TRIAC & 0-10V Dimmable LED Driver - Constant Voltage Output - KVE-TMWA Series 200W

PSCD-200W-24V KVE

ICES-005 Class P TYPE HL SELV RoHS Reach

Features

Output:	Constant Voltage
Range:	120-277VAC
PFC design:	Built-in active PFC function
Efficiency:	Up to 93%
Protections:	Short circuit/ over load/ over temperature
Heat dissipation:	Cooling by free air convection
Waterproof performance:	Full aluminum protection housing, for dry, damp & wet locations (US)
Design feature:	Output mode selection: PWM & Voltage reduce (VR) mode can be switched
Dimming function:	Phase dimming: work with forward phase /leading edge, MLV and Reverse phase /trailing edge, ELV, TRIAC dimmers. 0-10V dimming: 0-10V/1-10V/Potentiometer/10V PWM 4 in 1
Min load	Min load is 10%
Dimming range:	0-100% dimming depth 0.1%
Application:	Suitable for the application of LED lighting
Warranty:	2 years warranty

TRIAC & 0-10V Dimmable LED Driver - Constant Voltage Output - KVE-TMWA Series 200W

Specification

AVAILABLE ON ORDER - MOQ APPLICABLE
STANDARD INVENTORY

Model		PSCD-200W-12V KVE	PSCD-200W-24V KVE	PSCD-200W-36V KVE	PSCD-200W-48V KVE
Certificate		UL / FCC / ICES-005 / Class P / TYPE HL / SELV / ROHS / REACH			
Output	DC Voltage	12V	24V	36V	48V
	Voltage Tolerance	±4%	±3%	±3%	±2%
	Voltage Regulation	≤0.5%	≤0.5%	≤0.5%	≤0.5%
	Load Regulation	≤3%	≤2%	≤1%	≤1%
	Rated current	16.67A	8.33A	5.56A	4.17A
	Rated power	200W			
	Voltage Ripple	250mVp-p	250mVp-p	250mVp-p	250mVp-p
	Overshoot voltage	＜1%(full load)，＜2%(no load)			
	Output mode selection	When the blue&white wire and the yellow&gray wire at the output terminal are short-circuited, it indicates the Pulse-Width Modulation (PWM) mode. When they are disconnected, it indicates the Voltage Regulation (VR) mode of direct current voltage modulation. Switching the output mode requires the power to be cut off for 3 seconds and then powered on again for the mode switching to take effect.			
Input	Voltage Range	120-277VAC			
	Frequency Range	47 - 63Hz			
	Power Factor (Typ.) @ full load	＞0.98@120VAC ＞0.96@277VAC	＞0.98@120VAC ＞0.96@277VAC	＞0.98@120VAC ＞0.96@277VAC	＞0.98@120VAC ＞0.96@277VAC
	THD(Typ.) @ full load	＜15%@120V ＜15%@277V			
	Efficiency(Typ.) @ full load	≥86.5%@120VAC ≥90.0%@277VAC	≥89.0%@120VAC ≥92.0%@277VAC	≥89.0%@120VAC ≥93.0%@277VAC	≥90.0%@120VAC ≥92.0%@277VAC
	AC Current (Max.)	≤2.2A@120VAC ≤0.91A@277VAC			
	Standby power	≤0.5W			
	Inrush Current (Typ.)	40.8A,50%,480us@120VAC; 96.7A,50%192us@277VAC			
	Leakage current	<0.5mA			
Protection	Short Circuit	Hiccup mode, can be automatically restored after abnormal removal			
	Over Load	≥110% Constant - Current Mode, automatic recovery after exception			
	Over temperature	When the ambient temperature exceeds 55℃ ±5℃, the output is turned off			
Environment	Working TEMP.	-40~+50℃ (see below derating curve)			
	Working Humidity	20-95%RH non-condensing			
	Storage TEM.,Humidity	-40 - +80℃,10 - 95% RH non-condensing			
	TEMP.coefficient	±0.03%/℃(0 - 50℃)			
	Vibration	10 ~ 500Hz, 5G 12 minutes/cycle, X Y Z axis 72 minutes each			
Safety & EMC	Safety standards	UL8750; CSA-C22.2No.250.13			
	Withstand voltage	I/P-O/P:1.88KVac; I/P-FG:1.88KVac; O/P-FG:0.5KVac			
	Isolation resistance	I/P-O/P:100MΩ / 500VDC / 25℃ / 70% RH			

