



E-Star Power Development Co., Ltd. (E-STAR)  
 1F., No.40, Juren Ln., Sec. 2, Sanmin Rd., Banciao Dist., New Taipei City  
 22069, Taiwan (R.O.C.)  
 Phone : 886-2-2957 5580 Fax : 886-2-2957 7473

**150W LED Driver power supply < HVGC-150**



**Features**

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

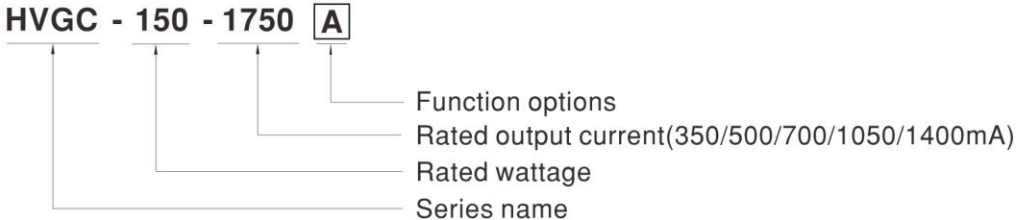
**Applications**

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

**Description**

HVGC-150 series is a 150W LED AC/DC LED power supply featuring the constant current mode and high voltage output. HVGC-150 operates from 180~528VAC and offers models with different rated current ranging between 350mA and 1400mA. Thanks to the high efficiency up to 91%, with the fanless design, the entire series is able to operate for -40°C ~ +80°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. HVGC-150 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 adjustable through built-in potentiometer.	In Stock
B	IP67	3 in 1 dimming function (0~10Vdc, 10V PWM signal and resistance)	In Stock
D	IP67	Timer dimming function, contact MEAN WELL for details(safety pending).	By request



**150W LED Driver power supply < HVGC-150**

**SPECIFICATION**

MODEL		HVGC-150-350□	HVGC-150-500□	HVGC-150-700□	HVGC-150-1050□	HVGC-150-1400□
OUTPUT	RATED CURRENT	350mA	500mA	700mA	1050mA	1400mA
	RATED POWER	149.8W	150W	150.5W	150.15W	149.8W
	CONSTANT CURRENT REGION Note.2	42 ~ 428V	30 ~ 300V	21 ~ 215V	15 ~ 143V	12 ~ 107V
	CURRENT ADJ. RANGE	Adjustable for A-Type only (via built-in potentiometer)				
		210 ~ 350mA	300 ~ 500mA	420 ~ 700mA	630 ~ 1050mA	840 ~ 1400mA
	CURRENT RIPPLE Note.5	8.0% max. @rated current				
	CURRENT TOLERANCE	±5.0%				
SET UP TIME Note.4	500ms / 230Vac 400ms / 347VAC,480VAC					
INPUT	VOLTAGE RANGE Note.3	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 ≥ 75%/480VAC) (Please refer to "TOTAL HARMONIC DISTORTION (THD)" section)				
	EFFICIENCY (Typ.)	91%	91%	91%	90%	90%
	AC CURRENT (Typ.)	0.5A / 347VAC 0.38A / 480VAC				
	INRUSH CURRENT (Typ.)	COLD START 35A(twidth=790μs measured at 50% Ipeak) at 480VAC; Per NEMA 410				
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	4 units (circuit breaker of type B) / 6 units (circuit breaker of type C) at 480VAC				
	LEAKAGE CURRENT	<0.75mA / 480VAC				
PROTECTION	SHORT CIRCUIT	Constant current limiting, recovers automatically after fault condition is removed				
	OVER VOLTAGE	430 ~ 460V	316 ~ 346V	226 ~ 247V	151 ~ 165V	113 ~ 124V
	OVER TEMPERATURE	Shut down o/p voltage, recovers automatically after temperature goes down				
ENVIRONMENT	WORKING TEMP.	Tcase=-40 ~ +80°C (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)				
	MAX. CASE TEMP.	Tcase=+80°C				
	WORKING HUMIDITY	20 ~ 95% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-40 ~ +80°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	UL8750(type "HL"), CSA C22.2 No. 250.0-08, TUV EN61347-1, EN61347-2-13, 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 (@ load ≥ 50%) ; EN61000-3-3, FCC part 15 class B				
	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)				
OTHERS	MTBF	179.5K hrs min. MIL-HDBK-217F (25°C)				
	DIMENSION	245*68*38.8mm (L*W*H)				
	PACKING	1.24Kg; 12pcs/15.9Kg/0.78CUFT				
NOTE	<ol style="list-style-type: none"> <li>All parameters NOT specially mentioned are measured at 347VAC input, rated current and 25°C of ambient temperature.</li> <li>Please refer to "DRIVING METHODS OF LED MODULE".</li> <li>De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.</li> <li>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.</li> <li>Current ripple is measured between 50%~100% of maximum voltage under rated power delivery.</li> <li>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.</li> <li>To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED driver can only be used behind a switch without permanently connected to the mains.</li> <li>This series meets the typical life expectancy of &gt;50,000 hours of operation when Tcase, particularly (Tc) point (or TMP, per DLC), is about 80°C or less.</li> </ol>					



