



Features

- Wide input range 90 ~ 305VAC
- Full power at 60~100% max current (Constant Power)
- Built-in active PFC function
- IP65/IP67 design for indoor or outdoor installations
- Function options: output adjustable via potentiometer; 3 in 1 dimming (dim-to-off) ; DALI dimming
- Typical lifetime>50000 hours
- 5 years warranty
- MEAN WELL patented circular metal housing with class I design(Patent No.):CN201220314551

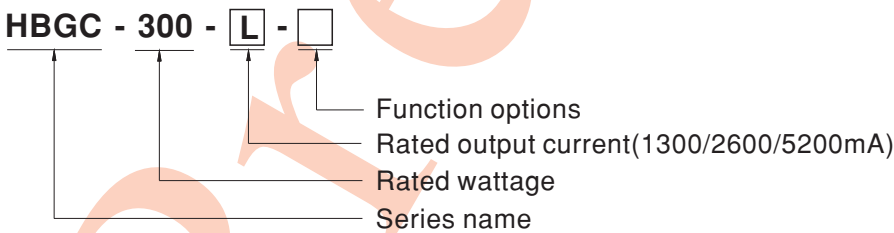
Applications

- LED bay lighting
- LED stage lighting
- LED spot lighting

Description

HBGC-300 series is a 300W LED AC/DC driver featuring the constant power mode and high voltage output. HBGC-300 operates from 90~305VAC and offers models with different rated current ranging between 1300mA and 5200mA. Thanks to the high efficiency up to 94.5%, 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 IP65/IP67 ingress protection level allows this series to fit both indoor and outdoor applications. Moreover the innovative environment-adaptive capability allows this series to reliably light on the LEDs for all kinds of application environments in almost any spots that may install LED luminaires in the world. HBGC-300 is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for LED lighting system.

Model Encoding



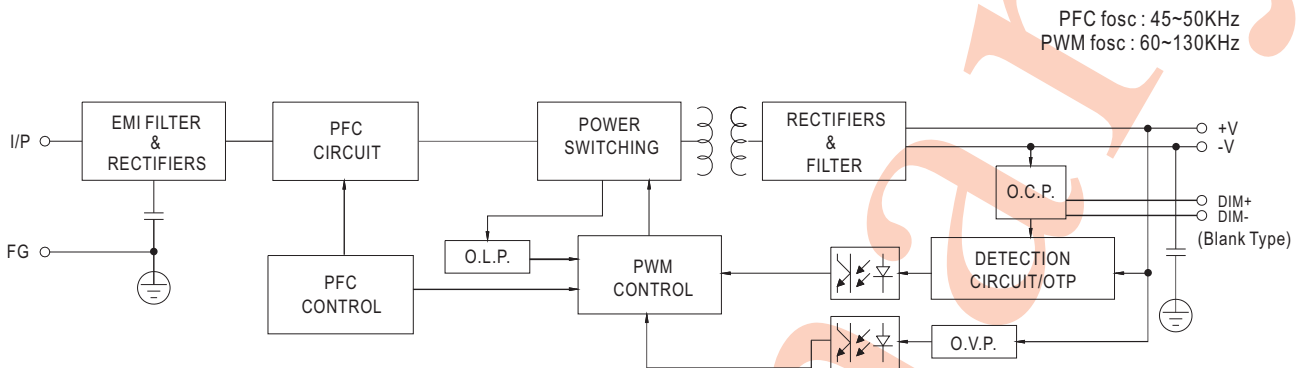
Type	IP Level	Function	Note
Blank	IP67	Io and Vo fixed	By request
A	IP65	output constant power adjustable via built-in potentiometer	In Stock
AB	IP65	output constant power adjustable via built-in potentiometer + 3 in 1 dimming function (0~10Vdc, 10V PWM signal and resistance)	In Stock
DA	IP67	DALI control technology.	In Stock



