



■ Features

- Wide input range 180 ~ 528VAC
- Constant Voltage + Constant Current mode output
- Metal housing with Class I design
- Built-in active PFC function
- IP67 / IP65 rating for indoor or outdoor installations
- Function options: output adjustable via potentiometer; 3 in 1 dimming (dim-to-off) ; Smart timer dimming
- Typical lifetime>50000 hours
- 5 years warranty

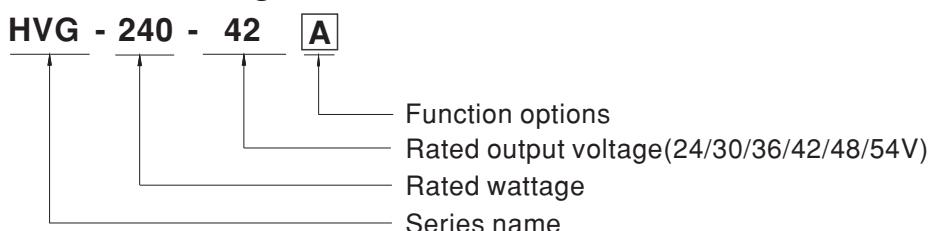
■ Applications

- LED street lighting
- LED high-bay lighting
- Parking space lighting
- LED fishing lamp
- LED greenhouse lighting
- Type "HL" for use in Class I , Division 2 hazardous (Classified) location.

■ Description

HVG-240 series is a 240W AC/DC LED power supply featuring the dual mode constant voltage and constant current output. HVG-240 operates from 180~528VAC and offers models with different rated voltage ranging between 24V and 54V. Thanks to the high efficiency up to 93%, with the fanless design, the entire series is able to operate for -40°C ~ +90°C case temperature under free air convection. The design of metal housing and IP67/IP65 ingress protection level allows this series to fit both indoor and outdoor applications. HVG-240 is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for LED lighting system.

■ Model Encoding



Type	IP Level	Function	Note
A	IP65	Io and Vo adjustable through built-in potentiometer.	In Stock
B	IP67	3 in 1 dimming function (0~10Vdc, 10V PWM signal and resistance)	In Stock
AB	IP65	Io and Vo adjustable through built-in potentiometer & 3 in 1 dimming function (0~10Vdc, 10V PWM signal and resistance)	In Stock
Dx	IP67	Built-in Smart timer dimming function by user request.	By request
D2	IP67	Built-in Smart timer dimming and programmable function.	By request



