



■ 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)
- Typical lifetime > 50000 hours
- 5 years warranty

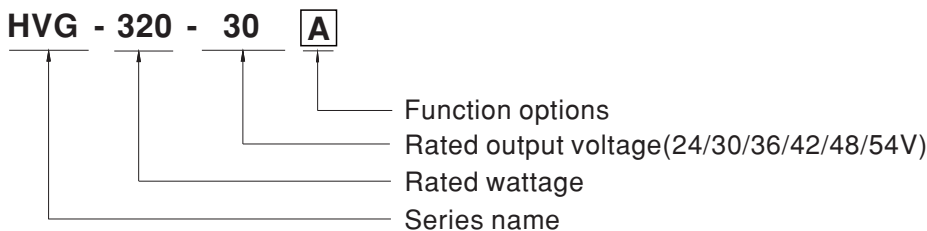
■ Applications

- 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-320 series is a 320W AC/DC LED power supply featuring the dual mode constant voltage and constant current output. HVG-320 operates from 180~528VAC and offers models with different rated voltage ranging between 24V and 54V. Thanks to the high efficiency up to 94%, with the fanless design, the entire series is able to operate for -40°C ~ +85°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-320 is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for LED lighting system.

■ Model Encoding



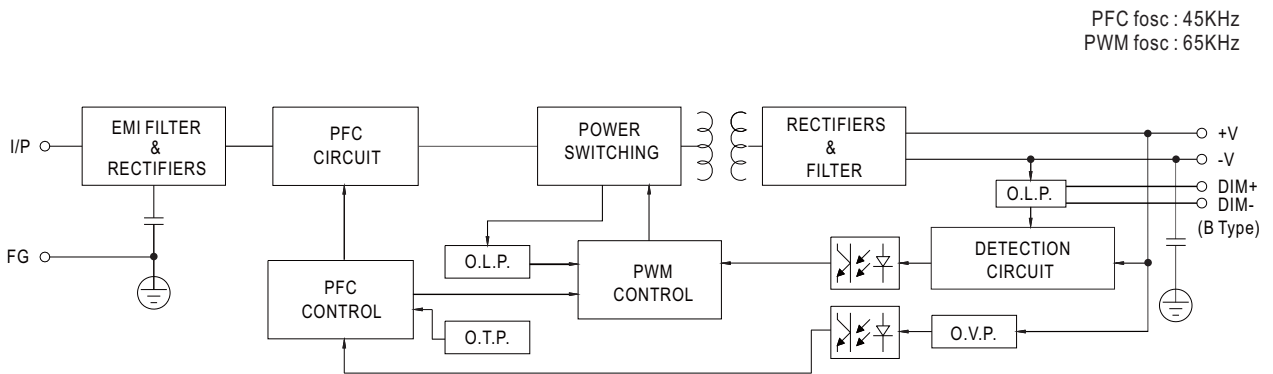
Type	IP Level	Function	Note
A	IP65	Io and Vo adjustable through built-in potentiometer.	In Stock
B	IP67	3 in 1 dimming function (0~10Vdc, 10V PWM signal and resistance)	In Stock