SPECIFICATION

MODEL		HBGC-300-L□	HBGC-300-M□	HBGC-300-H□
OUTPUT	RATED CURRENT	1300mA	2600mA	5200mA
	RATED POWER	301.6W	301.6W	301.6W
	CONSTANT CURRENT REGION	116 ~ 232V	58 ~ 116V	29 ~ 58V
	FULL POWER CURRENT RANGE	1300~2170mA	2600~4330mA	5200~8670mA
	OPEN CIRCUIT VOLTAGE (max.)	240V	120V	60V
	CURRENT ADJ. RANGE	650~2170mA	1300~4330mA	2600~8670mA
	CURRENT RIPPLE	5.0% max. @rated current		
	CURRENT TOLERANCE	±5%		
SET UP TIME		500ms/230VAC, 500ms/115VAC		
INPUT	VOLTAGE RANGE Note.2	100 ~ 305VAC 142VDC ~ 431VDC (Please refer to "STATIC CHARACTERISTIC" section)		
	FREQUENCY RANGE	47 ~ 63Hz		
	POWER FACTOR (Typ.)	PF ≥ 0.97 / 115VAC, PF ≥ 0.95 / 230VAC, PF ≥ 0.92 / 277VAC at full load (Please refer to "Power Factor Characteristic" section)		
	TOTAL HARMONIC DISTORTION	THD < 10% (@ load ≥ 50% at 115VAC/230VAC ,@load ≥ 75% at 277VAC) Please refer to "TOTAL HARMONIC DISTORTION (THD)" section		
	EFFICIENCY (Typ.)	94.5%	93.5%	92.5%
	AC CURRENT (Typ.)	3A / 115VAC	1.6A / 230VAC	1.3A / 277VAC
	INRUSH CURRENT(Typ.)	COLD START 45A(twidth=1300μs measured at 50% Ipeak) at 230VAC; Per NEMA 410		
	MAX. NO. of PSUs on 16A CIRCUIT BREAKER	2 unit(circuit breaker of type B) / 4 units(circuit breaker of type C) at 230VAC		
	LEAKAGE CURRENT	<0.75mA / 277VAC		
NO LOAD / STANDBY POWER CONSUMPTION	Standby power consumption <0.5W for B/AB / DA-Type Blank/A-Type please refer to Note. 5			
PROTECTION	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed		
	OVER VOLTAGE	241 ~ 275V	121 ~ 145V	61 ~ 78V
	OVER TEMPERATURE	Tcase>80°C ±5°C ,derate power automatically by 6%/°C max.		
ENVIRONMENT	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 ~ +80°C, 10 ~ 95% RH non-condensing		
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 60°C)		
SAFETY & EMC	SAFETY STANDARDS	UL8750(type"HL"), CSA C22.2 No. 250.13-12; ENEC EN61347-1, EN61347-2-13 independent, EN62384; GB19510.1 , GB19510.14; 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		
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, light industry level (surge immunity Line-Earth 6KV, Line-Line 4KV)		
OTHERS	MTBF	K hrs min. Telcordia SR-332(Bellcore); K hrs min. Telcordia SR-332(Bellcore); K hrs min. MIL-HDBK-217F (25°C)		
	LIFETIME Note.4	50000 hrs min.		
	DIMENSION	φ 191.5mm *69mm		
	PACKING	Kg; pcs/ Kg/ CUFT		
NOTE	<p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature.</p> <p>2. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.</p> <p>3. 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.</p> <p>4. This series meets the typical life expectancy of >50,000 hours of operation when Tcase, particularly tc point (or TMP, per DLC), is about 70°C or less.</p> <p>5. To fulfill requirements of the latest ErP regulation for lighting fixture, this LED drive can only be used behind a switch without permanently connected to the mains.</p> <p>6. Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.com</p>			