240W Constant Voltage + Constant Current LED Driver

HVG-240 series

SPECIFICATION

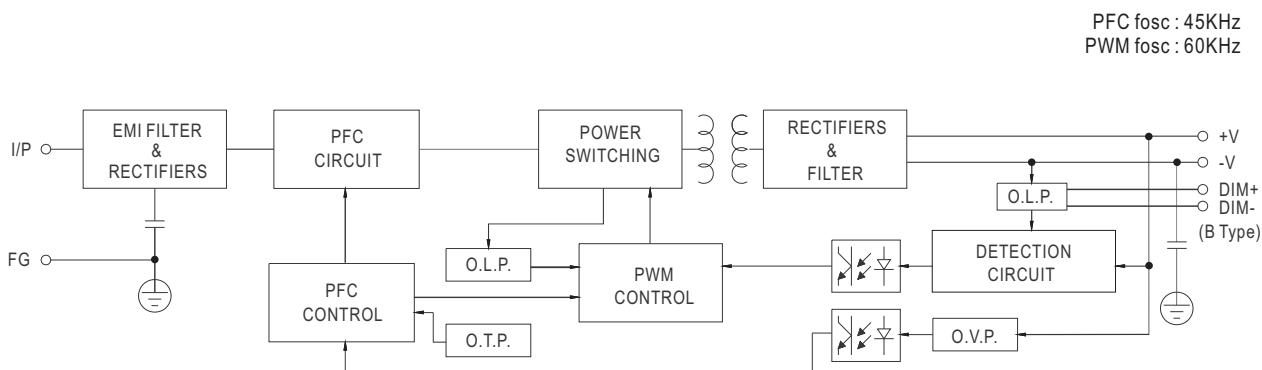
MODEL	HVG-240-24	HVG-240-30	HVG-240-36	HVG-240-42	HVG-240-48	HVG-240-54					
OUTPUT	DC VOLTAGE	24V	30V	36V	42V	48V					
	CONSTANT CURRENT REGION Note.4	12 ~ 24V	15 ~ 30V	18 ~ 36V	21 ~ 42V	24 ~ 48V					
	RATED CURRENT	10A	8A	6.7A	5.7A	5A					
	RATED POWER	240W	240W	241.2W	239.4W	240W					
	RIPLPE & NOISE (max.) Note.2	150mVp-p	200mVp-p	250mVp-p	250mVp-p	250mVp-p					
	VOLTAGE ADJ. RANGE	Adjustable for A/AB-Type only (via the built-in potentiometer)									
		22.4 ~ 25.6V	28 ~ 32V	33.5 ~ 38.5V	39 ~ 45V	44.8 ~ 51.2V					
	CURRENT ADJ. RANGE	Adjustable for A/AB-Type only (via the built-in potentiometer)									
		5 ~ 10A	4 ~ 8A	3.3 ~ 6.7A	2.85 ~ 5.7A	2.5 ~ 5A					
	VOLTAGE TOLERANCE Note.3	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%					
INPUT	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%					
	LOAD REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%					
	SETUP, RISE TIME Note.6	500ms, 150ms /230VAC, 347VAC, 480VAC									
	HOLD UP TIME (Typ.)	12ms/347VAC, 480VAC									
	VOLTAGE RANGE Note.5	180 ~ 528VAC 254VDC ~ 747VDC (Please refer to "STATIC CHARACTERISTIC" section)									
	FREQUENCY RANGE	47 ~ 63Hz									
	POWER FACTOR (Typ.)	PF ≥ 0.98/230VAC, PF ≥ 0.97/277VAC, PF ≥ 0.95/347VAC, PF ≥ 0.93/480VAC @full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)									
	TOTAL HARMONIC DISTORTION	THD < 20%(@ load ≥ 50%/230VAC, 277VAC, 347VAC, @ load ≥ 60%/480VAC) (Please refer to "TOTAL HARMONIC DISTORTION (THD)" section)									
	EFFICIENCY (Typ.)	92.5%	92.5%	93%	93%	92.5%					
	AC CURRENT (Typ.)	0.8A / 347VAC	0.6A / 480VAC								
PROTECTION	INRUSH CURRENT(Typ.)	COLD START 50A(twidth=532μs measured at 50% Ipeak) at 480VAC; Per NEMA 410									
	MAX. NO. of PSUs on 16A CIRCUIT BREAKER	4unit(circuit breaker of type B) / 6units(circuit breaker of type C) at 480VAC									
	LEAKAGE CURRENT	<0.75mA / 480VAC									
	OVER CURRENT	95 ~ 108% Constant current limiting, recovers automatically after fault condition is removed									
ENVIRONMENT	SHORT CIRCUIT	Constant current limiting, recovers automatically after fault condition is removed									
	OVER VOLTAGE	27 ~ 34V	33 ~ 39V	43 ~ 49V	48 ~ 54V	55 ~ 63V					
		Shut down and latch off o/p voltage, re-power on to recover									
	OVER TEMPERATURE	Shut down and latch off o/p voltage, re-power on to recover									
SAFETY & EMC	WORKING TEMP.	Tcase=-40 ~ +90°C (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)									
	MAX. CASE TEMP.	Tcase=+90°C									
	WORKING HUMIDITY	20 ~ 95% RH non-condensing									
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH non-condensing									
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 60°C)									
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes									
OTHERS	SAFETY STANDARDS	UL8750 (type "HL"), CSA C22.2 No. 250.13-12, EAC TP TC 004, IP65 or IP67 approved									
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC	I/P-FG:2KVAC	O/P-FG:1.5KVAC							
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH									
	EMC EMISSION	Compliance to FCC Part 15 Subpart B, EAC TP TC 020									
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, light industry level (surge immunity Line-Earth 4KV, Line-Line 2KV), EAC TP TC 020									
NOTE	MTBF	114.5 hrs min. MIL-HDBK-217F (25°C)									
	DIMENSION	254.2*68*38.8mm (L*W*H)									
	PACKING	1.31Kg; 12pcs/15.7Kg/0.78CUFT									
1. All parameters NOT specially mentioned are measured at 347VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. Please refer to "DRIVING METHODS OF LED MODULE". 5. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details. 6. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time. 7. The driver 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 manufacturers must re-qualify EMC Directive on the complete installation again. 8. This series meets the typical life expectancy of >50,000 hours of operation when Tcase, particularly (t _c) point (or TMP, per DLC), is about 80°C or less. 9. Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.com . 10. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft). 11. For any application note and IP water proof function installation caution, please refer our user manual before using. https://www.meanwell.com/Upload/PDF/LED_EN.pdf											
※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx											