	Surge Immunity Test	AC Power Line:Differential Mode 2KV,Common Mode 4KV
	EMC Immunity	FCC/ICES do not request this test
	EMC Emission	FCCPart15SubpartB; ANSIC63.4a-2017; ICES-005Issue5(US)
Others	Net Weight	0.83KG
	Dimension	200*78*25.1mm(L*W*H)
	Packing	415*230*170mm 20 pcs / CTN
Notes	1. All parameters NOT specially mentioned are measured at 120VAC input, rated load and 25℃of ambient 2. temperature. Tolerance: includes set up tolerance and load regulation . 3. The power supply is considered as a component that will be operated in combination with final Equipment. Since EMC performance will be affected by the complete installation, the final equipment manufactures must be-qualify EMC Directive on the complete installation again. 4. Default states: The output mode is VR mode. The dimming curve is a gamma2.2 curve.	

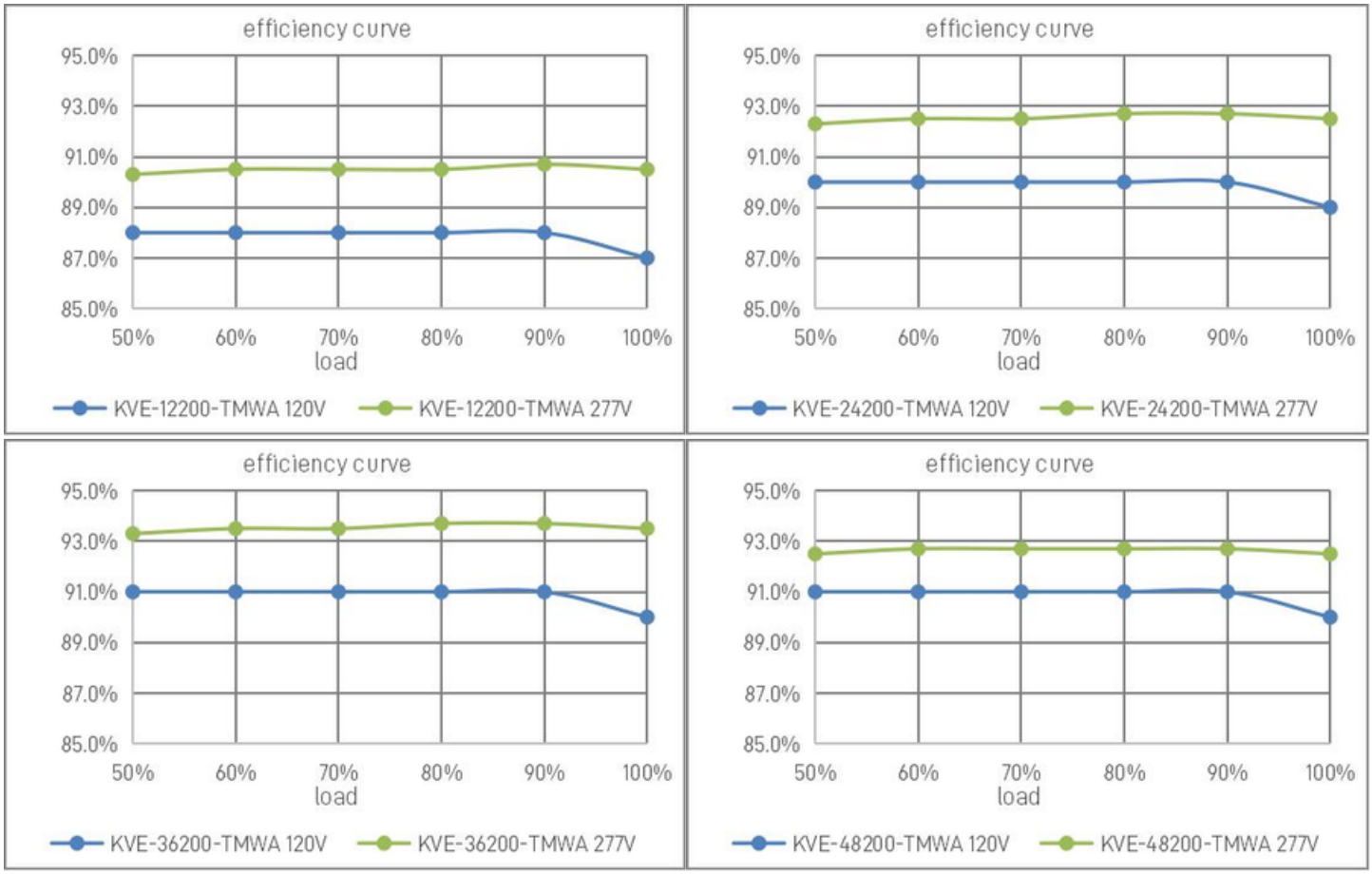
MCB recommendation

When the input voltage is 120Vac,the number of LED Driver matched by circuit breakers is as follows:		
MCBType	Level	The number of LED Driver
Ctype	10A	4
	13A	5
	16A	7
	20A	8
	25A	9
When the input voltage is 277Vac,the number of LED Driver matched by circuit breakers is as follows:		
MCBType	Level	The number of LED Driver
Ctype	10A	6
	13A	7
	16A	9
	20A	11
	25A	13

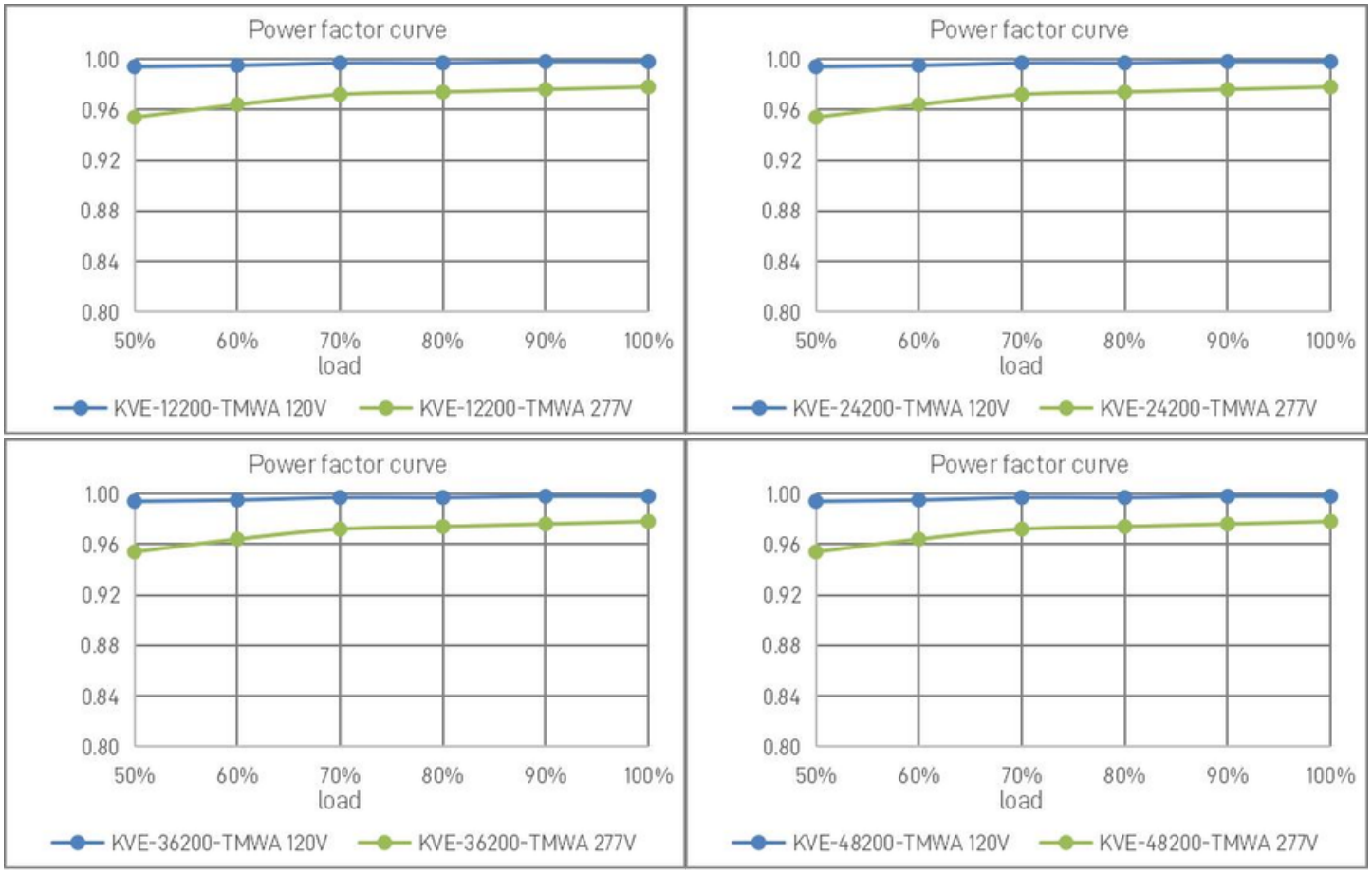
Note:

