

**PRECAUTIONS**

- 1) Please DO read through this user manual before installation.
- 2) This LED driver must be installed by a licensed electrician.
- 3) DO NOT install this LED driver if any part is missing or damaged. Contact your dealer for return or replacement.
- 4) Make sure the electricity to the wires you are working on is SHUT OFF; either the fuse is REMOVED or the circuit breaker is TURNED OFF. Turning the power off is NOT sufficient to prevent electrical shock.
- 5) This LED driver requires a area with proper ventilation, air circulation is important for heat dissipation.
- 6) Make sure the location can support the weight of this LED driver. Use the keyholes provided with LED driver case.
- 7) Make sure the input voltage, output voltage and wattage of this LED driver are appropriate for your application.
- 8) Recommended ambient temperature for this LED driver is between -40C and 40°C.  
Please DO refer to derating curve in PRODUCT SPECIFICATION if ambient temperature exceeds 40°C, Maximum 60°C.
- 9) When using TRIAC dimmer, please use TRIAC dimmer with rated power at least 1.5 times as the output power of this driver.

**SECURE CONNECTION**

- 1) Carefully open the wire compartment and remove the desired knockouts for both input and output.
- 2) Install wires with strain relief wire clamps, use only correctly sized wire connectors and wire gauge.
- 3) Only use certified components in accordance with National and Local Electrical Code.
- 4) For maximum mechanical integrity, carefully close the cover and fasten all the screws after the connection is done.

**INPUT CONNECTION**

- 1) Pull the input, neutral, dimmer wires (if the dimmer is 0/1~10V, or potentiometer, or 10V PWM) through the knockout.
- 2) Securely and tightly connect the AC input voltage wires to the White and Black driver wire leads.
- 3) Securely and tightly connect the dimmer wires(if the dimmer is 0/1~10V, or potentiometer, or 10V PWM) to the matching dimmer wires on this LED driver.
- 4) Always follow dimmer manufacturers' instruction.

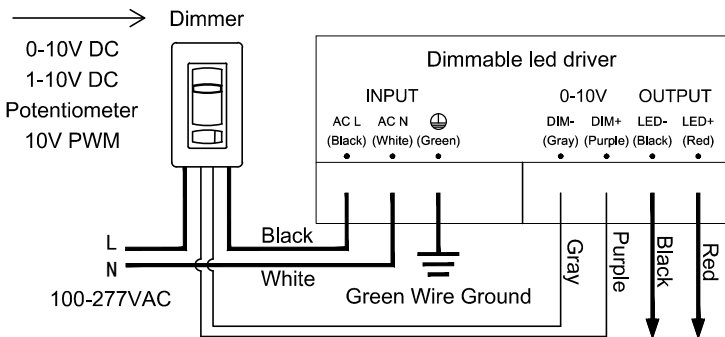
**OUTPUT CONNECTION**

- 1) Pull the low voltage wires through the output knockout.
- 2) Match and secure (LED+ red & LED- black) driver output leads to the low voltage wires. Use appropriate wire gauge.
- 5) Do not simultaneously connect two dimming controllers.  
For example, do not connect both PWM low voltage and TRIAC dimmers at the same time. The dimmers will not function.

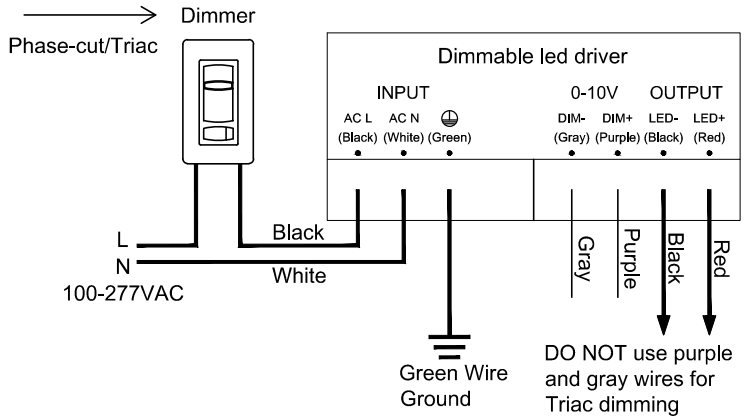
**PROPER GROUNDING**

- 1) Ensure the driver is grounded to the enclosure. The enclosure must be grounded per Electrical Code.
- 2) Connect the green wire to external ground source.