SPECIFICATION

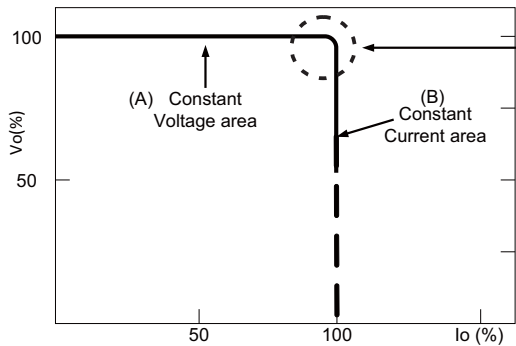
MODEL		HVG-320-24 □	HVG-320-30 □	HVG-320-36 □	HVG-320-42 □	HVG-320-48 □	HVG-320-54 □
OUTPUT	DC VOLTAGE	24V	30V	36V	42V	48V	54V
	CONSTANT CURRENT REGION Note.4	12 ~ 24V	15 ~ 30V	18 ~ 36V	21 ~ 42V	24 ~ 48V	27 ~ 54V
	RATED CURRENT	13.4A	10.7A	8.9A	7.6A	6.7A	6A
	RATED POWER	321.6W	321W	320.4W	319.2W	321.6W	324W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	200mVp-p	250mVp-p	250mVp-p	250mVp-p	350mVp-p
	VOLTAGE ADJ. RANGE	Adjustable for A-Type only (via the built-in potentiometer)					
		21 ~ 26V	26 ~ 32V	32 ~ 39V	38 ~ 45V	43 ~ 52V	49 ~ 58V
	CURRENT ADJ. RANGE	Adjustable for A-Type only (via the built-in potentiometer)					
		6.7 ~ 13.4A	5.35 ~ 10.7A	4.45 ~ 8.9A	3.8 ~ 7.6A	3.35 ~ 6.7A	3 ~ 6A
	VOLTAGE TOLERANCE Note.3	±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 Note.6	500ms, 150ms /230Vac 500ms,80ms/347VAC, or 480VAC						
HOLD UP TIME (Typ.)	15ms / 347VAC or 480VAC						
INPUT	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 or PF ≥ 0.98/277VAC or PF ≥ 0.97/347VAC or PF ≥ 0.95/480VAC @full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)					
	TOTAL HARMONIC DISTORTION	THD < 20% @ ≥ 50% load/230VAC, or 277VAC, or 347VAC, or 480VAC (Please refer to "TOTAL HARMONIC DISTORTION" section)					
	EFFICIENCY (Typ.)	92.5%	93%	93.5%	93.5%	94%	94%
	AC CURRENT (Typ.)	1.1A / 347VAC	0.8A / 480VAC				
	INRUSH CURRENT(Typ.)	COLD START 50A(twidth=850μs measured at 50% Ipeak) at 480VAC; Per NEMA 410					
	MAX. NO. of PSUs on 16A CIRCUIT BREAKER	2unit(circuit breaker of type B) / 4units(circuit breaker of type C) at 480VAC					
LEAKAGE CURRENT	<0.75mA / 480VAC						
PROTECTION	OVER CURRENT	95 ~ 108% Constant current limiting, recovers automatically after fault condition is removed					
	SHORT CIRCUIT	Constant current limiting, recovers automatically after fault condition is removed					
	OVER VOLTAGE	27 ~ 33V	33 ~ 37V	40 ~ 46V	46.5 ~ 53V	53.5 ~ 60V	59 ~ 65V
	OVER TEMPERATURE	Shut down and latch off o/p voltage, re-power on to recover					
ENVIRONMENT	WORKING TEMP.	Tcase=-40 ~ +85°C (Refer to "Derating Curve")					
	MAX. CASE TEMP.	Tcase=+85°C					
	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)					
SAFETY & EMC	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes					
	SAFETY STANDARDS	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 FCC Part 15 Subpart B					
OTHERS	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)					
	MTBF	124.3K hrs min. MIL-HDBK-217F (25°C)					
	DIMENSION	262*90*43.8mm (L*W*H)					
	PACKING	2Kg; 8pcs/17Kg/0.92CUFT					
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". De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTICS" sections for details. 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. 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. To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED power supply can only be used behind a switch without permanently connected to the mains. This series meets the typical life expectancy of >50,000 hours of operation when Tcase, particularly (Tc) point (or TMP, per DLC), is about 80°C or less. Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.com 						

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.