1. The above quantities of the led drivers connected on the Type C is recommended base on the maximum ambient temperature is 50℃.
2. The breaker should be selected according to the input rated voltage, input rated current, ambient temperature, and trip characteristic curve.

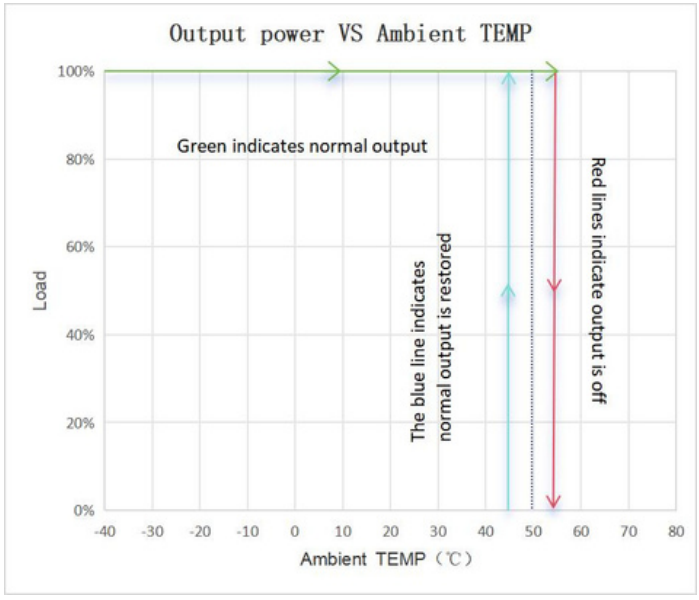
Efficiency Curve (efficiency vs output load)



Power factor curve(Power factor vs output load)