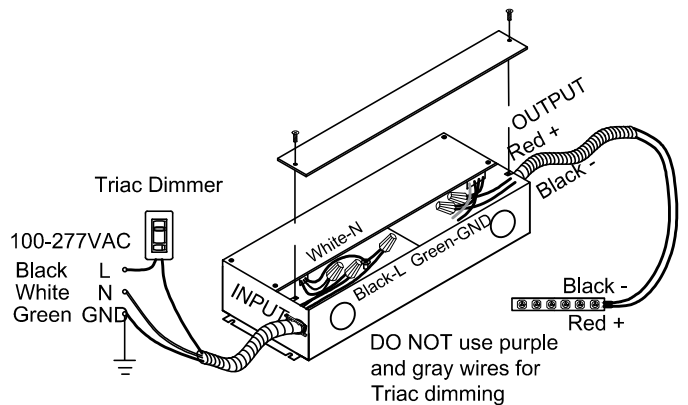
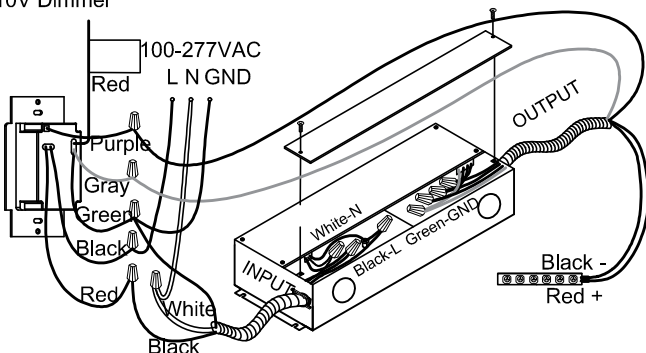
0/1-10V dimming wiring diagram



Triac dimming wiring diagram



0/1-10V Dimmer



Limited 5-year warranty from order delivered. Failure to use this LED driver for its intended purpose or improper installation will void warranty. The warranty does not cover labor or expense to remove or install defective, repaired or replaced products. Must follow Dimmer Manufacturer wiring diagram. Please feel free to contact us if you have any issue during installation and application. Please save this user manual as purchase proof and future reference. For our latest information and updates, always consult with us through your dealer or send email to support@wohoda.com.



Class 2 TYPE HL



# PRODUCT SPECIFICATION

Triac/0-10V/1-10V/Potentiometer/10V PWM 5 in 1 Dimmable led driver

KVG-12060-DWJ

## ■ Features

- Output constant voltage
- UL, cUL listed, Class 2 unit, Type HL rated. FCC
- Universal AC input: 100-277VAC
- Power Factor: up to 0.99
- High efficiency : up to 80%
- Load: 10-100%
- Protection: short circuit/over loading/ over temperature
- PWM output, does not change the color index
- Full protection metal case, for dry, damp, wet location
- Flicker-free
- 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
- Dimming range: 0-100%
- Suitable for LED lighting and moving sign applications



Class 2  
TYPE HL



<b>Model</b>		<b>KVG-12060-DWJ</b>			
<b>Certificates</b>		UL, cUL listed, Class 2 unit, Type HL rated, FCC			
<b>Output</b>	DC Voltage	12V			
	Rated Current	5A			
	Rated Power	60W			
	Voltage Tolerance	±0.5V			
	Voltage Regulation	±0.5%			
	Load Regulation	±1%			
<b>Input</b>	Voltage Range	100-277VAC			
	Frequency Range	47-63Hz			
	Power Factor (Typ.) @ full load	0.98@120VAC	0.95@277VAC	0.98@120VAC	0.95@277VAC
	THD (Typ.) @ full load	<20%			
	Efficiency (Typ.) @ full load	83% @120Vac	85%@277Vac	83% @120Vac	84%@277Vac
	AC Current (Max.)	0.5A@100Vac			
	Inrush Current (Typ.)	14A, 50%, 780us @120Vac	15A, 50%, 660us @277Vac		
	Leakage current	<0.50mA			
<b>Protection</b>	Short Circuit	shut down o/p voltage, re-power on to recover after fault condition is removed			
	Over Loading	≤120% Hiccup mode,recovers automatically after fault condition is removed			
	Over temperature	100°C±0°C shut down o/p voltage, automatically recover after cooling.			
<b>Environment</b>	Working TEMP.	-40~+60°C (see below derating curve)			
	Working Humidity	20~90%RH, non-condensing			
	Storage TEMP. Humidity	-40~+80°C, 10~95%RH			
	TEMP .coefficient	±0.03%/°C (0~50°C)			
	Vibration	10~500Hz, 5G 10min./1 cycle,period for 60min. each along X,Y,Z axes			
<b>Safety&amp; EMC</b>	Safety standards	UL8750+UL1310			
	Withstand voltage	I/P-O/P:1.88KVAC			
	Isolation resistance	I/P-O/P:100MΩ/500VDC/25°C/70% RH			
	EMC EMISSION	FCC Part 15 B			