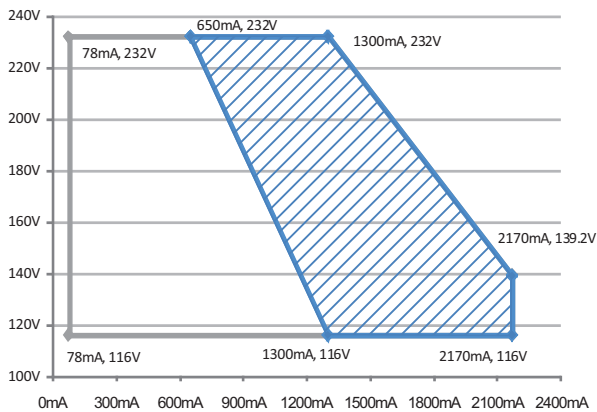
■ BLOCK DIAGRAM



■ DRIVING METHODS OF LED MODULE

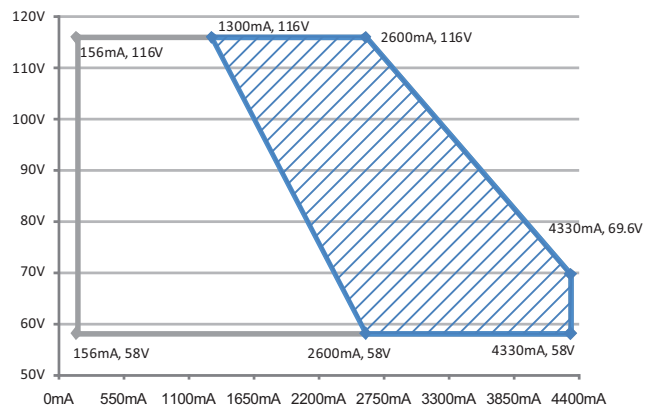
※ I-V Operating Area

◎ HBGC-300-L



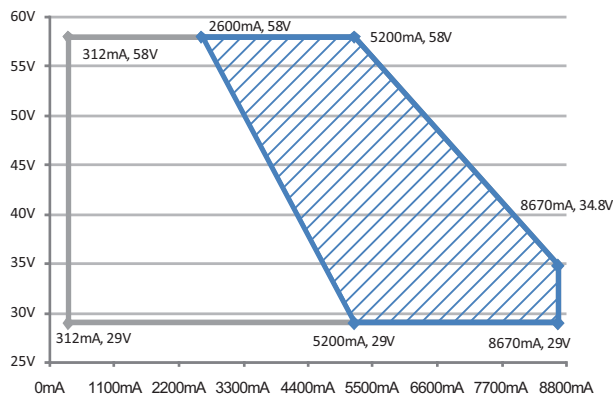
High Performance Region Operational Region

◎ HBGC-300-M



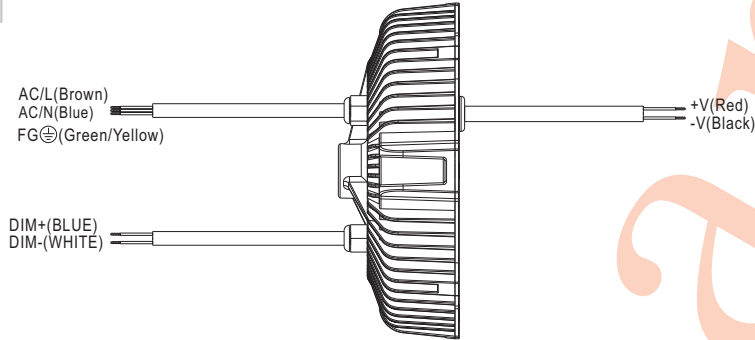
High Performance Region Operational Region