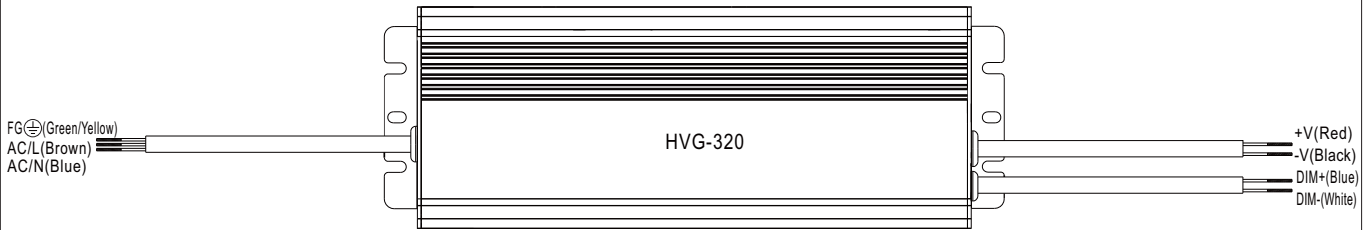


Typical output current normalized by rated current (%)

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

Should there be any compatibility issues, please contact MEAN WELL.

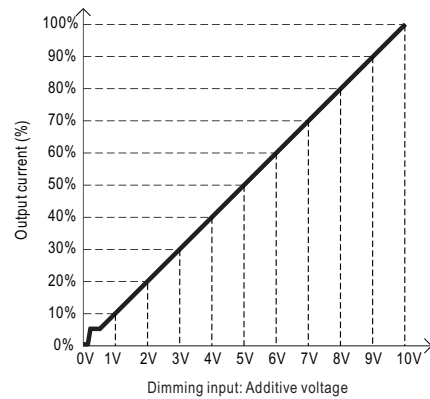
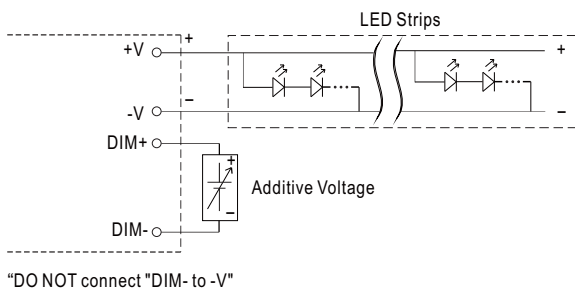
■ DIMMING OPERATION



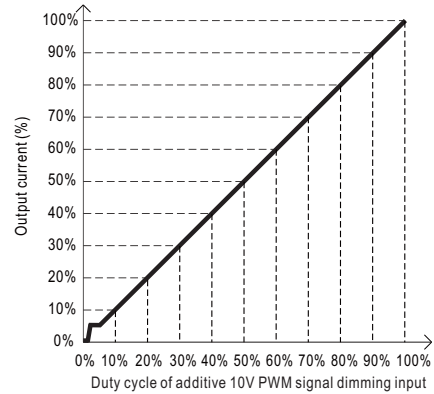
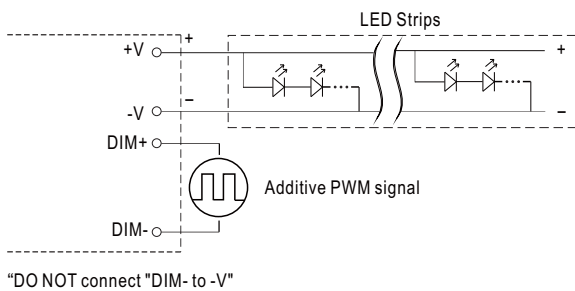
※ 3 in 1 dimming function (for B-Type)

- 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 μ A (typ.)

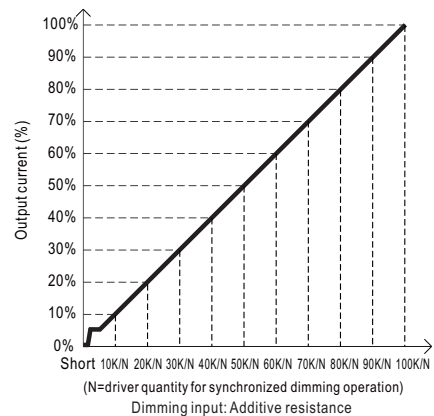
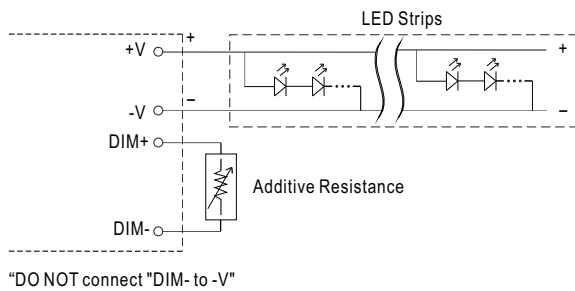
◎ Applying additive 0 ~ 10VDC