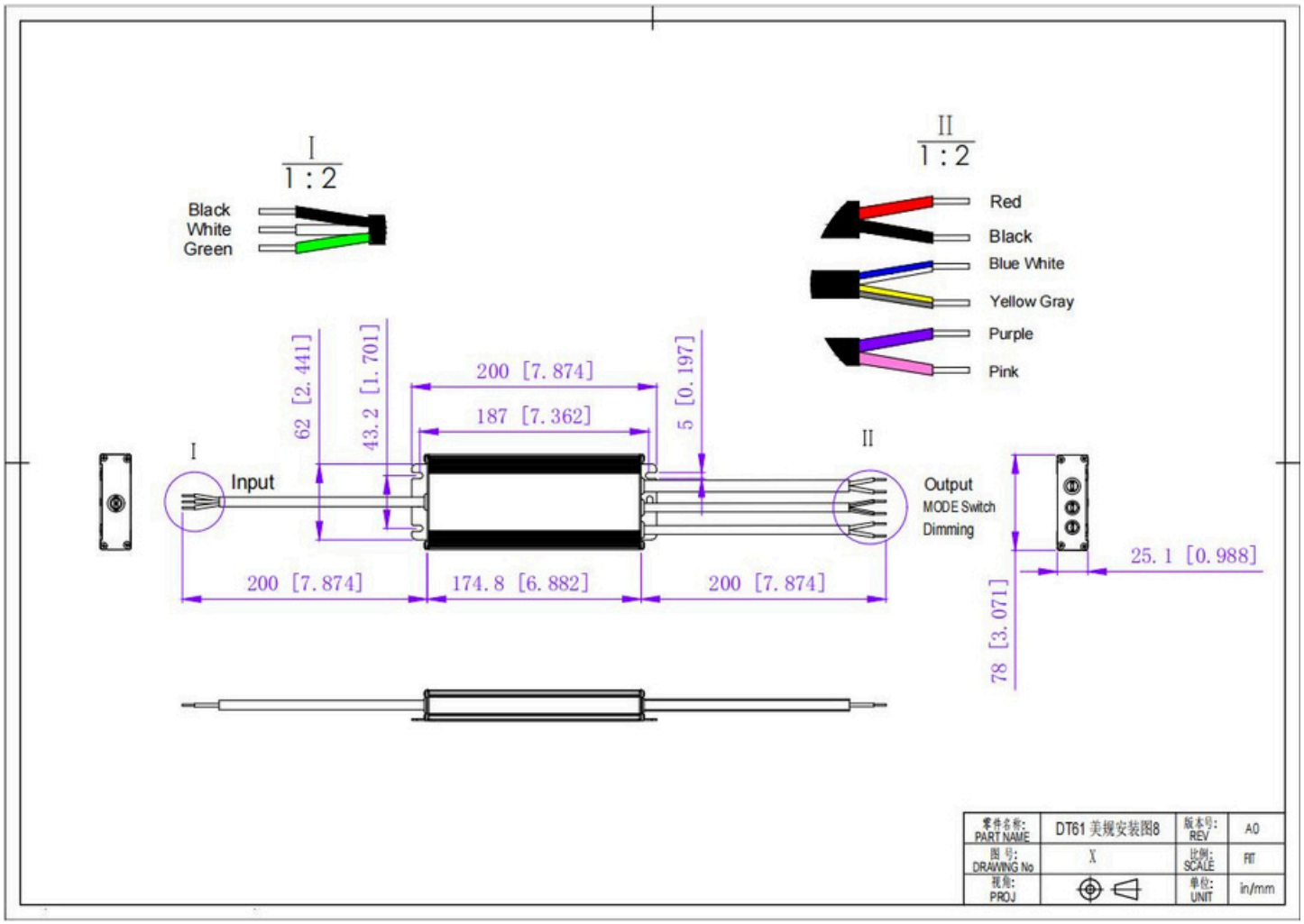


Derating Curve (output load vs TEMP.)



1. To extend their life, please refer to the Derating Curve and derate according to the temperature.
2. The output current of the LED driver should be selected according to the rated current of the lamp and the ambient temperature. Normally, we recommend the power supply to reserve a certain amount of load to extend LED driver's life.