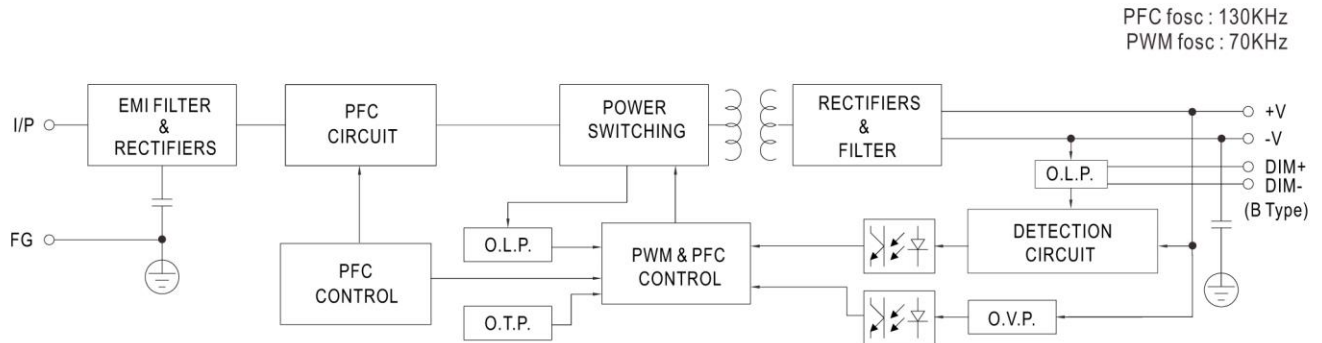
E-Star Power Development Co., Ltd. (E-STAR)

1F, No.40, Juren Ln., Sec. 2, Sanmin Rd., Banciao Dist., New Taipei City 22069, Taiwan (R.O.C.)

Phone : 886-2-2957 5580 Fax : 886-2-2957 7473

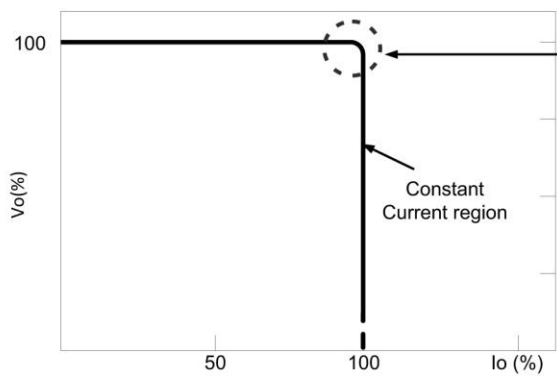
**150W LED Driver power supply < HVGC-150**

**Block Diagram**



**DRIVING METHODS OF LED MODULE**

※ This series works in constant current mode to directly drive the LEDs.



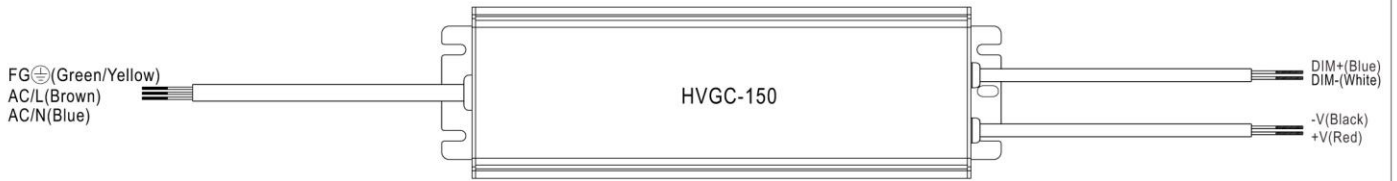
Typical output current normalized by rated current (%)

In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.