240W Constant Voltage + Constant Current LED Driver

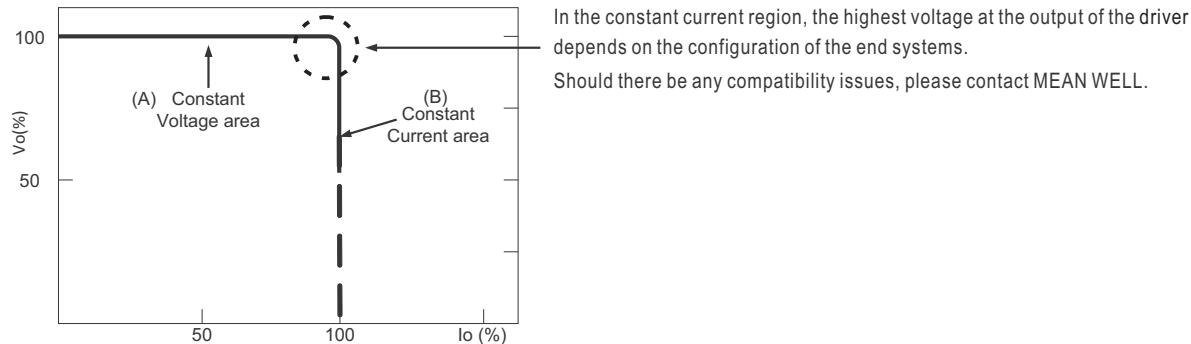
HVG-240 series

Block Diagram

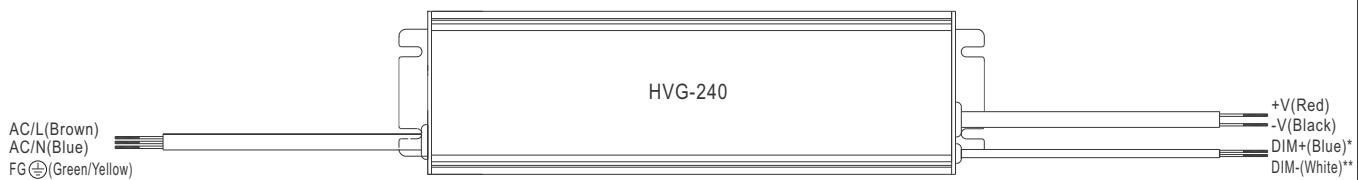


DRIVING METHODS OF LED MODULE

※ This series is able to work in either Constant Current mode (a direct drive way) or Constant Voltage mode (usually through additional DC/DC driver) to drive the LEDs.



■ DIMMING OPERATION

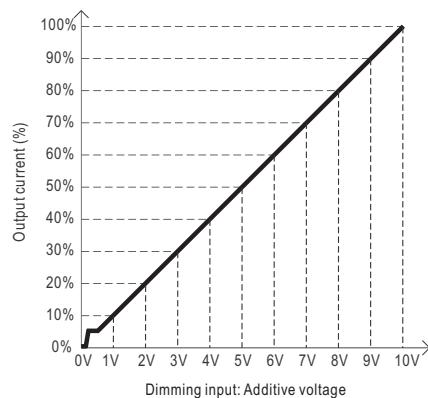
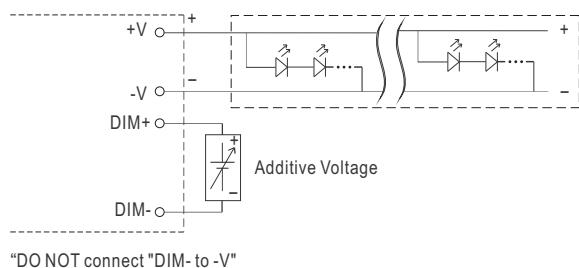


※ 3 in 1 dimming function (for B/AB-Type)