◎ HBGC-300-H



High Performance Region Operational Region

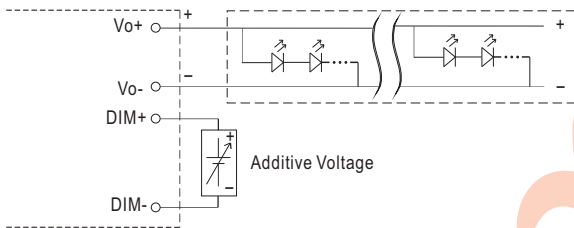
■ DIMMING OPERATION



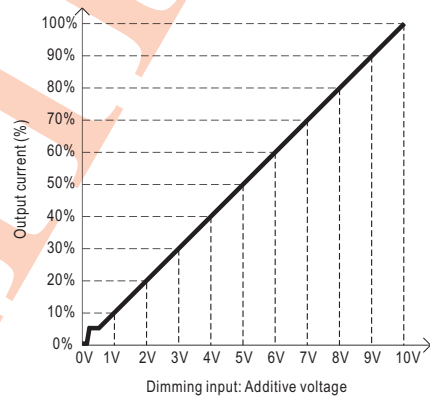
※ **3 in 1 dimming function (for B/AB-Type)**

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.)

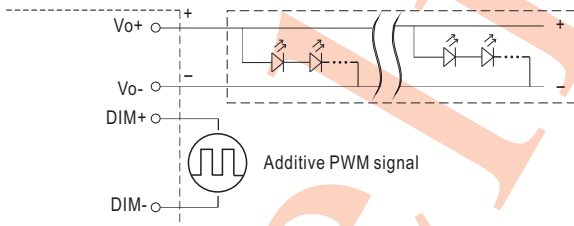
◎ Applying additive 0 ~ 10VDC



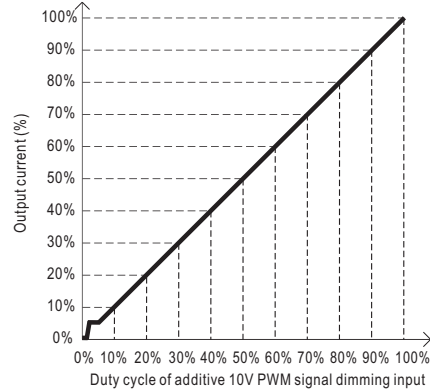
"DO NOT connect "DIM- to Vo-"



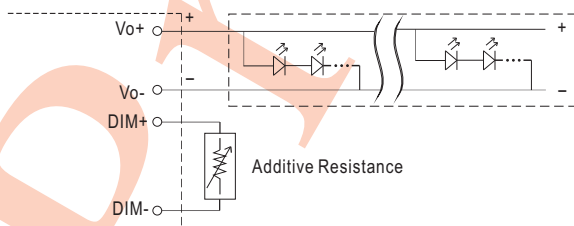
◎ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):



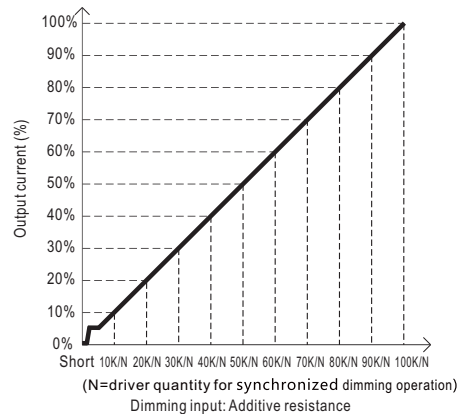
"DO NOT connect "DIM- to Vo-"



◎ Applying additive resistance:

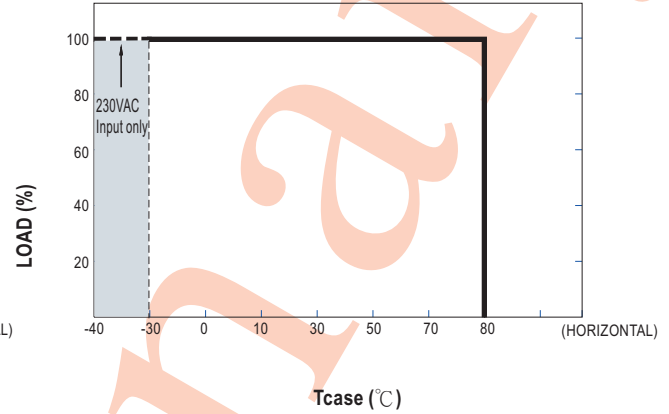
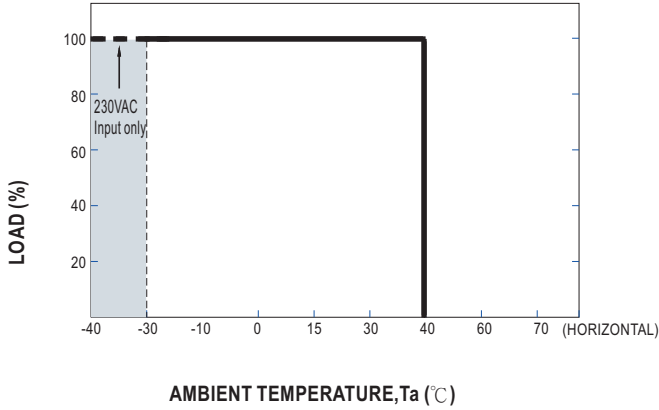


"DO NOT connect "DIM- to Vo-"

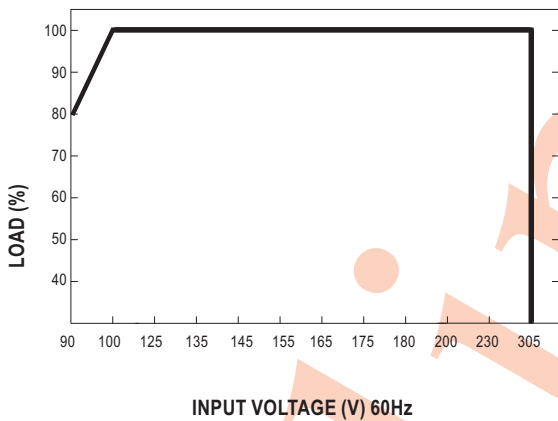


Note : 1. Min. dimming level is about 8% and the output current is not defined when 0% < I_{out} < 8%.
 2. The output current could drop down to 0% when dimming input is about 0k Ω or 0Vdc, or 10V PWM signal with 0% duty cycle.

OUTPUT LOAD vs TEMPERATURE

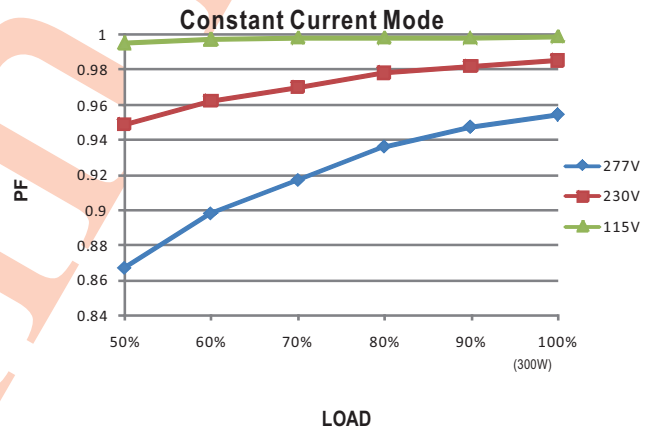


STATIC CHARACTERISTIC



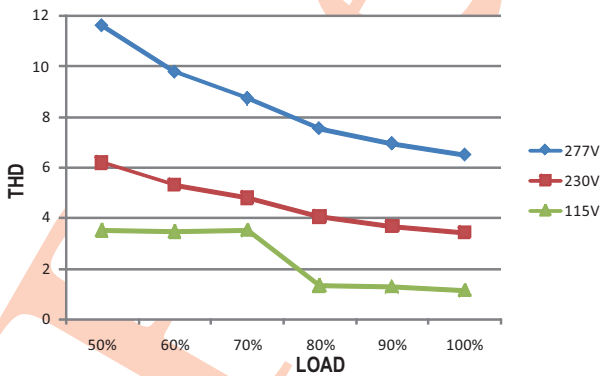
POWER FACTOR (PF) CHARACTERISTIC

※ Tcase at 65°C



TOTAL HARMONIC DISTORTION (THD)