**150W LED Driver power supply < HVGC-150**

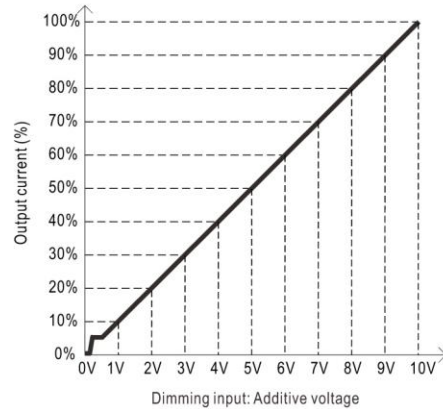
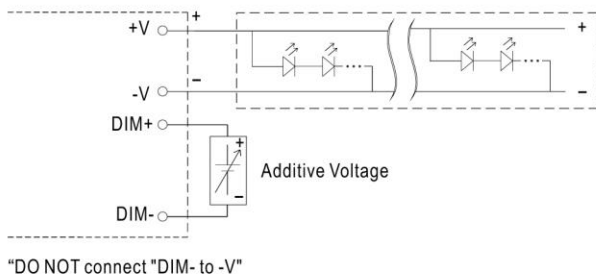
**■ DIMMING OPERATION**



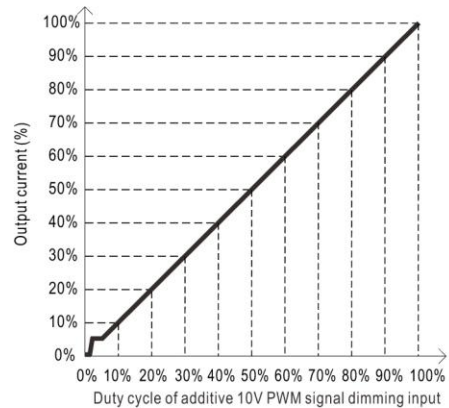
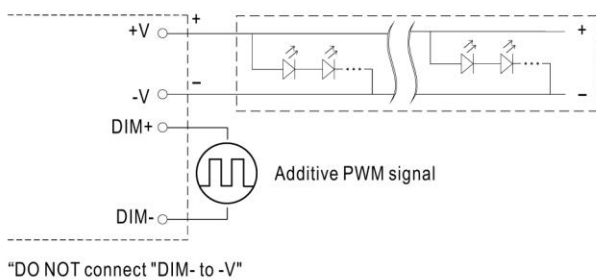
※ 3 in 1 dimming function (for B-Type)

- 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 $\mu$ A (typ.)

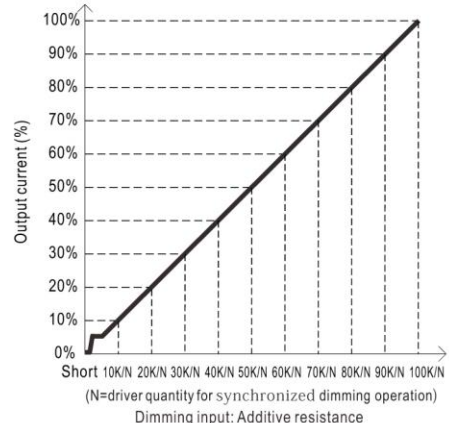
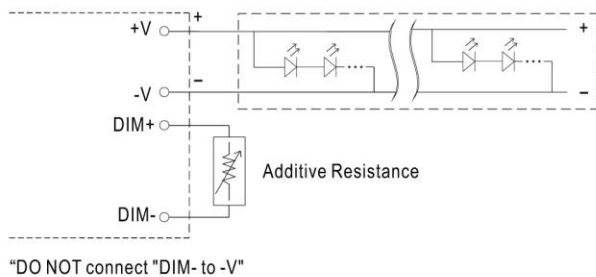
◎ Applying additive 0 ~ 10VDC



