

# Programmable Multi-Channel Driver PMD-55A-S

## SLP-DUA4550AUS



### Key Features

- Programmable, adjustable constant output current which can be adjusted to match LED module requirements and selectable various functions : 0-10V Classic, Native White Tuning(Select Mode, Continuous Mode), Dim to Warm.
- 0-10V Classic, two 0-10V inputs allow to control the two output currents of each within the limit of the max. power.
- Native White Tuning, the driver does the current mixing based on one input. That allows the PMD to do white color tuning with only two wall sliders. One 0-10V input sets the mix of warm to cool and another 0-10V input sets the brightness level.
- Dim to Warm, the driver does the current mixing and make CCT to become warmer as the brightness level reduced.

### Basic Features

Series.	Part Number	Max. Power	Function	Input Voltage	Output Voltage	Output Current	Certification
PMD-55A-S	SLP-DUA4550AUS	55W	0-10V	120~277Vac	10~50Vdc	0.35~1.4A	cUL

- Certification : UL8750, UL Class2 Power, 47 CFR Part15 Subpart B
- Protections : Short Circuit, Over Temperature, Open Lamp, Over Voltage
- ta Range : -20 ~ +50 °C
- Expected Lifetime : 50,000 hours at tc = 70 °C

## PMD Series

Series	Part Number	Max. Power	Function	Input Voltage	Output Voltage	Output Current	Certification
PMD-75C-LU	SLP-DUA47531WW	75W	0-10V, DALI	120~277Vac	10~50Vdc	0.35~1.4A	cUL, CE
PMD-75A-L	SLP-DUA47501US	75W	0-10V	120~277Vac	10~50Vdc	0.35~1.4A	cUL
PMD-75D-L	SLP-D2A475D1EU	75W	DALI	220~240Vac	10~50Vdc	0.35~1.4A	CE, ENEC
PMD-75D-LU	SLP-DUA475D1US	75W	DALI	120~277Vac	10~50Vdc	0.35~1.4A	cUL
PMD-55A-L	SLP-DUA45501US	55W	0-10V	120~277Vac	10~50Vdc	0.35~1.4A	cUL
PMD-55D-L	SLP-D2A455D1EU	55W	DALI	220~240Vac	10~50Vdc	0.35~1.4A	CE, ENEC
PMD-55D-LU	SLP-DUA455D1US	55W	DALI	120~277Vac	10~50Vdc	0.35~1.4A	cUL
PMD-55A-S	SLP-DUA4550AUS	55W	0-10V	120~277Vac	10~50Vdc	0.35~1.4A	cUL
PMD-35A-L	SLP-DUA43501US	35W	0-10V	120~277Vac	10~50Vdc	0.35~1.4A	cUL
PMD-35D-L	SLP-D2A435D1EU	35W	DALI	220~240Vac	10~50Vdc	0.35~1.4A	CE, ENEC
PMD-35D-LU	SLP-DUA435D1US	35W	DALI	120~277Vac	10~50Vdc	0.35~1.4A	cUL
PMD-35A-S	SLP-DUA4350AUS	35W	0-10V	120~277Vac	10~50Vdc	0.35~1.4A	cUL
PMD-25A-S	SLP-DUA0250AUS	25W	0-10V	120~277Vac	10~50Vdc	0.35~1.0A	cUL
PMD-25D-SU	SLP-DUA025DAWW	25W	DALI	120~277Vac	10~50Vdc	0.35~1.0A	cUL, CE, ENEC