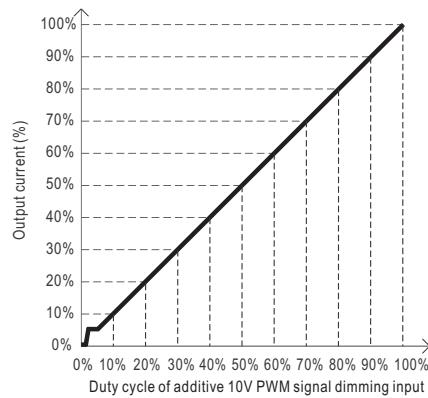
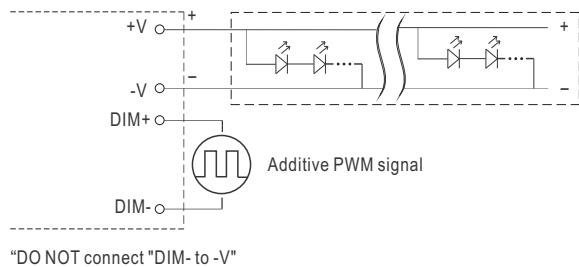
- Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-: 0 ~ 10VDC, or 10V PWM signal or resistance.
- Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.
- Dimming source current from power supply: 100 μ A (typ.).

* DIM+ for B/AB-Type
PROG+ for D2-Type
* DIM- for B/AB-Type
PROG- for D2-Type

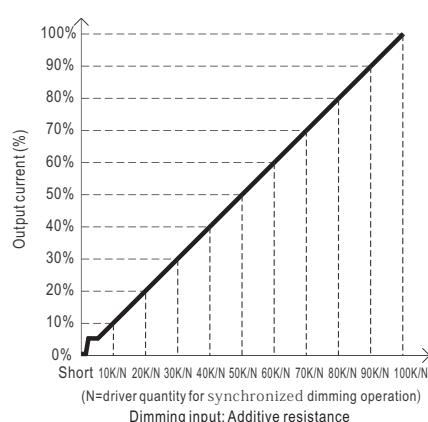
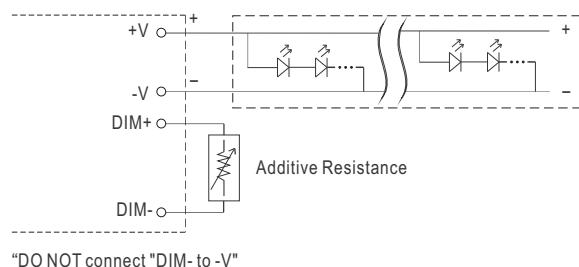
◎ Applying additive 0 ~ 10VDC



◎ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):



◎ Applying additive resistance:



Note : 1. Min. dimming level is about 5% and the output current is not defined when 0% < Iout < 5%.

2. The output current could drop down to 0% when dimming input is about 0k Ω or 0Vdc, or 10V PWM signal with 0% duty cycle.



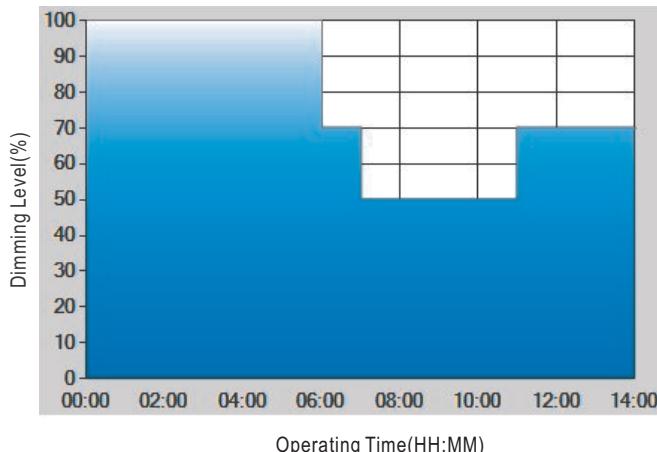
240W Constant Voltage + Constant Current LED Driver

HVG-240 series

※ Smart timer dimming function (for Dxx-Type by User definition)

MEAN WELL Smart timer dimming primarily provides the adaptive proportion dimming profile for the output constant current level to perform up to 14 consecutive hours. 3 dimming profiles hereunder are defined accounting for the most frequently seen applications. If other options may be needed, please contact MEAN WELL for details.