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



◎ Applying additive resistance:

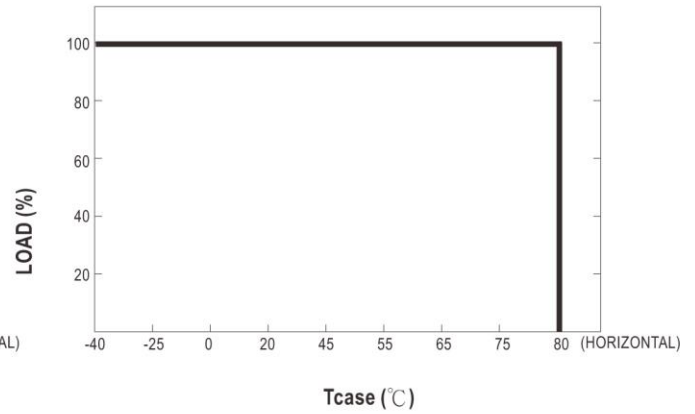
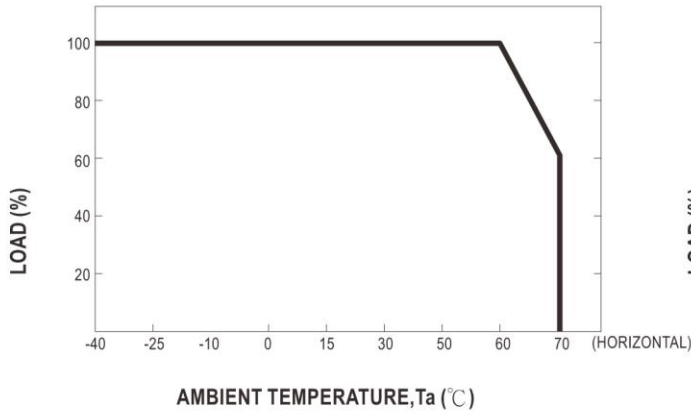


Note : 1. Min. dimming level is about 6% and the output current is not defined when 0% < I<sub>out</sub> < 6%.  
 2. The output current could drop down to 0% when dimming input is about 0k $\Omega$  or 0Vdc, or 10V PWM signal with 0% duty cycle.

