



■ Features

- Wide input range 180 ~ 528VAC
- Built-in active PFC function
- High efficiency up to 92%
- -40°C ~ +70°C wide operating range
- Fanless design, cooling by free air convection
- Three in one dimming function (0~10Vdc or PWM signal or resistance)
- IP67 / IP65 design for indoor or outdoor installations
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Withstand 5G vibration test
- Suitable for dry / damp / wet location
- Type “HL” for use in class I , Division 2 hazardous(Classified) location luminaires
- 5 years warranty (Note.10)

■ Applications

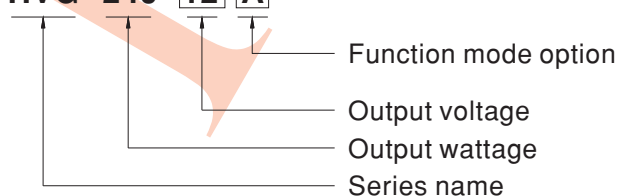
- LED street lighting
- LED high-bay lighting
- Parking space lighting
- LED fishing lamp
- LED greenhouse lighting
- Class I , Division 2 hazardous(Classified) location luminaires

■ Description

HVG-240 series is a high performance 240W AC-to-DC LED power supply featuring the high input voltage ranging from 180VAC through 528VAC. The working efficiency is up to 92%. The fully-potted silicone and the aluminum case facilitate the heat dissipation. HVG-240 is thus able to work at the temperature between -40°C and +70°C under free air convection. This series can withstand surge up to 4KV (EN61000-4-5) and is approved for IP65/IP67 protection level. These attributes all make HVG-240 perfectly fit the indoor/outdoor LED lighting application requiring remarkable reliability.

■ Model Encoding

HVG - 240 - 12 A

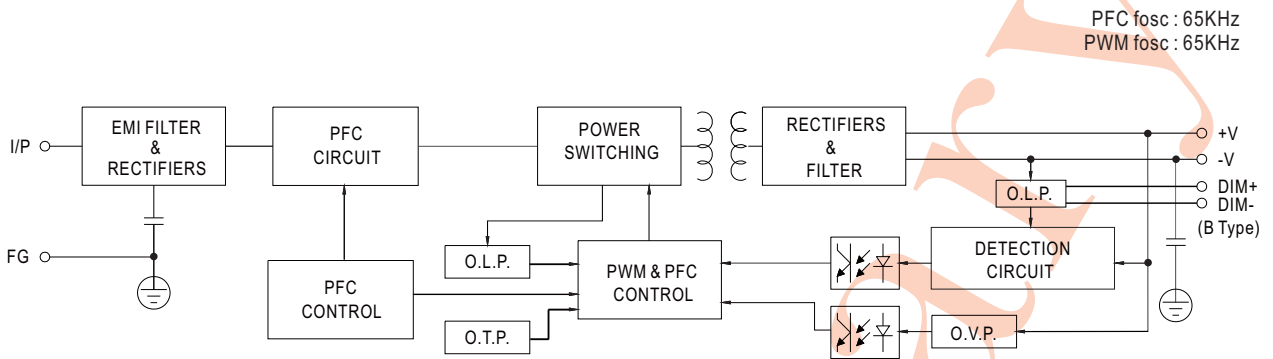


- A : IP65, Vo and Io level can be adjusted through internal potentiometer.
- B : IP67, Io adjustable with 0~10Vdc, PWM signal or resistance.
- D or D2 : IP67, Smart Timing Dimming function. Please contact MEAN WELL for details.