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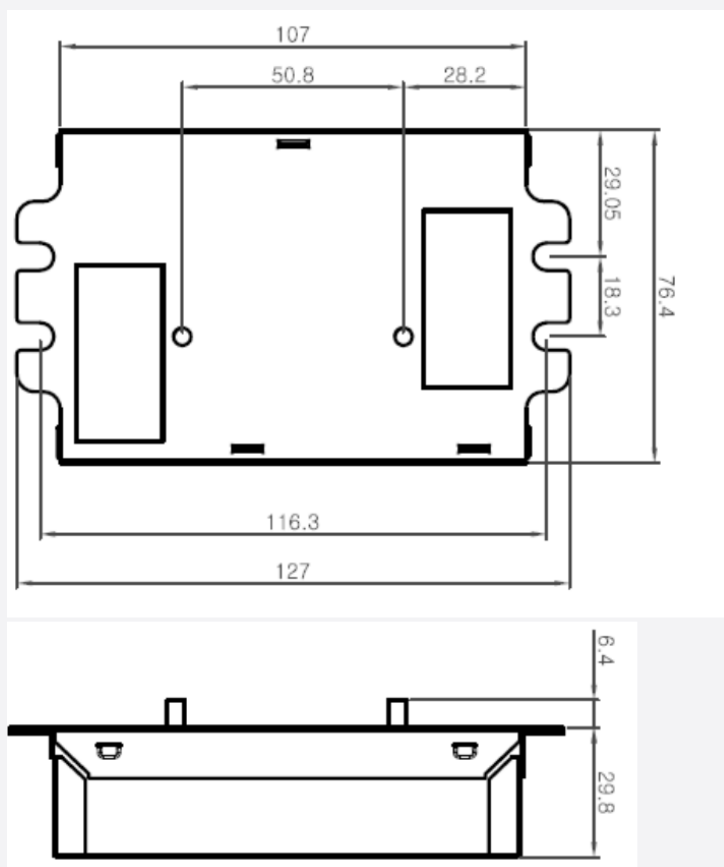
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## 1. Electrical Specification

Article	Symbol	Specification			Unit	Note
		Min.	Typ.	Max.		
<b>INPUT SPECIFICATIONS</b>						
Nominal Voltage	Vin	120		277	Vac	Full input range
Voltage Range		108		305	Vac	
Nominal Frequency	fin	50		60	Hz	
Frequency Range		47		63	Hz	
Input Current	Iin			0.6	A	@ 120Vac
Input Current	Iin			0.25	A	@ 277Vac
Total Harmonic Distortion	THD			20	%	@ full load, 120-277 Vac
Power Factor	PF	0.9			-	@ full load, 120-277Vac
Efficiency	H	83	88		%	@ full load, 120-277 Vac,
Protection Class			I		-	PE can be connected to either terminal or housing
Inrush Current				20	A <sub>pk</sub>	t <sub>width</sub> = Typ. 300 μs @ 50% I <sub>peak</sub> )
<b>OUTPUT SPECIFICATIONS</b>						
Nominal Voltage	Vo	10		50	Vdc	See graph
Nominal Current	Io	0.35		1.4	A	2channel ±5 % tolerance (@ max current)
Current Ripple				30	%	Output current ± 30%
Nominal Power	Po			55	W	Output wattage
Auxiliary Power Voltage			24		V	For nIO Supply Power
Auxiliary Power Current				100	mA	For nIO Supply power
Turn on delay time	Td			1.0	s	AC on 90%
<b>Dimming SPECIFICATIONS</b>						
Control 1			1 - 10			Analog
Control 1 Range			1 - 100		%	
Dimming Technique			PWM			
Standby Power				0.5	W	Dimming Off

Article	Symbol	Specification			Unit	Note
		Min.	Typ.	Max.		
<b>ENVIRONMENTAL SPECIFICATIONS</b>						
Ambient Temperature	$t_a$	-20		50	°C	
Case Temperature	$t_c$			70	°C	Measured at $t_c$ point as indicated on the product label
Storage Temperature	$t_s$	-20		85	°C	Cool down before operating
Relative Humidity		20		95	%	Not condensing
Surge Transient Protection	L / N			±2	kV	According to EN 61547
	LN / GND			±4	kV	
IP Rating			20		-	Suitable for indoor environment
Expected Lifetime		50,000			h	$t_c = 70\text{ °C}$ , full load
Dimensions	L x W x H		127 x 76.4 x 36.2		mm	
Net Weight			320		g	± 10%

## 2. Enclosure




### 3. Label

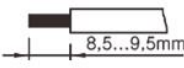
**SAMSUNG** Tc.