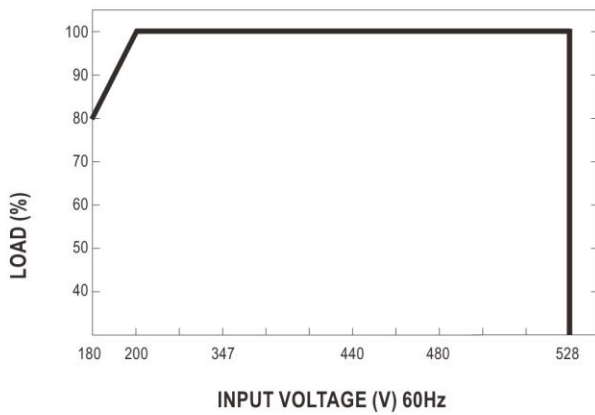


**150W LED Driver power supply < HVGC-150**

**OUTPUT LOAD vs TEMPERATURE**

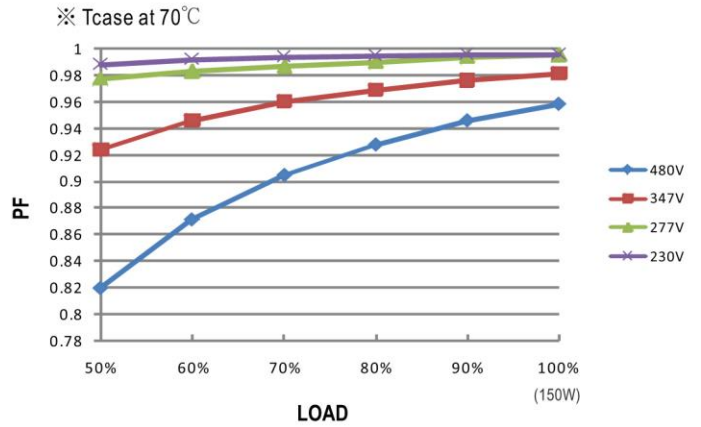


**STATIC CHARACTERISTIC**



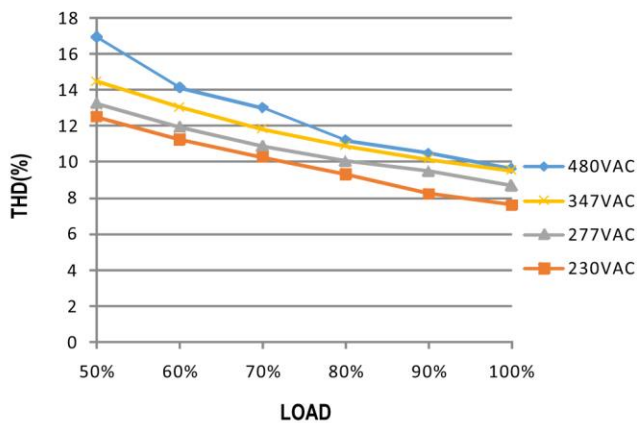
※ De-rating is needed under low input voltage.

**POWER FACTOR (PF) CHARACTERISTIC**



**TOTAL HARMONIC DISTORTION (THD)**

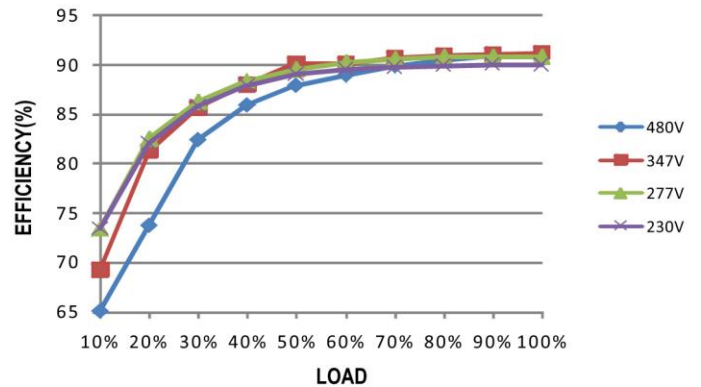
※ 350mA Model, Tcase at 70°C



**EFFICIENCY vs LOAD**

HVGC-150 series possess superior working efficiency that up to 91% can be reached in field applications.