Ex: (○) D01-Type: the profile recommended for residential lighting



Set up for D01-Type in Smart timer dimming software program:

	T1	T2	T3	T4
TIME**	06:00	07:00	11:00	---
LEVEL**	100%	70%	50%	70%

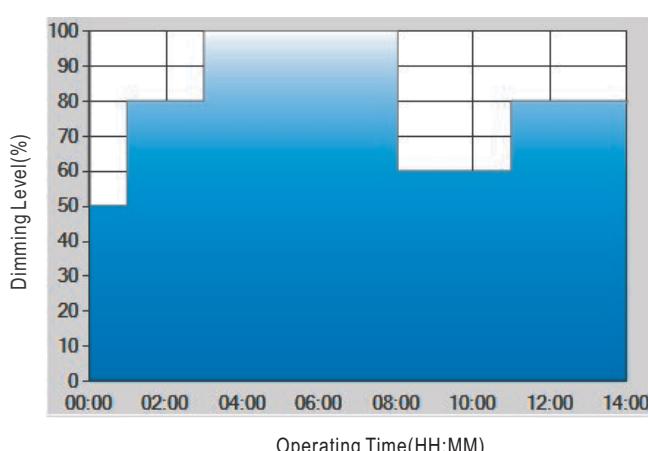
**: TIME matches Operating Time in the diagram whereas LEVEL matches Dimming Level.

Example: If a residential lighting application adopts D01-Type, when turning on the power supply at 6:00pm, for instance:

- [1] The power supply will switch to the constant current level at 100% starting from 6:00pm.
- [2] The power supply will switch to the constant current level at 70% in turn, starting from 0:00am, which is 06:00 after the power supply turns on.
- [3] The power supply will switch to the constant current level at 50% in turn, starting from 1:00am, which is 07:00 after the power supply turns on.
- [4] The power supply will switch to the constant current level at 70% in turn, starting from 5:00am, which is 11:00 after the power supply turns on.

The constant current level remains till 8:00am, which is 14:00 after the power supply turns on.

Ex: (○) D02-Type: the profile recommended for street lighting



Set up for D02-Type in Smart timer dimming software program:

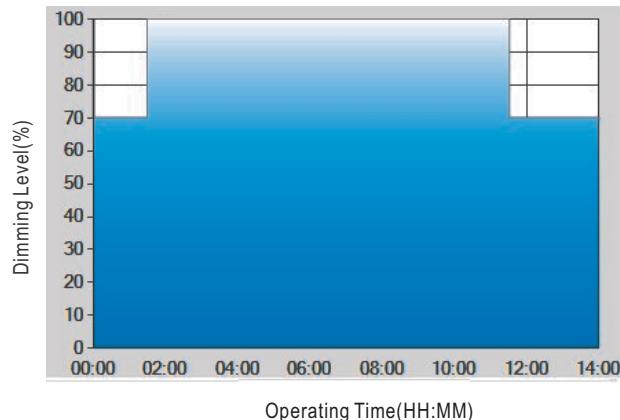
	T1	T2	T3	T4	T5
TIME**	01:00	03:00	8:00	11:00	---
LEVEL**	50%	80%	100%	60%	80%

**: TIME matches Operating Time in the diagram whereas LEVEL matches Dimming Level.

Example: If a street lighting application adopts D02-Type, when turning on the power supply at 5:00pm, for instance:

- [1] The power supply will switch to the constant current level at 50% starting from 5:00pm.
- [2] The power supply will switch to the constant current level at 80% in turn, starting from 6:00pm, which is 01:00 after the power supply turns on.
- [3] The power supply will switch to the constant current level at 100% in turn, starting from 8:00pm, which is 03:00 after the power supply turns on.
- [4] The power supply will switch to the constant current level at 60% in turn, starting from 1:00am, which is 08:00 after the power supply turns on.
- [5] The power supply will switch to the constant current level at 80% in turn, starting from 4:00am, which is 11:00 after the power supply turns on. The constant current level remains till 6:30am, which is 14:00 after the power supply turns on.

Ex: (○) D03-Type: the profile recommended for tunnel lighting



Set up for D03-Type in Smart timer dimming software program:

	T1	T2	T3
TIME**	01:30	11:00	---
LEVEL**	70%	100%	70%

**: TIME matches Operating Time in the diagram whereas LEVEL matches Dimming Level.

Example: If a tunnel lighting application adopts D03-Type, when turning on the power supply at 4:30pm, for instance:

[1] The power supply will switch to the constant current level at 70% starting from 4:30pm.