**PMD(Programmable Multichannel Driver)**  
SLP-DUA4550AUS

Vin : 120 – 277 V~    Vout : 10 – 50V ===  
 Iin : 0.6A            Iout : 0.35 – 1.4A  
 Freq : 50/60Hz      Vaux : 24V ===    Iaux : 0.1A  
 PF : > 0.90C        Pout : Max. 55W

 **UL**  
 E470825

wire preparation  
push in  
0.2 – 0.75□



Block Connection











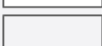
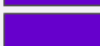




(GREEN)	P.E	Current Setting	GND	(GRAY)
			24V	(YELLOW)
			ADIM2+	(PURPLE)
			ADIM1+	(PURPLE)
(WHITE)	NEUTRAL		LED2-	(BLACK)
			LED2+	(RED)
			LED1-	(BLACK)
(BLACK)	LIVE		LED1+	(RED)

S/N

Made in Korea   
 Made in China   
**GROUNDING**  
 Driver case must be grounded

### 4. Connector

Bottom View

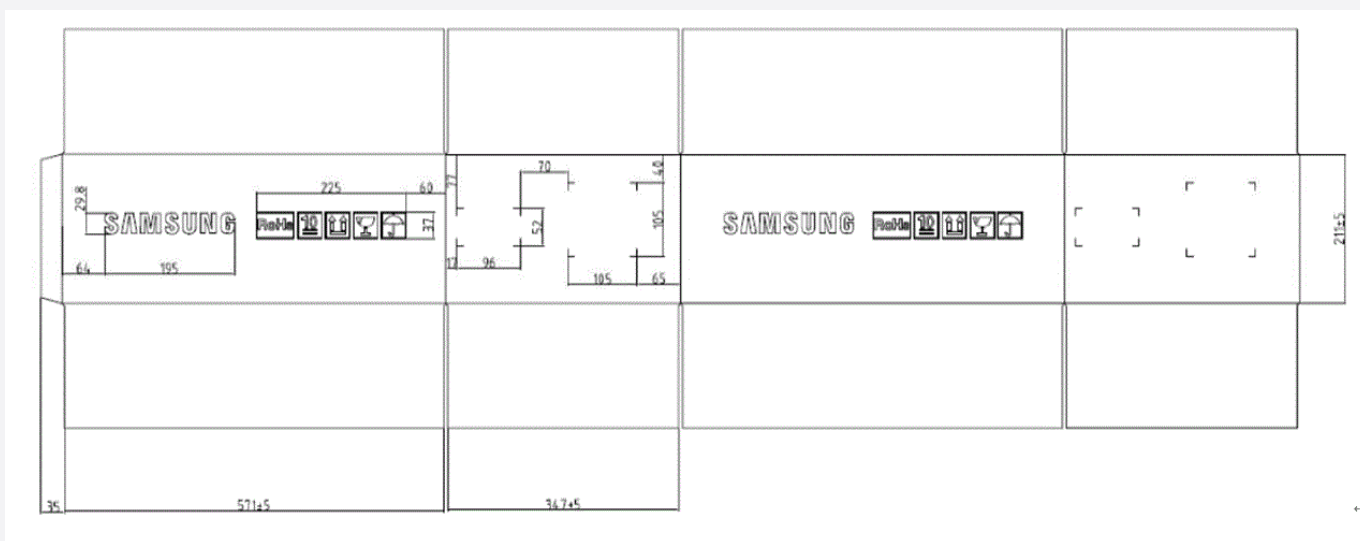
	Live	LED1+	
		LED1-	
		LED2+	
	Neutral	LED2-	
		ADIM1+	
		ADIM2+	
		24V	
	P.E	GND	