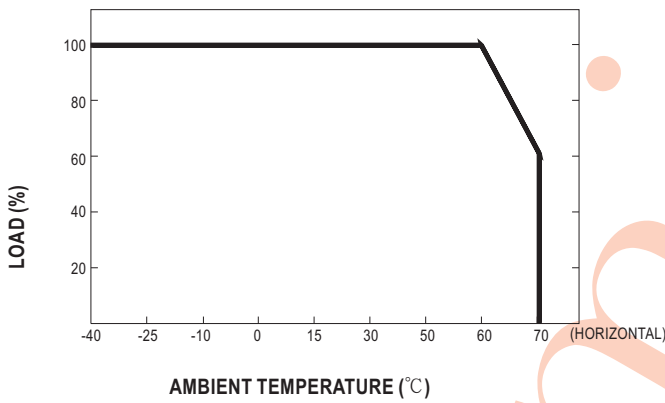
SPECIFICATION

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	54V
	CONSTANT CURRENT REGION <small>Note.4</small>	12 ~ 24V	15 ~ 30V	18 ~ 36V	21 ~ 42V	24 ~ 48V	27 ~ 54V
	RATED CURRENT	10A	8A	6.7A	5.7A	5A	4.5A
	RATED POWER	240W	240W	241.2W	239.4W	240W	243W
	RIPPLE & NOISE (max.) <small>Note.2</small>	150mVp-p	200mVp-p	250mVp-p	250mVp-p	250mVp-p	350mVp-p
	VOLTAGE ADJ. RANGE <small>Note.6</small>	22.4 ~ 25.6V	28 ~ 32V	33.5 ~ 38.5V	39 ~ 45V	44.8 ~ 51.2V	50 ~ 57V
	CURRENT ADJ. RANGE <small>Note.6</small>	5 ~ 10A	4 ~ 8A	3.3 ~ 6.7A	2.85 ~ 5.7A	2.5 ~ 5A	2.25 ~ 4.5A
	VOLTAGE TOLERANCE <small>Note.3</small>	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME <small>Note.8</small>	500ms, 80ms /230Vac	400ms,80ms/347VAC/480VAC at full load ; B type	500ms, 280ms/230Vac	500ms,280ms/347VAC/480Vac at 95% load		
HOLD UP TIME (Typ.)	18ms at full load	480VAC / 347VAC					
INPUT	VOLTAGE RANGE <small>Note.5</small>	180 ~ 528VAC	254VDC ~ 747VDC				
	FREQUENCY RANGE	47 ~ 63Hz					
	POWER FACTOR (Typ.)	PF≥0.98/230VAC, PF≥0.97/277VAC, PF≥0.95/347VAC, PF≥0.93/480VAC at full load (Please refer to "Power Factor Characteristic" curve)					
	TOTAL HARMONIC DISTORTION	Total harmonic distortion will be lower than 20% when output loading is 50% or higher at 230VAC / 277VAC / 347VAC / 480VAC					
	EFFICIENCY (Typ.)	91%	92%	92%	92%	92%	92%
	AC CURRENT (Typ.)	0.9A / 347VAC	0.6A / 480VAC				
	INRUSH CURRENT(Typ.)	COLD START 50A(twidth= μs measured at 50% Ipeak) at 480VAC					
	LEAKAGE CURRENT	<0.75mA / 480VAC					
	MAX. NO. of PSUs on 16A CIRCUIT BREAKER	unit(circuit breaker of type B) / units(circuit breaker of type C) at 480VAC					
PROTECTION	OVER CURRENT <small>Note.4</small>	95 ~ 108% Protection type : Constant current limiting, recovers automatically after fault condition is removed					
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed					
	OVER VOLTAGE	27 ~ 34V	33 ~ 39V	43 ~ 49V	48 ~ 54V	55 ~ 63V	60 ~ 67V
	OVER TEMPERATURE	Shut down o/p voltage, recovers automatically after temperature goes down					
ENVIRONMENT	WORKING TEMP.	-40 ~ +70°C (Refer to "Derating Curve")					
	WORKING HUMIDITY	20 ~ 95% RH non-condensing					
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH					
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 60°C)					
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes					
SAFETY & EMC	SAFETY STANDARDS <small>Note.7</small>	UL8750 (type"HL"), CSA C22.2 No. 250.0-08, 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 EN55015; EN61000-3-2 Class C (≥50% load) ; EN61000-3-3 ; FCC Part 15 Subpart B					
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, light industry level (surge 4KV), criteria A					
OTHERS	MTBF	K hrs min. MIL-HDBK-217F (25°C)					
	DIMENSION	254.2*68*38.8mm (L*W*H)					
	PACKING	Kg					
NOTE	<ol style="list-style-type: none"> All parameters NOT specially mentioned are measured at 347VAC input, rated load and 25°C of ambient temperature. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Tolerance : includes set up tolerance, line regulation and load regulation. Please refer to "DRIVING METHODS OF LED MODULE". Derating may be needed under low input voltages. Please check the static characteristics for more details. A-Type only. Safety and EMC design refer to EN60598-1, subject CNS15233, GB7000.1, FCC part18. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time. 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 manufacturers must re-qualify EMC Directive on the complete installation again. Refer to warranty statement. 						