[2] The power supply will switch to the constant current level at 100% in turn, starting from 6:00pm, which is 01:30 after the power supply turns on.

[3] The power supply will switch to the constant current level at 70% in turn, starting from 5:00am, which is 11:00 after the power supply turns on.

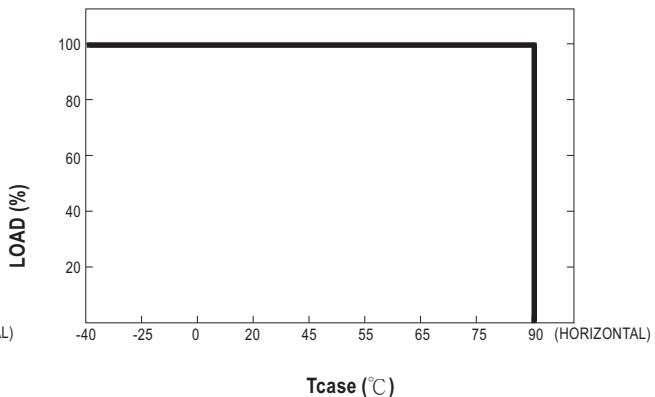
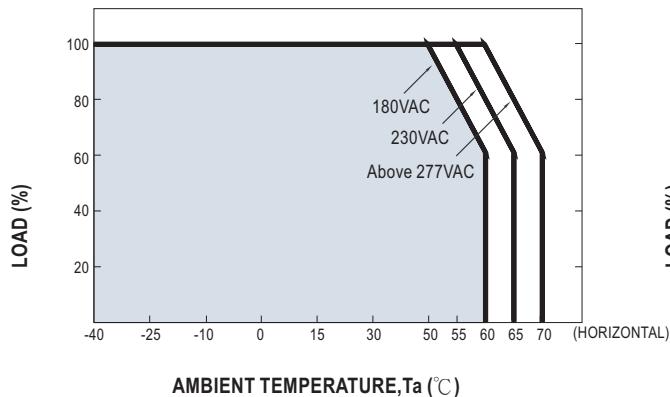
The constant current level remains till 6:30am, which is 14:00 after the power supply turns on.



240W Constant Voltage + Constant Current LED Driver

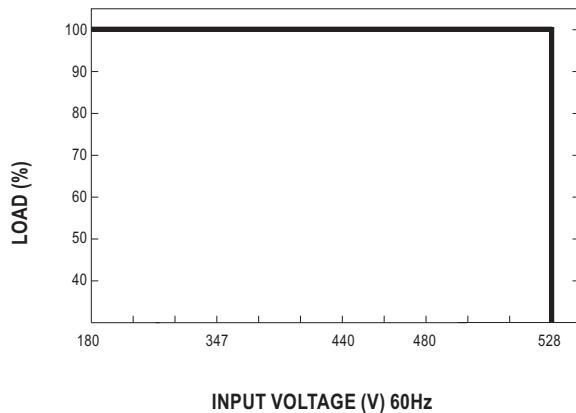
HVG-240 series

■ OUTPUT LOAD vs TEMPERATURE (Note.9)

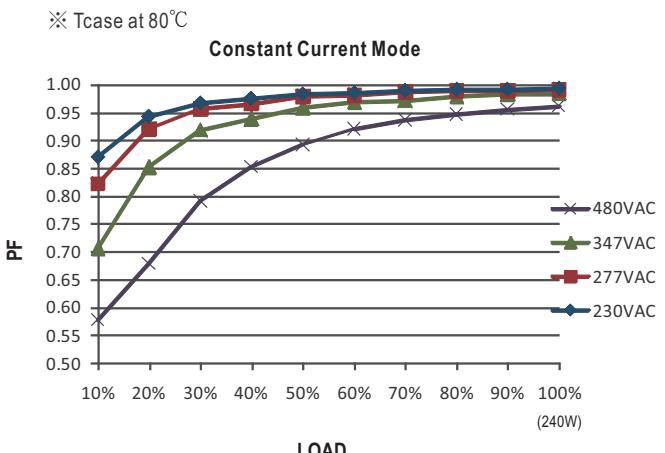


- ◎ If HVG-240 operates in constant current mode with the rated current, the maximum workable T_a is 55°C. (Typ. 230VAC)