## 5. Packing

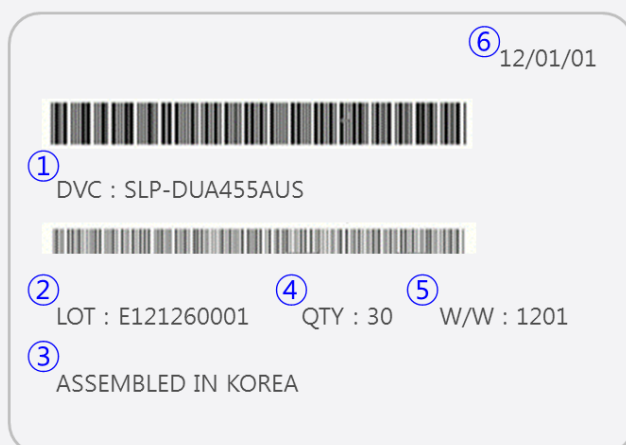
Material	Quantity (Max. pcs)	Dimension (mm)		
		Length	Width	Height
Outer Paper Box	40	571	347	211

- Pallet
  - 1100 x 1100 x 120mm
  - 1 Pallet : 20 Box =PSU 800ea(4 Box x 5 Floor)

- Box



- Box Label



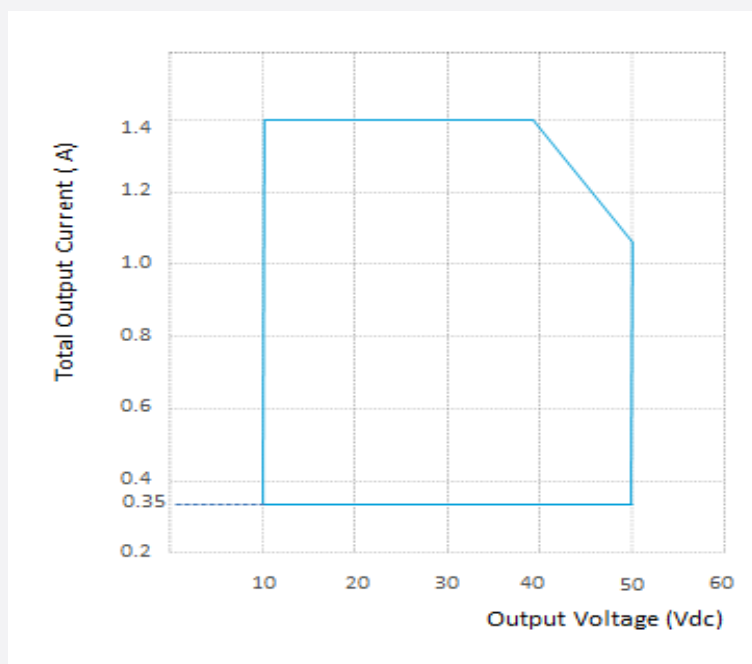
- ① Model Code
- ② Lot No.
- ③ Origin
- ④ Packing Quantity
- ⑤ Date of Manufacture (Weekly)
- ⑥ Date of Manufacture (Daily)

## 6. Protection

Items	Symbol	Condition	Function
Over Temperature Protection	OTP	Vin = Rated Voltage, Temp. exceeds 150°C	Current decreases (Auto Recovery)
Short Circuit Protection	SCP	Vin = Rated Voltage, LED short	No Output (Auto Recovery)
Open Lamp Protection	OLP	Vin = Rated Voltage, LED open	Vout = 60V Clamp (Auto Recovery)
Over Voltage Protection	OVP	Vin = Rated Voltage, F/B Open or Short	Vout = 60V Clamp (Auto Recovery)