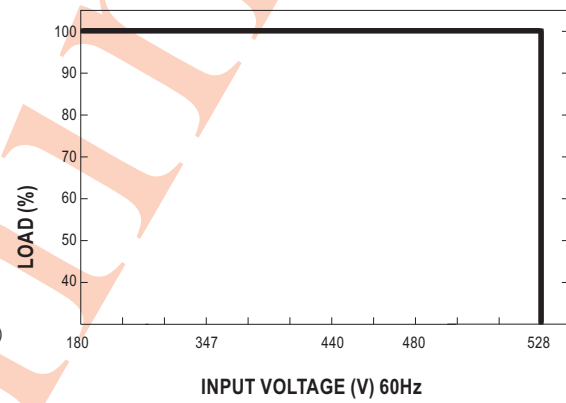
■ Block Diagram



■ Derating Curve

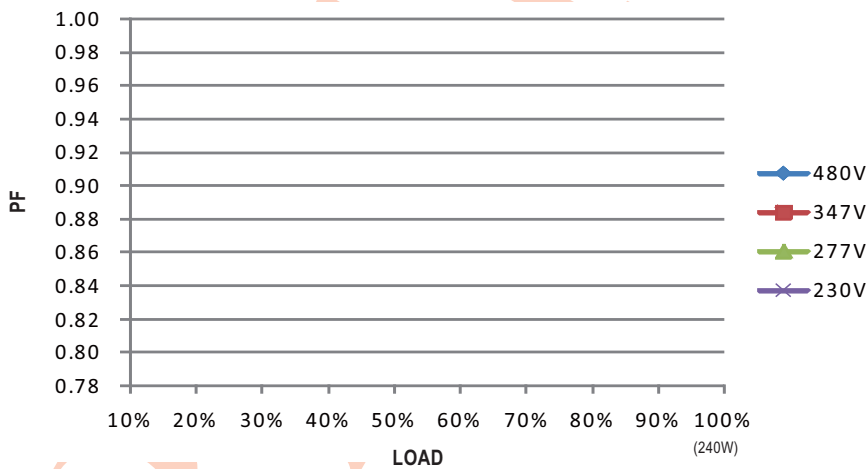


■ Static Characteristics



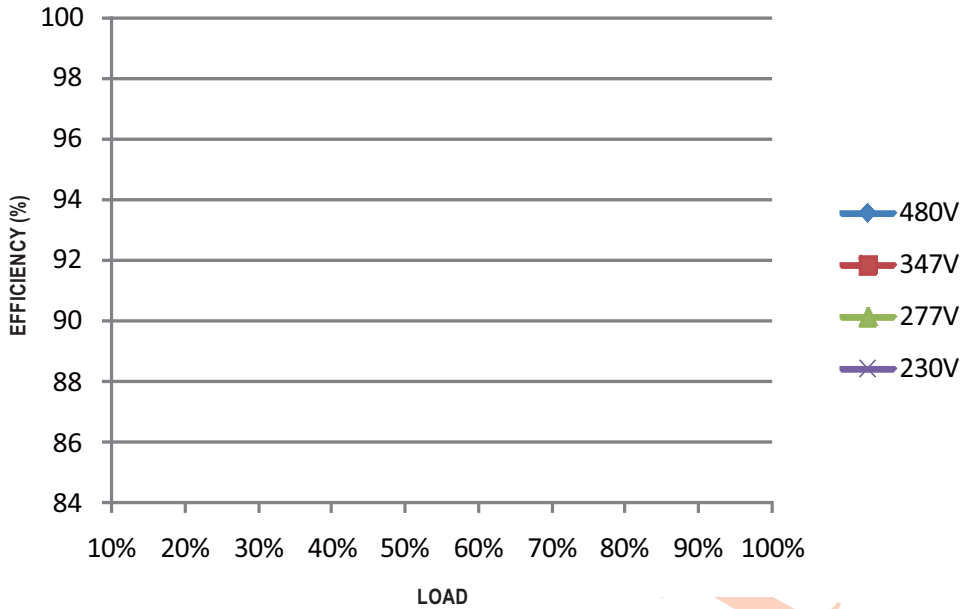
■ Power Factor Characteristic

Constant Current Mode



EFFICIENCY vs LOAD (54V Model)

HVG-240 series possess superior working efficiency that up to 92% can be reached in field applications.

