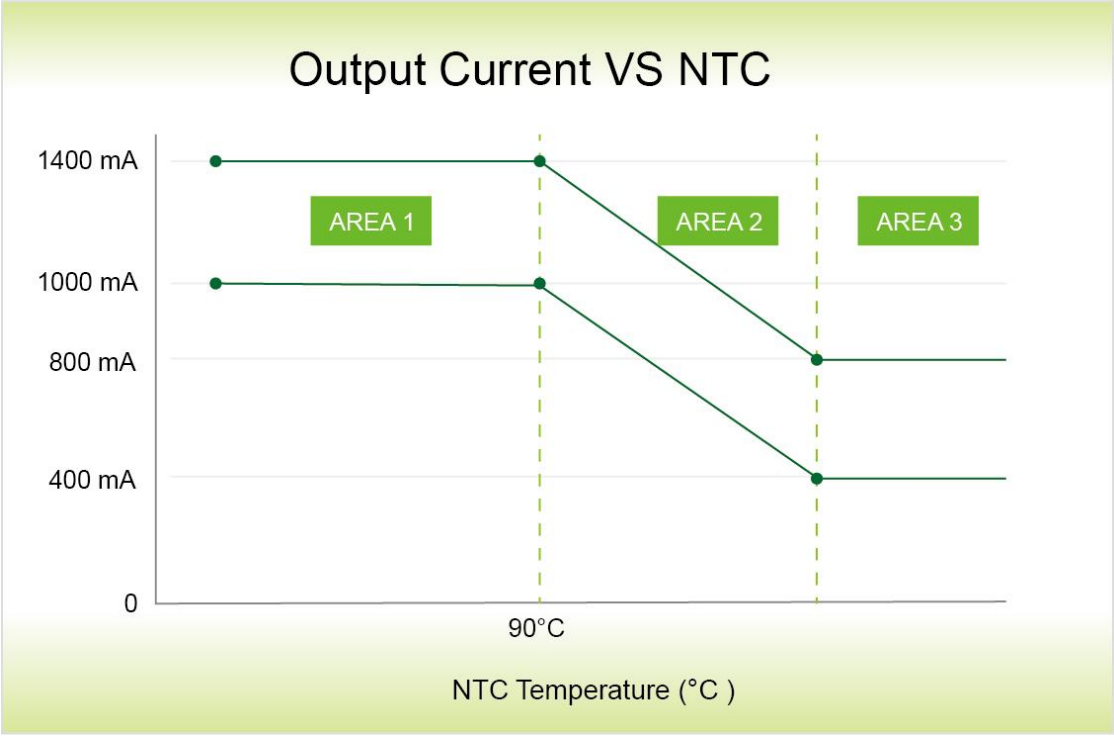
There is no action from the driver to the LED driving current related to the overheat protection function.

Area 2: the NTC temperature of the LED driver is above 90℃

The LED driver dims down to 800/400 mA gradually, according to a linear curve.

The temperature of the LED driver constantly checked to adjust the current (decrease of the current, if temperature becomes lower than 90℃ the current level is back to normal).

Area 3 : the NTC temperature of the LED driver ＞ 90℃, driver current at 800/400 mA



Macron Associate Co. – Power Supply Team

NO.352, Perng-Yi Road, Taiping, Taichung, Taiwan 411

TEL: 886-4-22708357 FAX: 886-4-22767307 Email: macron@macrongroup.com