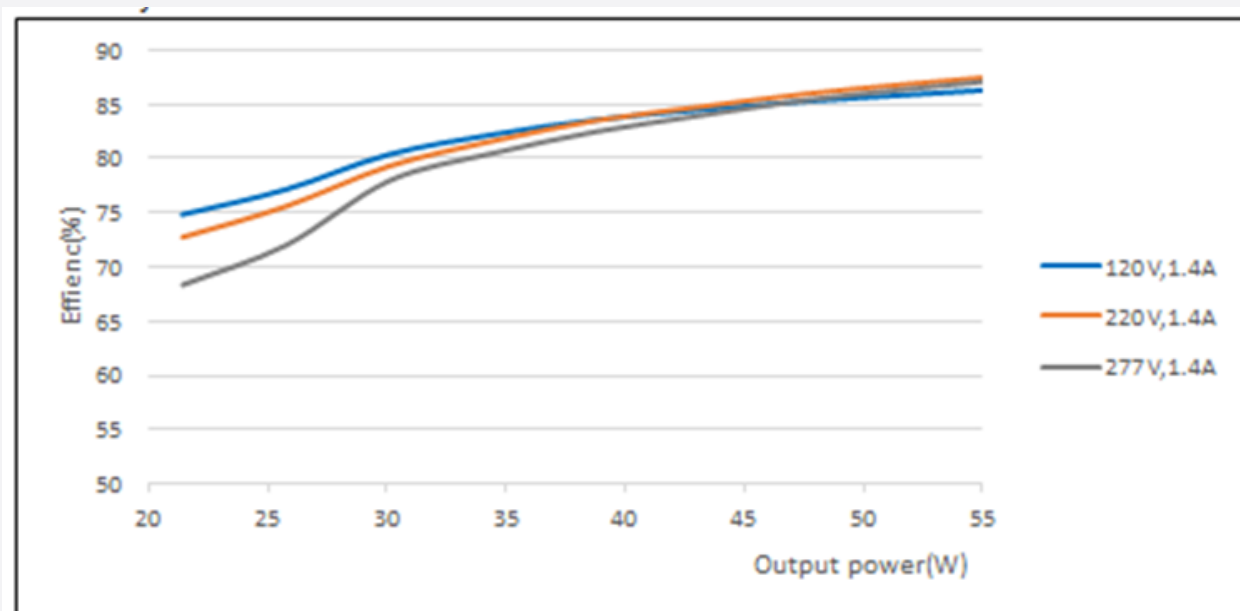


## 7. Operating Window

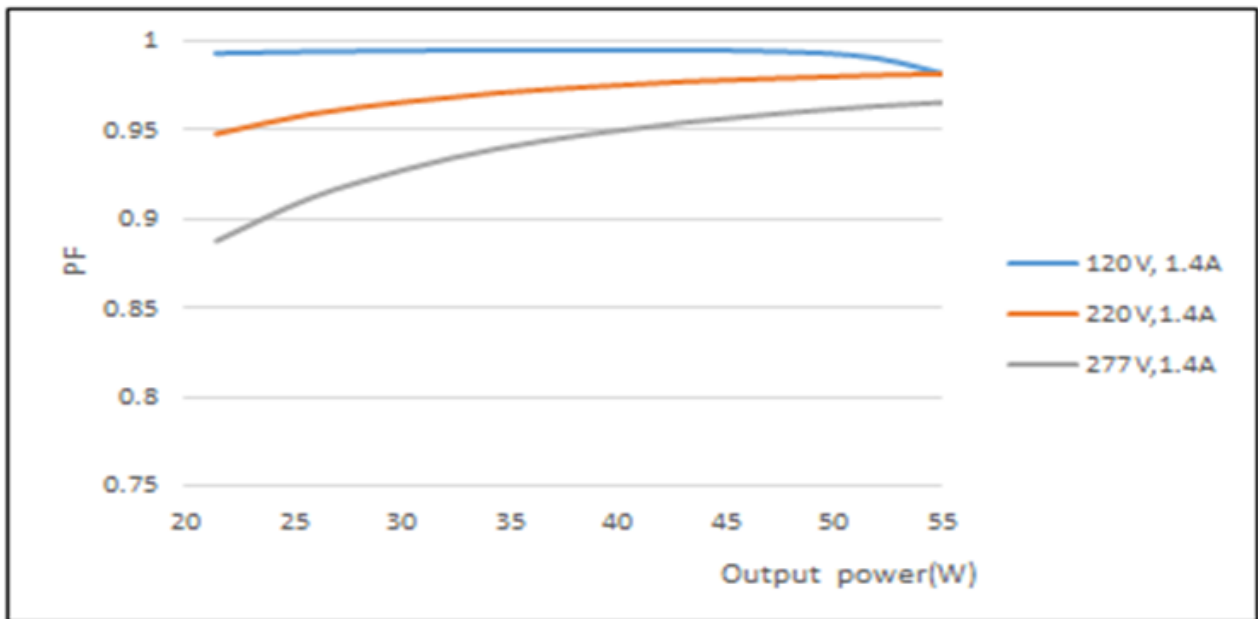


## 8. Performance