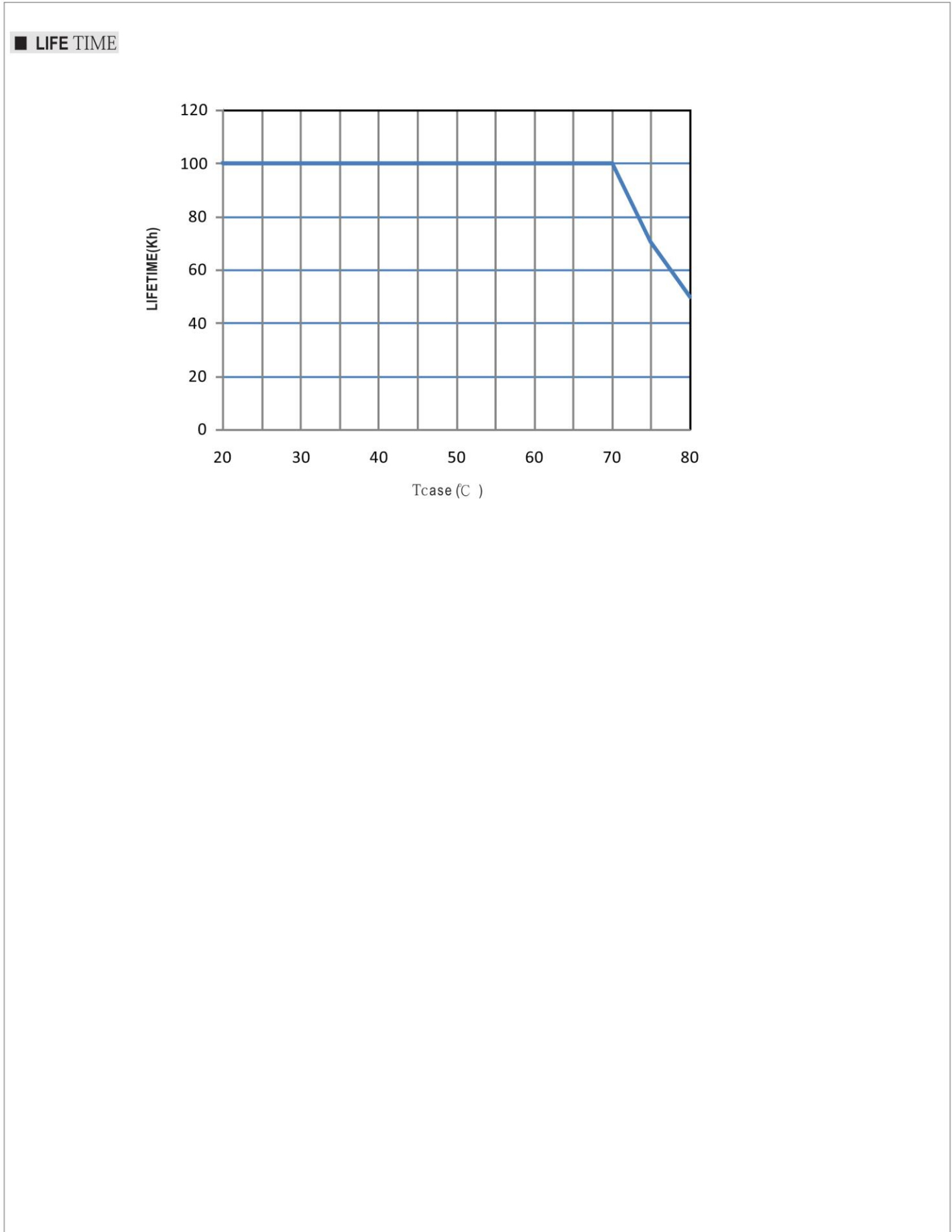
※ 350mA Model, Tcase at 70°C





E-Star Power Development Co., Ltd. (E-STAR)  
1F, No.40, Juren Ln., Sec. 2, Sanmin Rd., Banciao Dist., New Taipei City  
22069, Taiwan (R.O.C.)  
Phone : 886-2-2957 5580 Fax : 886-2-2957 7473