Mechanical Specification



12V&24V&36V&48V Version

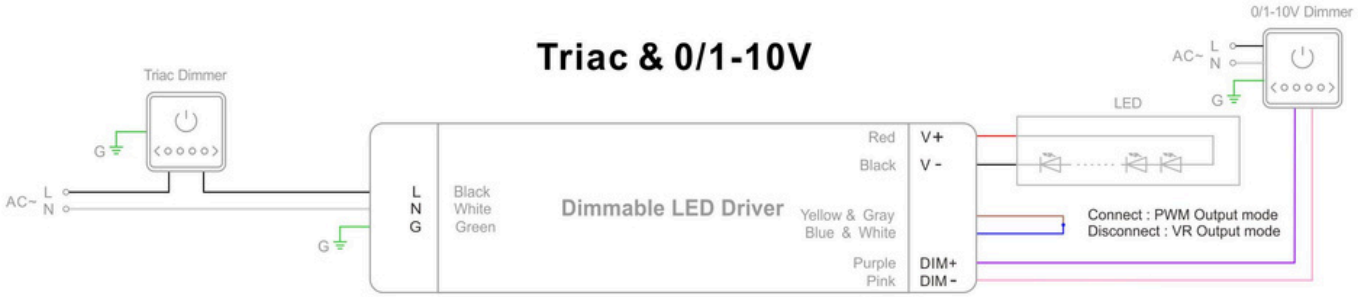
American wire gauge	
DT61	
Input wire	Black(L) White(N) Green(G)(3*18 AWG)(12V&24V&36V&48V)
Output wire	Red(+) and Black(-) (2*14 AWG)(12V Version)
	Red(+) and Black(-) (2*16 AWG)(24V & 36V Version)
	Red(+) and Black(-) (2*18 AWG)(48V Version)
Mode switch wire	Blue&White and Yellow&Gray (2*18 AWG)(12V&24V&36V&48V)
Dimming wire	Purple(D+) and Pink(D-) (2*18 AWG)(12V&24V&36V&48V)

Warm tips:

1. Recommended Max. Carrying Current (A) = wire diameter(mm^2) x 10A/mm^2
   For example: 1mm^2 output cable, Recommended Max. Carrying Current (A) = 1mm^2 x 10A/mm^2=10A
2. Any other requests for cable, we can customize.

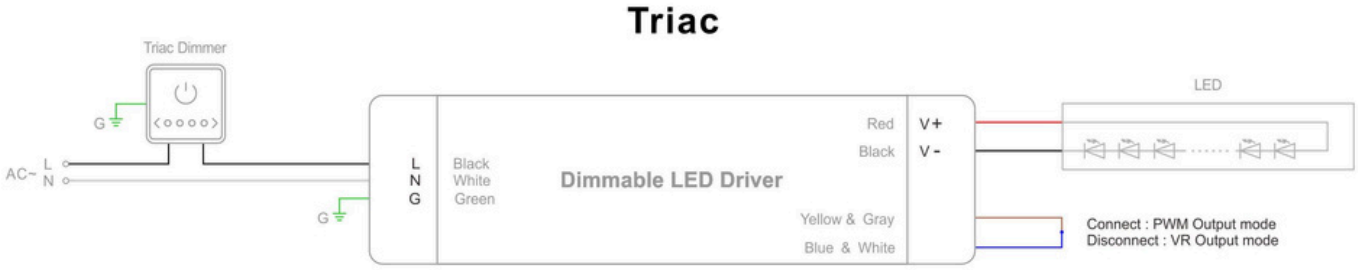
Dimming Operation and Connecting Diagram

Using two ways of dimming at the same time,you must be assured that LED lighting is up to the max. Brightness then you could operate with the other dimming;