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



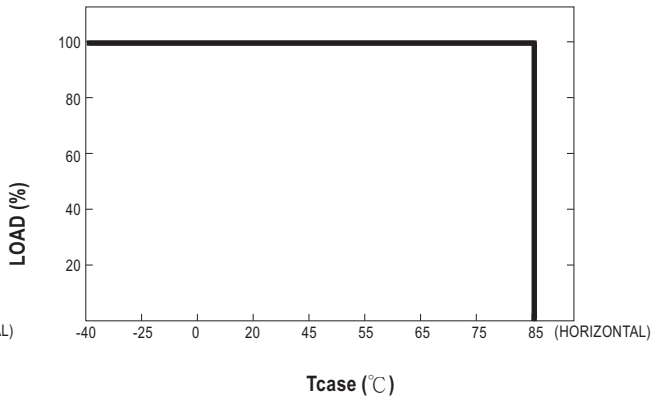
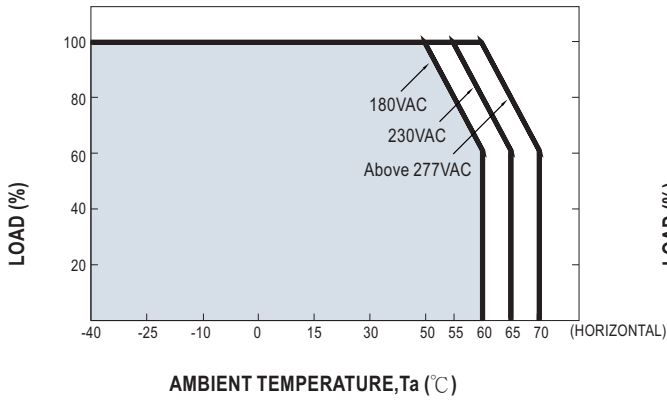
◎ Applying additive resistance:



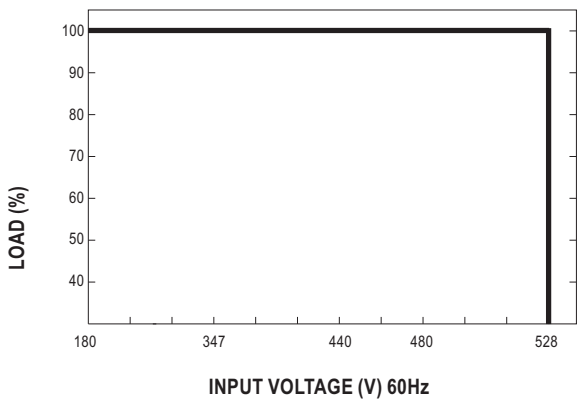
Note : 1. Min. dimming level is about 5% and the output current is not defined when $0\% < I_{out} < 5\%$.

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.