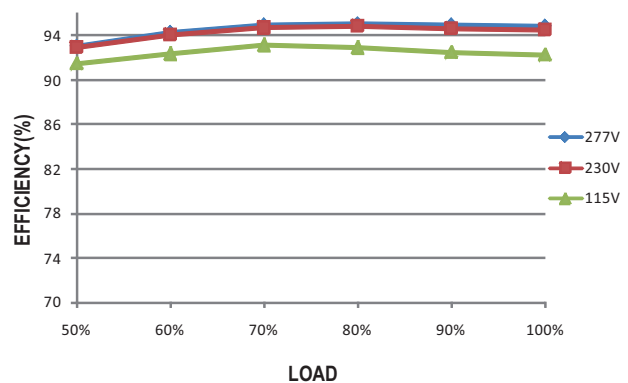
※ HBGC-300-L Model, Tcase at 65°C



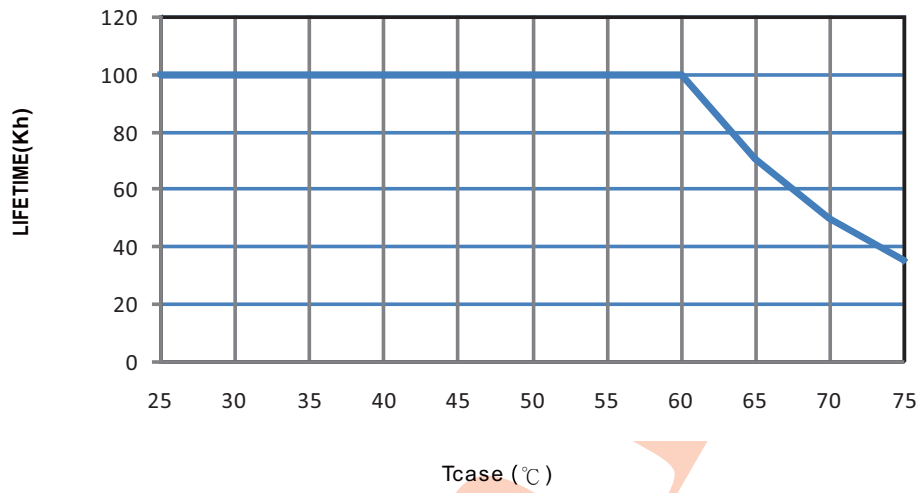
EFFICIENCY vs LOAD

HBGC-300 series possess superior working efficiency that up to 94.5% can be reached in field applications.