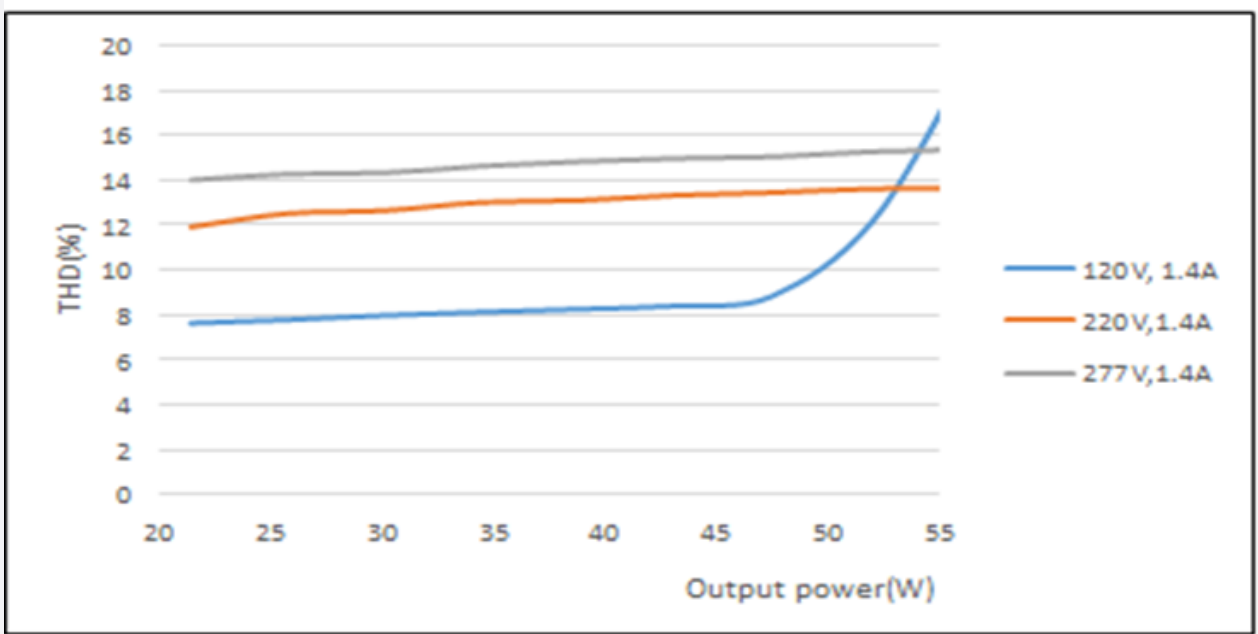
- Tested with connected LED load , Programmed for 1,400mA and at 25 °c ambient temperature.
- Efficiency