**150W LED Driver power supply < HVGC-150**



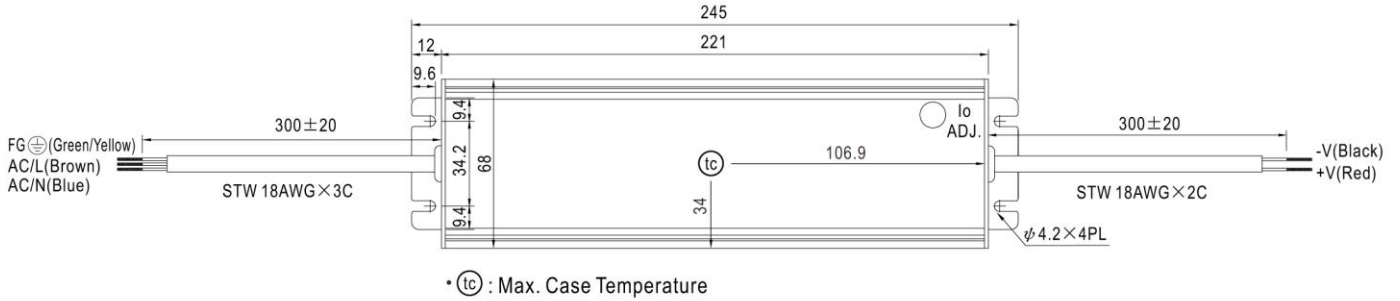


**150W LED Driver power supply < HVGC-150**

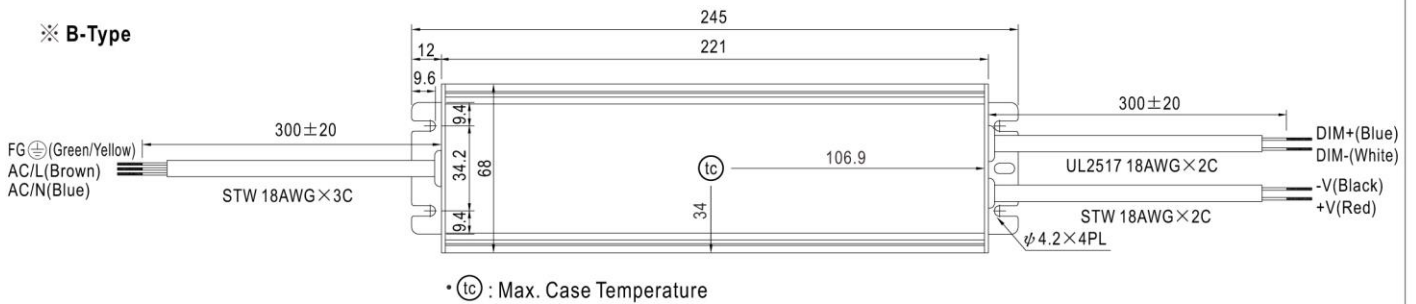
**MECHANICAL SPECIFICATION**

Case No. 994 Unit:mm

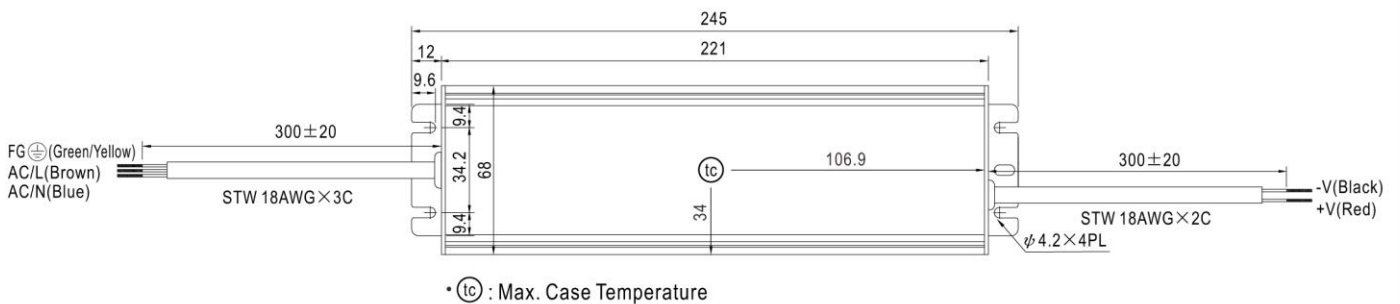
※ **A-Type**



※ **B-Type**



※ **D-Type**



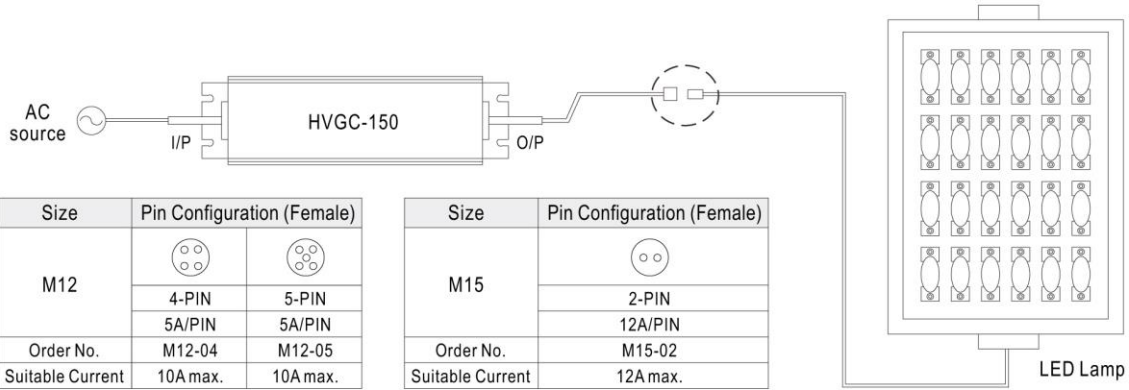


**150W LED Driver power supply < HVGC-150**

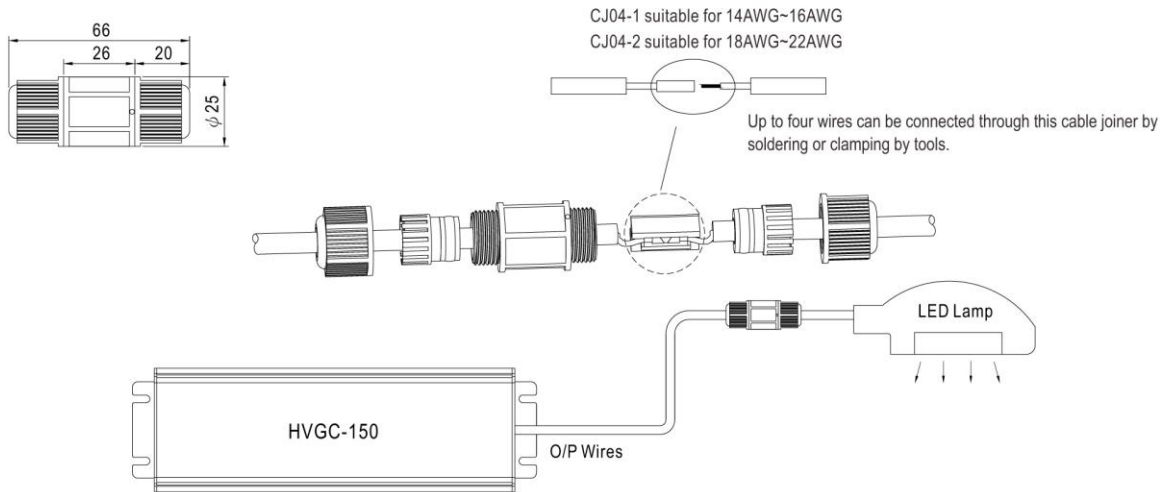