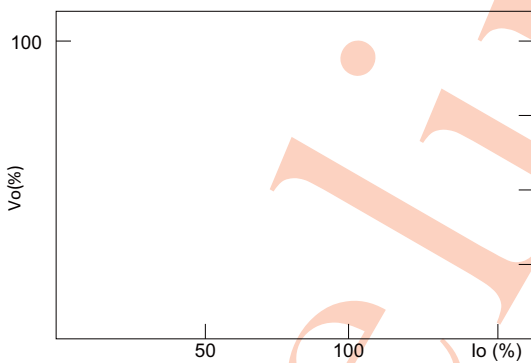


DRIVING METHODS OF LED MODULE

There are two major kinds of LED drive methods, "direct drive" and "with LED driver".

A typical LED power supply may either work in "constant voltage mode (C.V) or constant current mode (C.C)" to drive the LEDs.

Mean Well's LED power supply with C.V+ C.C characteristic can be operated at both C.V mode [with LED driver, at area (A)] and C.C mode [direct drive, at area (B)].



Typical LED power supply I-V curve

DIMMING OPERATION (for B-Type only)



※ Built-in 3 in 1 dimming function, IP67 rated. Output constant current level can be adjusted through output cable by connecting a resistance or 0 ~ 10Vdc or 10V PWM signal between DIM+ and DIM-.

※ Please DO NOT connect "DIM-" to "-V".

※ Reference resistance value for output current adjustment (Typical)

Resistance value	Single driver	Short	10KΩ	20KΩ	30KΩ	40KΩ	50KΩ	60KΩ	70KΩ	80KΩ	90KΩ	100KΩ	OPEN
	Multiple drivers (N=driver quantity for synchronized dimming operation)	Short	10KΩ/N	20KΩ/N	30KΩ/N	40KΩ/N	50KΩ/N	60KΩ/N	70KΩ/N	80KΩ/N	90KΩ/N	100KΩ/N	-----
Percentage of rated current		0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%~108%

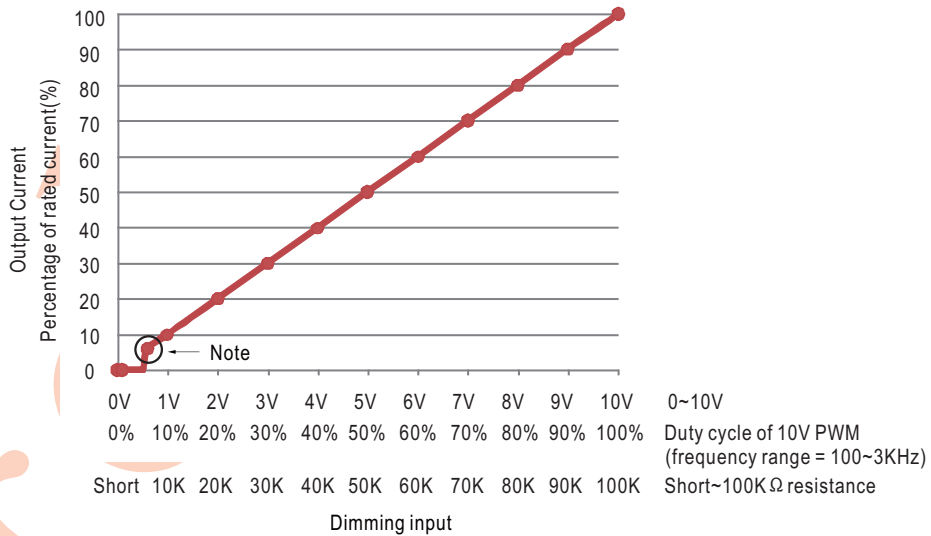
※ 0 ~ 10V dimming function for output current adjustment (Typical)

Dimming value	0V	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
Percentage of rated current	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%~108%

※ 10V PWM signal for output current adjustment (Typical): Frequency range : 100Hz ~ 3KHz

Duty value	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
Percentage of rated current	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%~108%