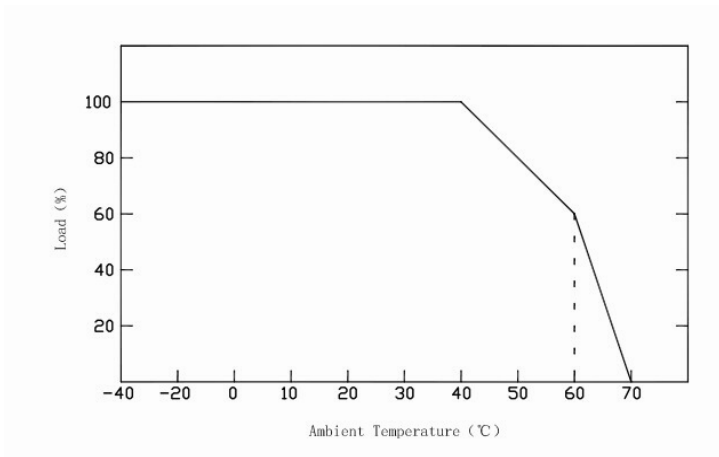
# PRODUCT SPECIFICATION

Triac/0-10V/1-10V/Potentiometer/10V PWM 5 in 1 Dimmable led driver

KVG-12060-DWJ

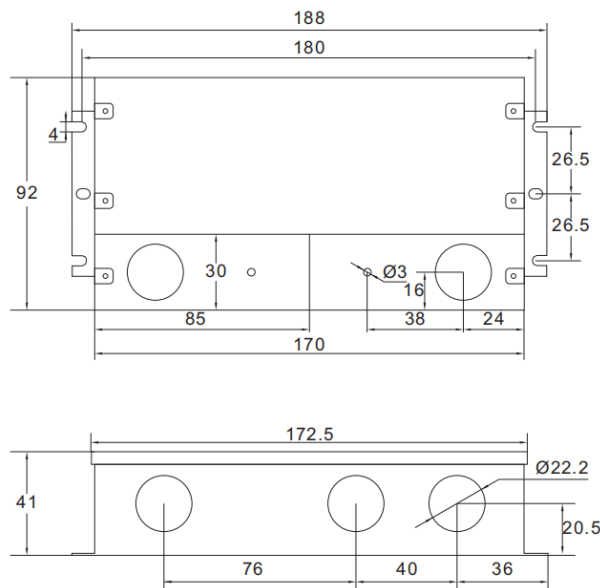
others	Net. Weight	1.05Kg
	Size	188*92*41mm (L*W*H)
	packing	20PCS/CTN 415*265*235mm (L*W*H)
Notes	All parameters if NOT specially mentioned are measured at 120VAC input , rated load and 25°Cof ambient temperature.	

## Derating Curve



※To extend their life, please refer to the Derating Curve and derate according to the temperature.

## Mechanical Specification



Unite: mm

Tolerance: 0.5-2mm

# PRODUCT SPECIFICATION

Triac/0-10V/1-10V/Potentiometer/10V PWM 5 in 1 Dimmable led driver

KVG-12060-DWJ

## ■ List of Phase/TRIAC Dimmer Tested

※Following are only the list of phase/TRIAC dimmer models tested in our lab, for your reference.

※The compatible Phase/TRIAC dimmers with this LED driver are not limited to this list.

Brand	Model	Input Voltage	Dimming Range
LUTRON	SCL-153PR-WH	100-130V	0-100%
LUTRON	DVCL-153PR-WH	100-130V	0-100%
LUTRON	DVWCL-153PH-LA	100-130V	0-100%
LUTRON	CTCL-153PDH-LA	100-130V	0-100%
LUTRON	TGCL-153PR-WH	100-130V	0-100%
LUTRON	TGCL-153PH-WH	100-130V	0-100%
LUTRON	MACL-153MH-LA	100-130V	1-100%
LUTRON	MIR-600M	100-130V	1-100%
LUTRON	CT-600PR-IV	100-130V	0-100%
LUTRON	CT-600PR-WH	100-130V	0-100%
LUTRON	CT-103PR-WH	100-130V	0-100%
LUTRON	DV-600PR-BL	100-130V	0-100%
LUTRON	DV-600PR-WH	100-130V	0-100%
LUTRON	TG-600PR-LA	100-130V	0-100%
LUTRON	TG-600PR-IV	100-130V	0-100%
LUTRON	TG-600PR-WH	100-130V	0-100%
LUTRON	TG-10PR-WH	100-130V	0-100%
LUTRON	S-600PR-WH	100-130V	0-100%
LUTRON	MRF2-6ND-120-AL	100-130V	0-100%
LUTRON	MRF2-6CL-GR	100-130V	1-100%
LUTRON	DZ6HD	100-130V	3-100%
LUTRON	PD-6WCL	100-130V	1-100%
LUTRON	SELV-300P	100-130V	1-100%
LUTRON	MSELV-600M	100-130V	0-100%
LUTRON	MEF2-6ELV-120	100-130V	0-100%
LUTRON	NTLV-600-277-WH	277V	0-100%
LUTRON	ST-12P-277	277V	3-100%
LUTRON	NTF-10-277	277V	0-100%
LEVITON	VPI06-1LZ	100-130V	1-100%
LEVITON	TTI06-1LZ	100-130V	1-100%
LEVITON	IPL06	100-130V	0-100%
LEVITON	DZ6HD	100-130V	1-100%
LEVITON	6674	100-130V	1-100%
LEVITON	6672	100-130V	1-100%
LEVITON	TBL03	100-130V	1-100%
LEVITON	6602	100-130V	0-100%
LEVITON	6683	100-130V	0-100%