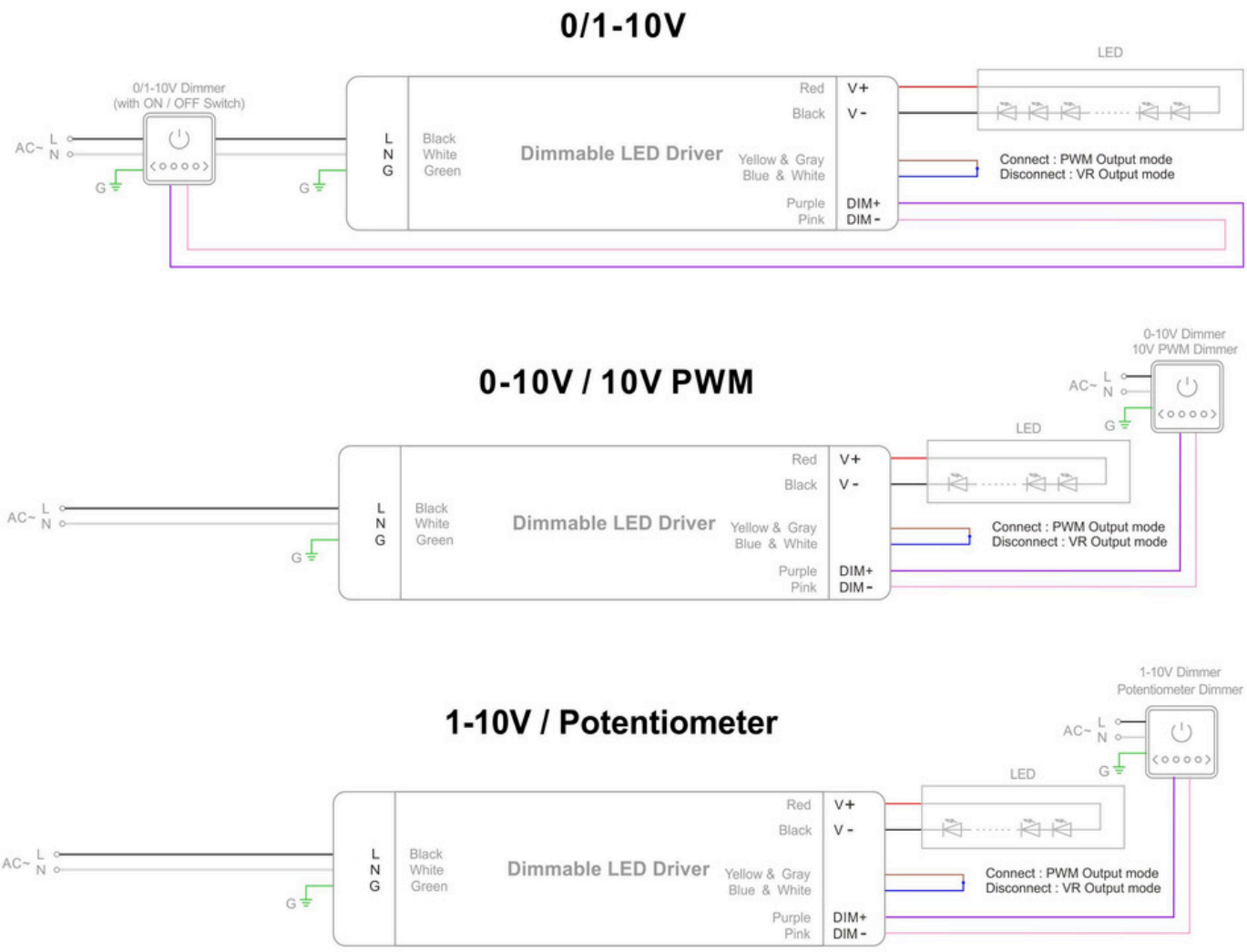


Using one dimming ---TRIAC/Phase cut dimming

1. The Pulse-Width Modulation (PWM) of output voltage can be adjusted through input terminal of the AC phase line(L) by connection a phase /Triac dimmer or lighting system.
2. Working with forward phase /leading edge, MLV and Reverse phase /trailing edge, ELV, TRIAC dimmers or light system. Min. loading is about 10%
3. Please try to use dimmers with power at least 1.5 times as the output power of the driver.
4.



Using one dimming ---0-10/ 1-10V/ 10V PWM/ Potentiometer dimming



Instructions

1 This driver should be installed by qualified and professional person.

. Please make sure the driver is installed with adequate ventilation around it to allow for heat dissipation.

2 Ensure that wiring is correct before test in order to avoid light and power supply damage.

. If driver Cannot work normally, don't maintain privately.

3

Have any questions, please contact Zhuhai Shengchang.

4 Please visit our website or contact us for more information! www.scpower.net.cn/en

.