※ HBGC-300-L Model, Tcase at 65°C



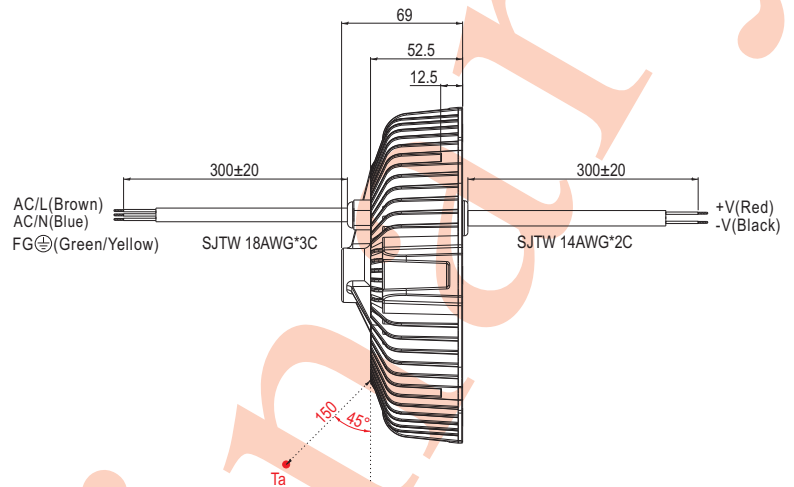
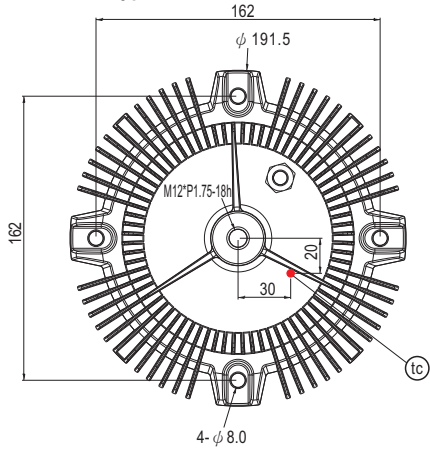
■ LIFE TIME



Case No.213 Unit:mm

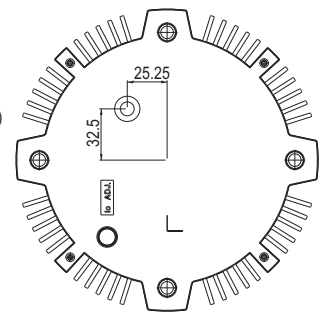
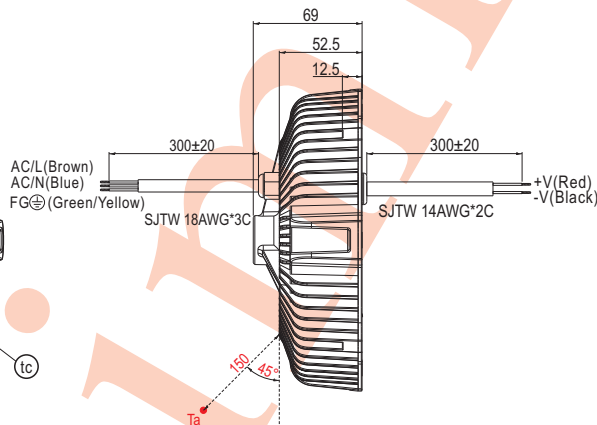
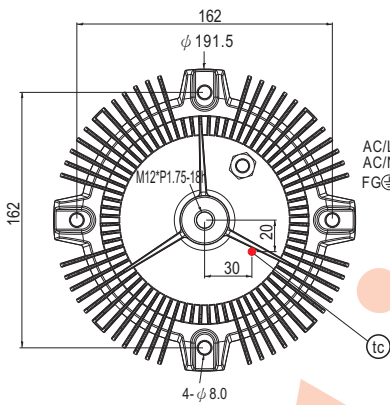
MECHANICAL SPECIFICATION