© Dimming Characteristic

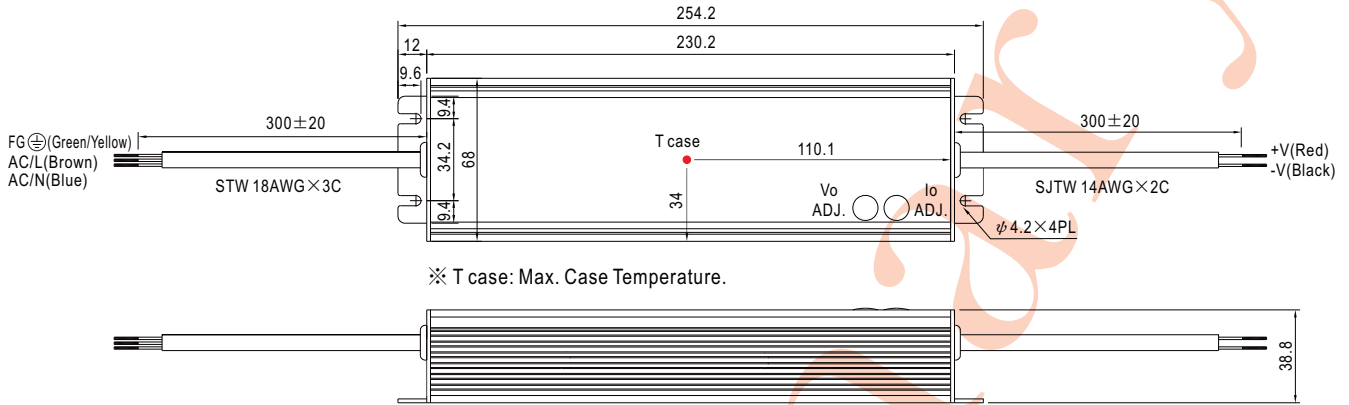


※ Note : The output current drops down to 0% when the dimming input is about 6KΩ or 0.6Vdc, or 10V PWM signal with 6% duty cycle.

■ Mechanical Specification

Case No. 994 Unit:mm

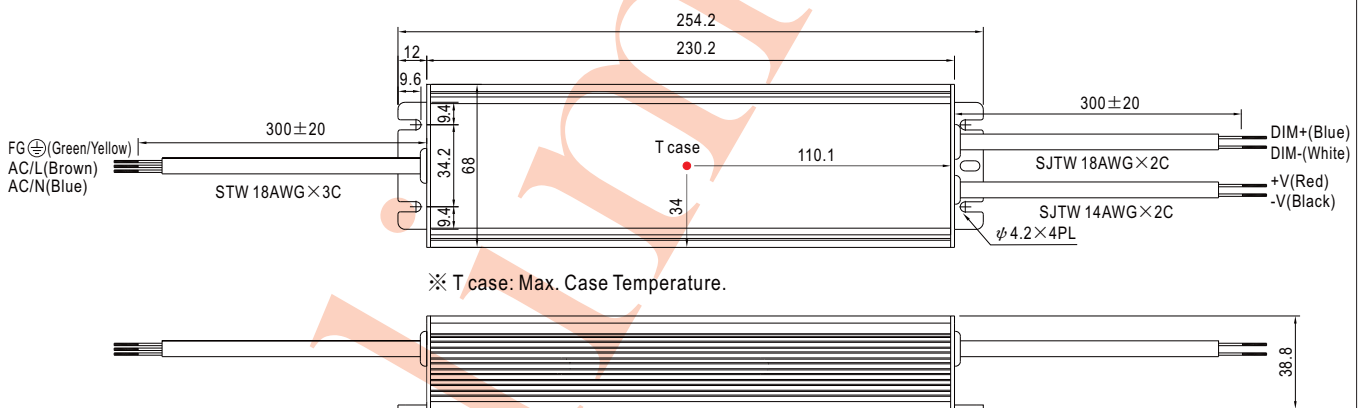
A-Type:(HVG-240-_A)



※ T case: Max. Case Temperature.

※ IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer.
(Can access by removing the rubber stopper on the case.)

B-Type:(HVG-240-_B)



※ T case: Max. Case Temperature.

■ Installation Manual

Please refer to : <http://www.meanwell.com/webnet/search/InstallationSearch.html>