■ STATIC CHARACTERISTIC

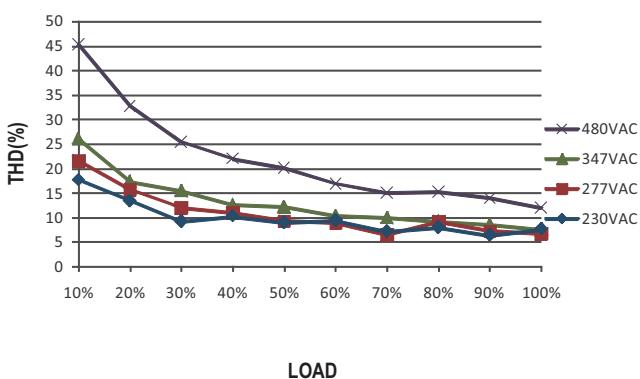


■ POWER FACTOR (PF) CHARACTERISTIC



■ TOTAL HARMONIC DISTORTION (THD)

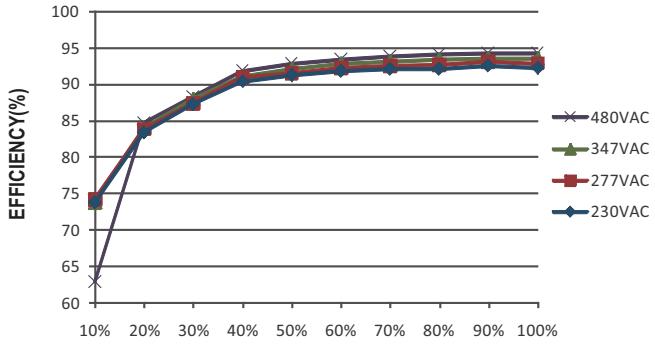
※ 54V Model, T_{case} at 80°C

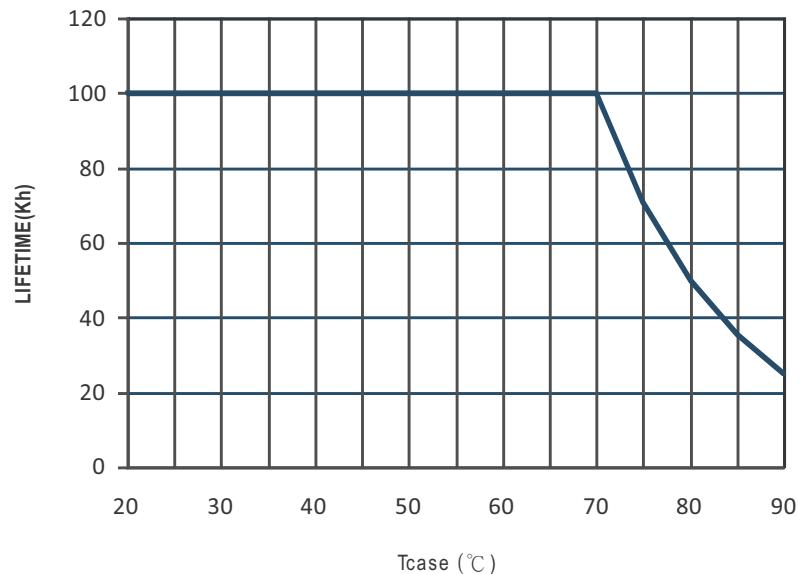


■ EFFICIENCY vs LOAD

HVG-240 series possess superior working efficiency that up to 93% can be reached in field applications.