Blank-Type



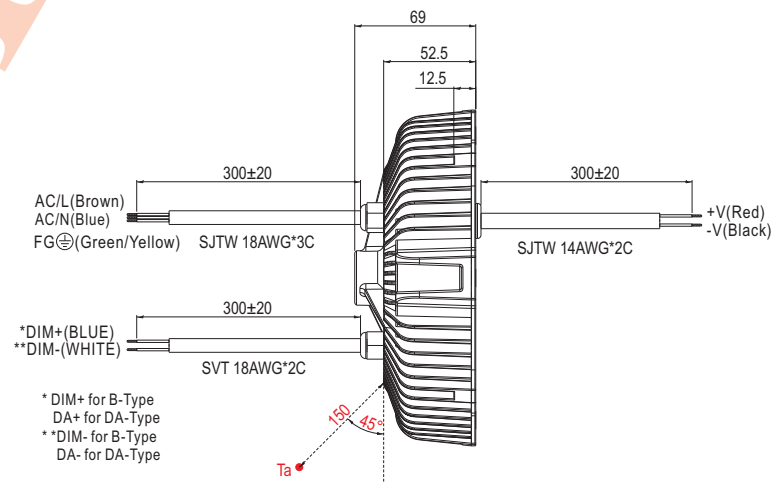
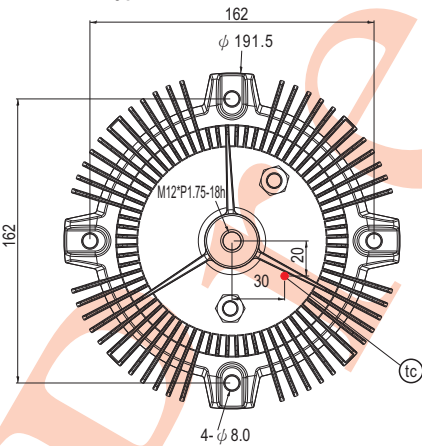
- tc: Max. Case Temperature. (case temperature measured point)
- Ta: Ambient Temperature measured point

A-Type



- tc: Max. Case Temperature. (case temperature measured point)
- Ta: Ambient Temperature measured point

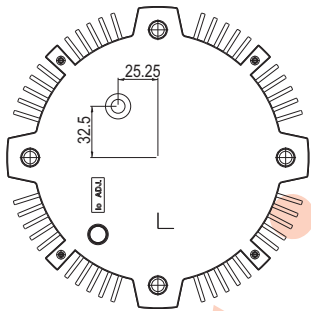
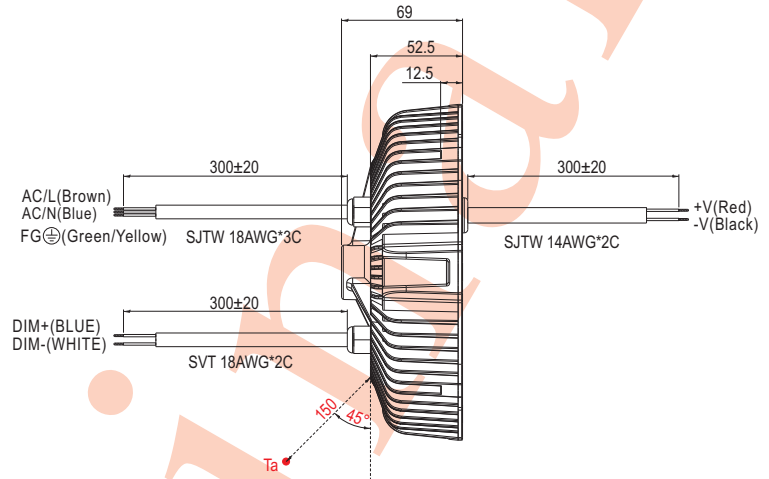
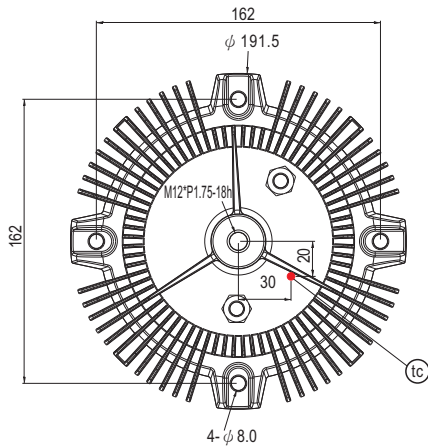
B/DA-Type



- * DIM+ for B-Type
- DA+ for DA-Type
- ** DIM- for B-Type
- DA- for DA-Type

- tc: Max. Case Temperature. (case temperature measured point)
- Ta: Ambient Temperature measured point

※ AB-Type



- tc: Max. Case Temperature. (case temperature measured point)
- Ta: Ambient Temperature measured point

■ INSTALLATION MANUAL

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