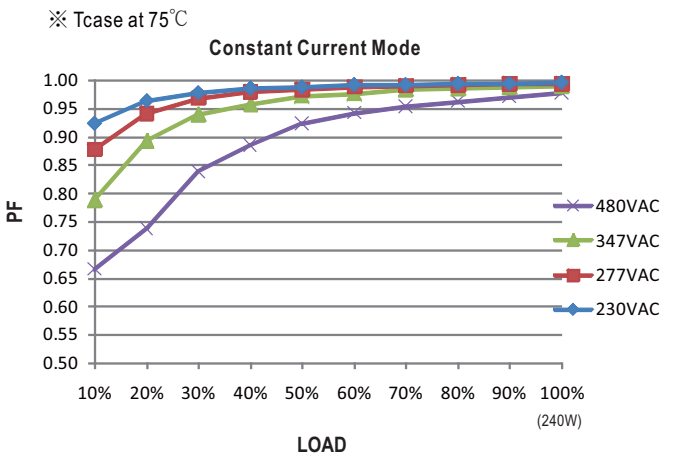
OUTPUT LOAD vs TEMPERATURE



STATIC CHARACTERISTIC

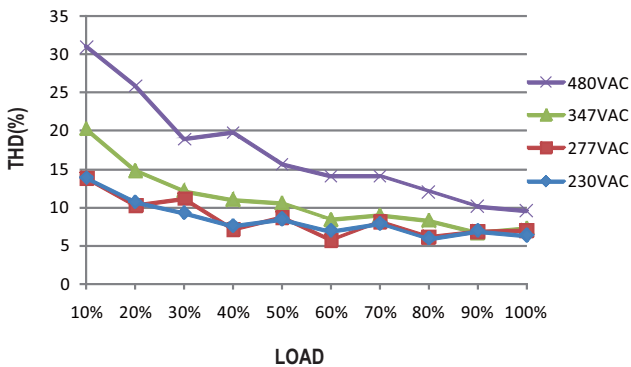


POWER FACTOR (PF) CHARACTERISTIC



TOTAL HARMONIC DISTORTION (THD)

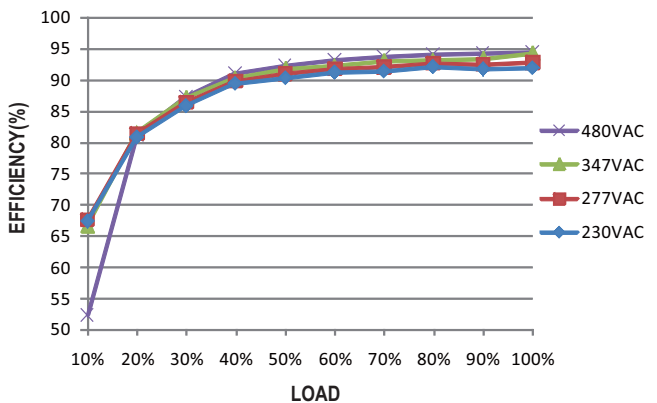
※ 54V Model, Tcase at 75°C



EFFICIENCY vs LOAD

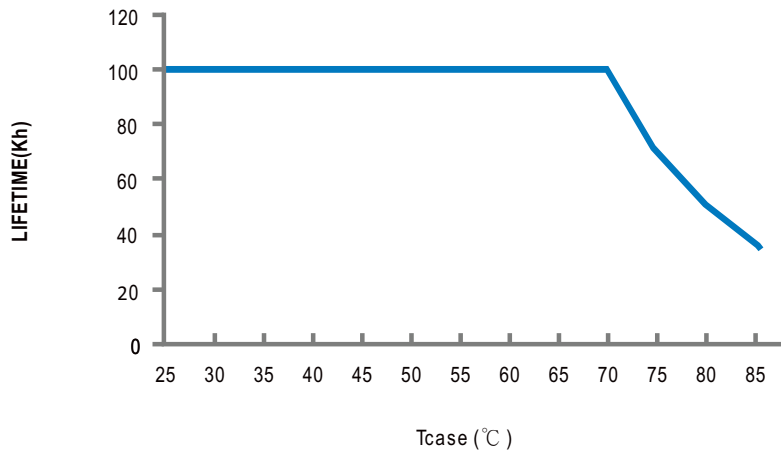
HVG-320 series possess superior working efficiency that up to 94% can be reached in field applications.