**■ WATERPROOF CONNECTION**

※ **Waterproof connector**

Waterproof connector can be assembled on the output cable of HVGC-150 to operate in dry/wet/damp or outdoor environment.

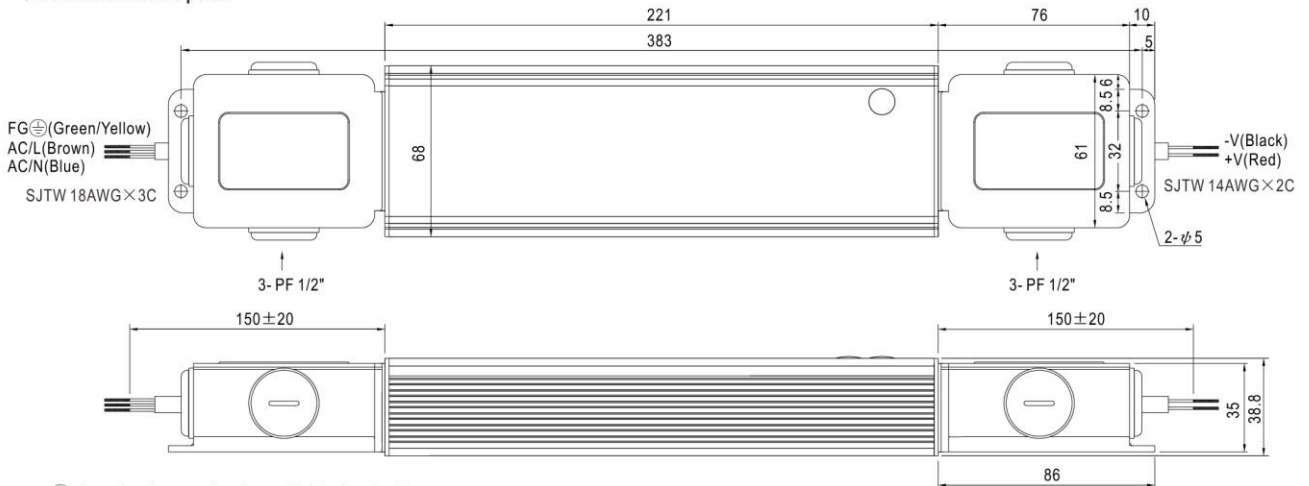


※ **Cable Joiner**



◎ CJ04 cable joiner can be purchased independently for user's own assembly.  
 MEAN WELL order No. : CJ04-1, CJ04-2.

※ **Junction Box Option**



◎ Junction box option is available for A - Type.