※ 54V Model, T_{case} at 80°C



LIFE TIME



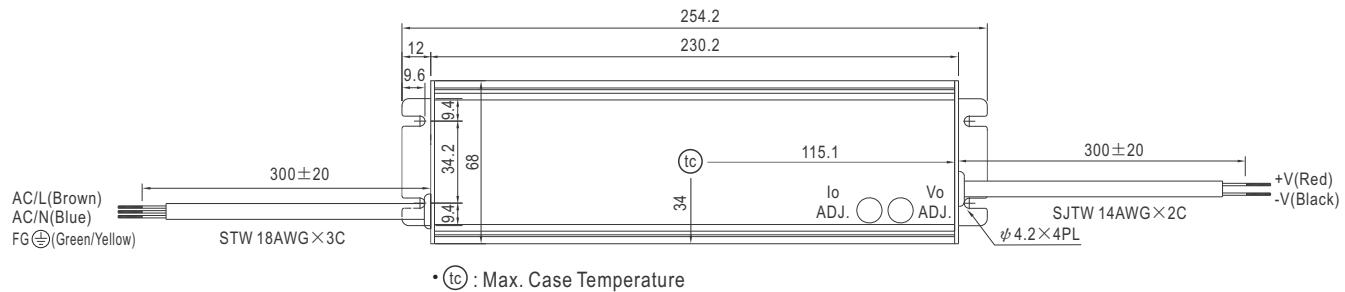
240W Constant Voltage + Constant Current LED Driver

HVG-240 series

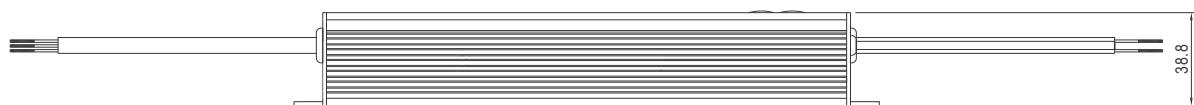
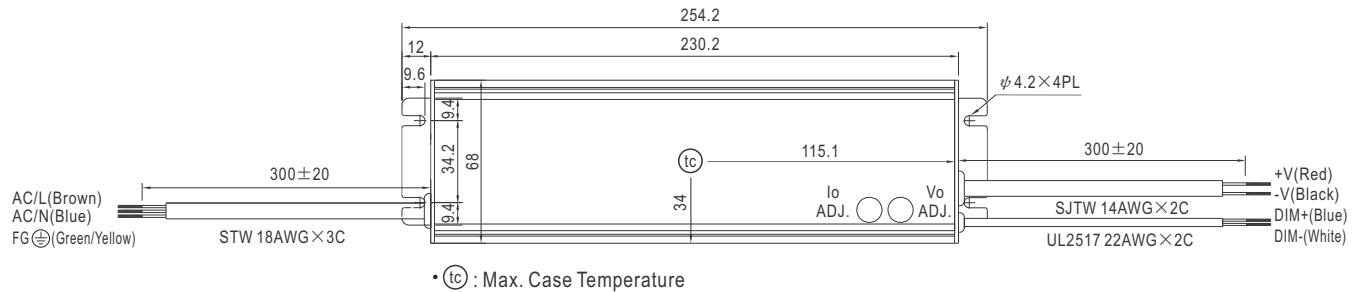
■ MECHANICAL SPECIFICATION

Case No. 994 Unit:mm

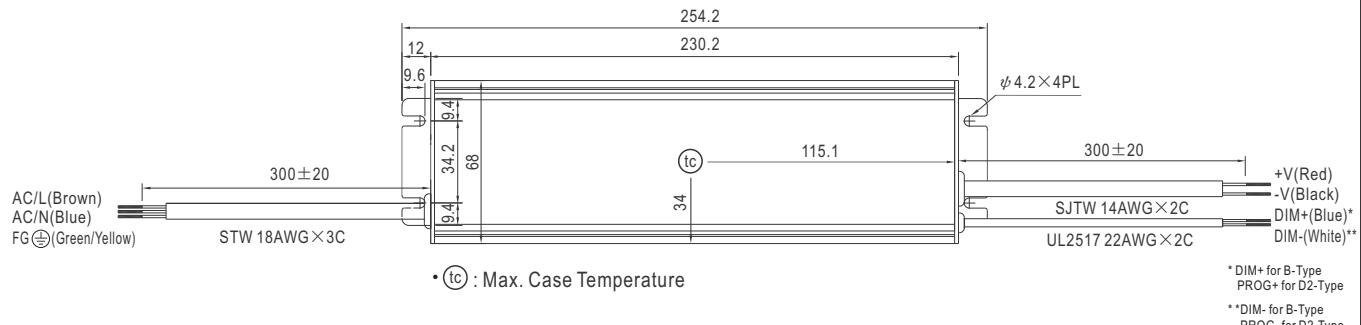
※ A-Type



※ AB-Type



※ B/D2-Type



■ INSTALLATION MANUAL

Please refer to : <http://www.meanwell.com/manual.html>