※ 54V Model, Tcase at 75°C





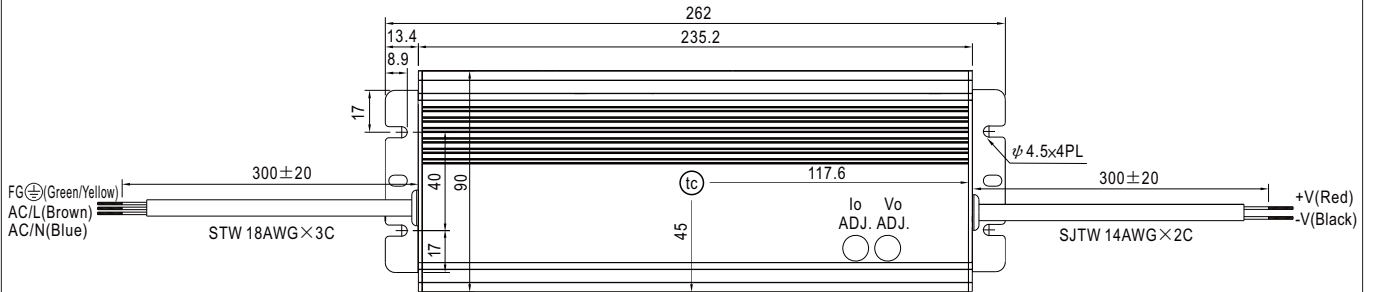
■ LIFE TIME



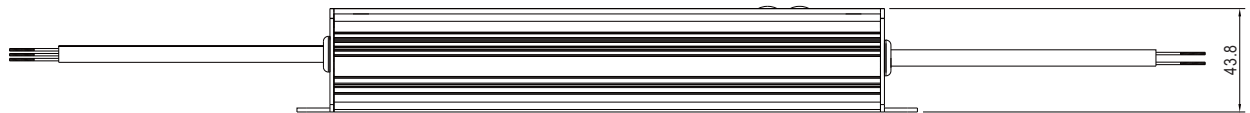
MECHANICAL SPECIFICATION

Case No. 202 Unit:mm

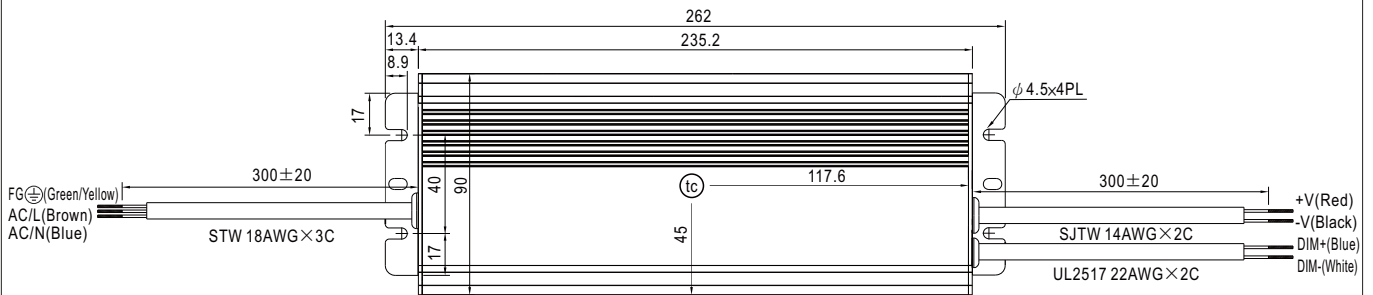
※ **A-Type**



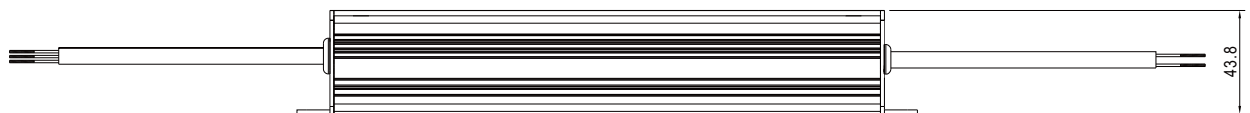
• t_c : Max. Case Temperature



※ **B-Type**



• t_c : Max. Case Temperature



INSTALLATION MANUAL

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