- Power Factor

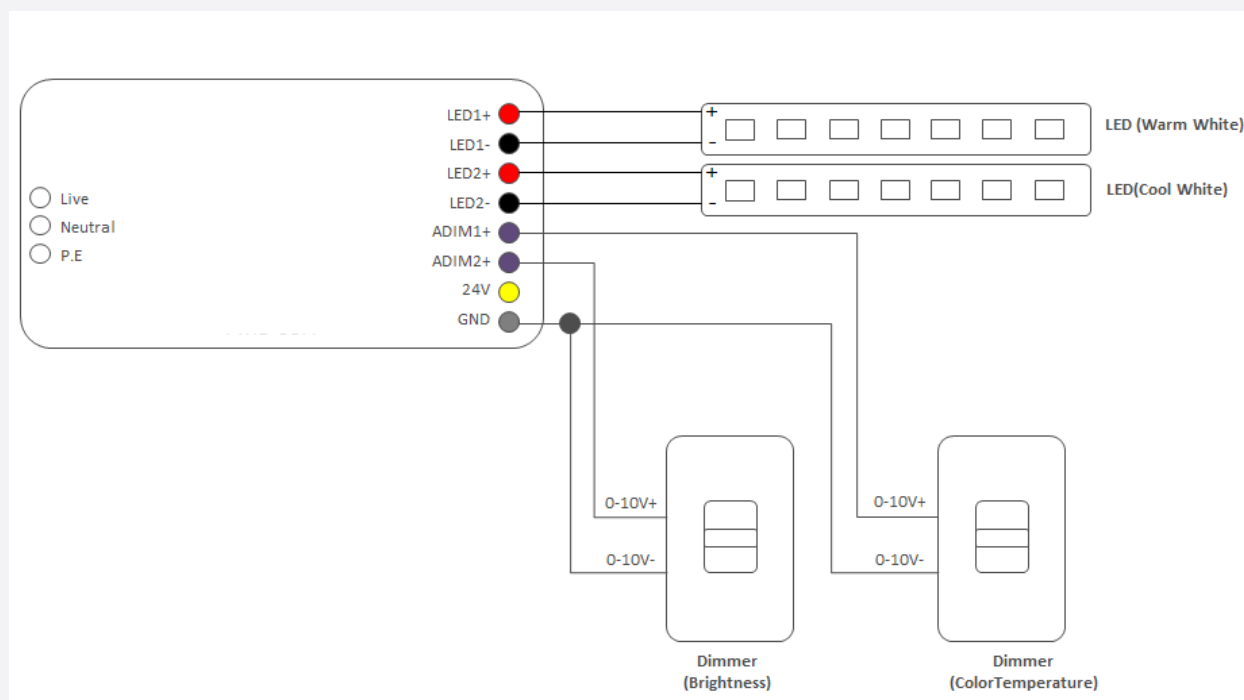


- Total Harmonic Distortion



## 9. Precaution

- To prevent the LED Driver from any defect, please handle and store it with care
  - Do not drop or give shock
  - Do not store in very humid location or at extreme temperature
  - Do not open or disassemble the product
- Static electricity or surge voltage may damage the components inside LED Driver, as such please observe proper anti-electrostatic working process
  - People handling the Driver should be well grounded (e.g. using ESD wrist band) and wear anti-static working clothes and gloves
  - All related devices and instruments in the production line should be well grounded (e.g. working table, measuring equipment, assembly jigs)
- Incorrect installation of the LED driver can cause irreparable damage to the LED driver and the connected LEDs. Pay attention when connecting the LEDs: polarity reversal results in damages the LED driver
  - Observe the correct polarity of output terminal : Please refer to the connection diagram as below



- Avoid input voltage exceeds the maximum rating, which will cause damage to the circuit and result in malfunction
- Specifications are subject to change without notice

# Legal and additional information.

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