



■ Features

- Wide input range 90 ~ 305VAC
- Full power at 60~100% max current (Constant Power)
- Built-in active PFC function
- Circular metal housing design with IP67
- Function options: output adjustable via potentiometer; 3 in 1 dimming (Dim to off and Isolation) ; DALI-2 dimming
- Typical lifetime>50000 hours
- 5 years warranty

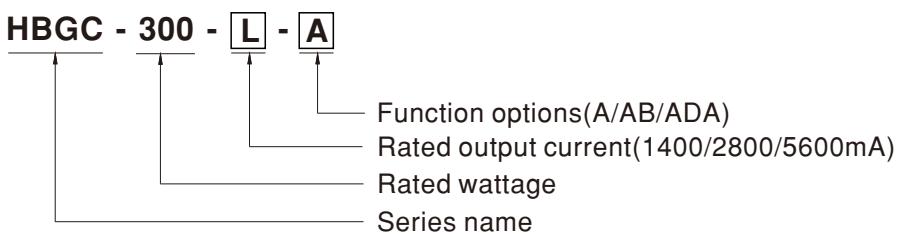
■ Applications

- Bay lighting
- Stage lighting
- Flood lighting
- Stadium lighting
- Type HL for use in class I ,Division 2

■ 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 8670mA. Thanks to the high efficiency up to 94.5%, 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 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
A	IP67	output constant power adjustable via built-in potentiometer	In Stock
AB	IP67	output constant power adjustable via built-in potentiometer + 3 in 1 dimming function (0~10Vdc, 10V PWM signal and resistance)	In Stock
ADA	IP67	DALI-2 control technology with Io Adjustable via build-in Potentiometer	In Stock



300W Constant Power Mode LED Driver

HBGC-300 series

SPECIFICATION

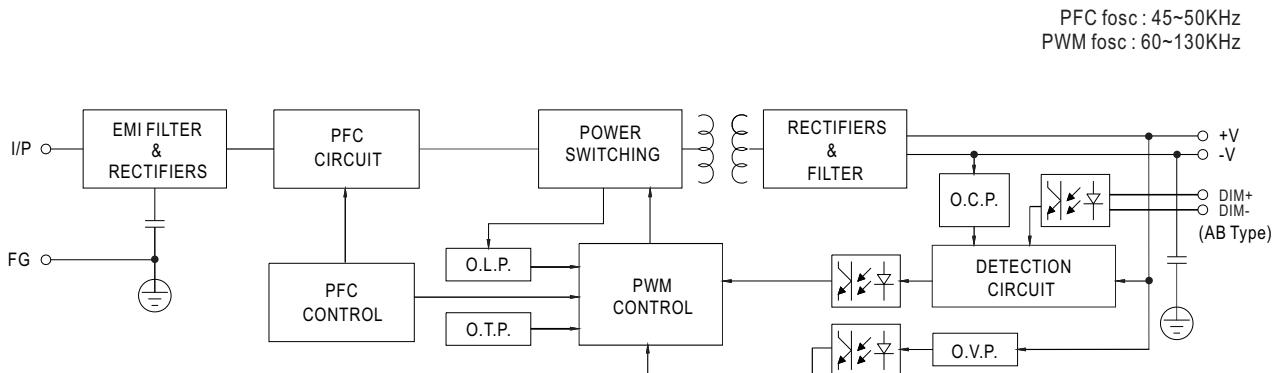
MODEL	HBGC-300-L-□	HBGC-300-M-□	HBGC-300-H-□
OUTPUT	DEFAULT CURRENT	1400mA	2800mA
	RATED POWER	301.6W	301.6W
	CONSTANT CURRENT REGION	116 ~232V	58 ~ 116V
	FULL POWER CURRENT RANGE	1300~2170mA	2600~4330mA
	OPEN CIRCUIT VOLTAGE (max.)	240V	120V
	CURRENT ADJ. RANGE	650~2170mA	1300~4330mA
	CURRENT RIPPLE	5.0% max. @rated current	
	CURRENT TOLERANCE	±5%	
	SET UP TIME	500ms/230VAC, 500ms/115VAC	
INPUT	VOLTAGE RANGE Note.2	90 ~ 305VAC 127VDC ~ 431VDC (Please refer to "STATIC CHARACTERISTIC" section)	
	FREQUENCY RANGE	47 ~ 63Hz	
	POWER FACTOR (Typ.)	PF \geq 0.97 / 115VAC, PF \geq 0.95 / 230VAC, PF \geq 0.92 / 277VAC at full load (Please refer to "Power Factor Characteristic" section)	
	TOTAL HARMONIC DISTORTION	THD $<$ 10% (@ load \geq 50% at 115VAC/230VAC, @load \geq 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=1300/ μ s 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 AB / ADA-Type Blank/A-Type please refer to Note. 5	
PROTECTION	SHORT CIRCUIT	Constant current limiting, recovers automatically after fault condition is removed	
	OVER VOLTAGE	241 ~ 275V 121 ~ 145V 61 ~ 78V	
	OVER TEMPERATURE	Shut down output voltage, re-power on to recovery	
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 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	
SAFETY & EMC	SAFETY STANDARDS	UL8750(type"HL"), CSA C22.2 No. 250.13-12; ENEC BS EN/EN61347-1, BS EN/EN61347-2-13 independent, BS EN/EN62384; EAC TP TC 004;GB19510.1, GB19510.14; IP67 approved	
	DALI STANDARDS	Compliance to IEC62386-101,102,207 for ADA Type only	
	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 BS EN/EN55015, BS EN/EN61000-3-2 Class C (@ load \geq 50%); BS EN/EN61000-3-3, EAC TP TC 020	
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN61547, light industry level (surge immunity Line-Earth 6KV, Line-Line 4KV), EAC TP TC 020	
OTHERS	MTBF	561.2K hrs min. Telcordia SR-332(Bellcore) ; 154.9K hrs min. MIL-HDBK-217F (25°C)	
	LIFETIME Note.4	50000 hrs min.	
	DIMENSION	φ 191.5mm *69mm	
	PACKING	2.2Kg;8pcs/19.8Kg/2.09CUFT	
NOTE	<ol style="list-style-type: none"> 1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature. 2. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details. 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. 4. This series meets the typical life expectancy of >50,000 hours of operation when Tcase, particularly to point (or TMP, per DLC), is about 75°C or less. 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. 6. Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.com 7. 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). 8. 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 <p>※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx</p>		



300W Constant Power Mode LED Driver

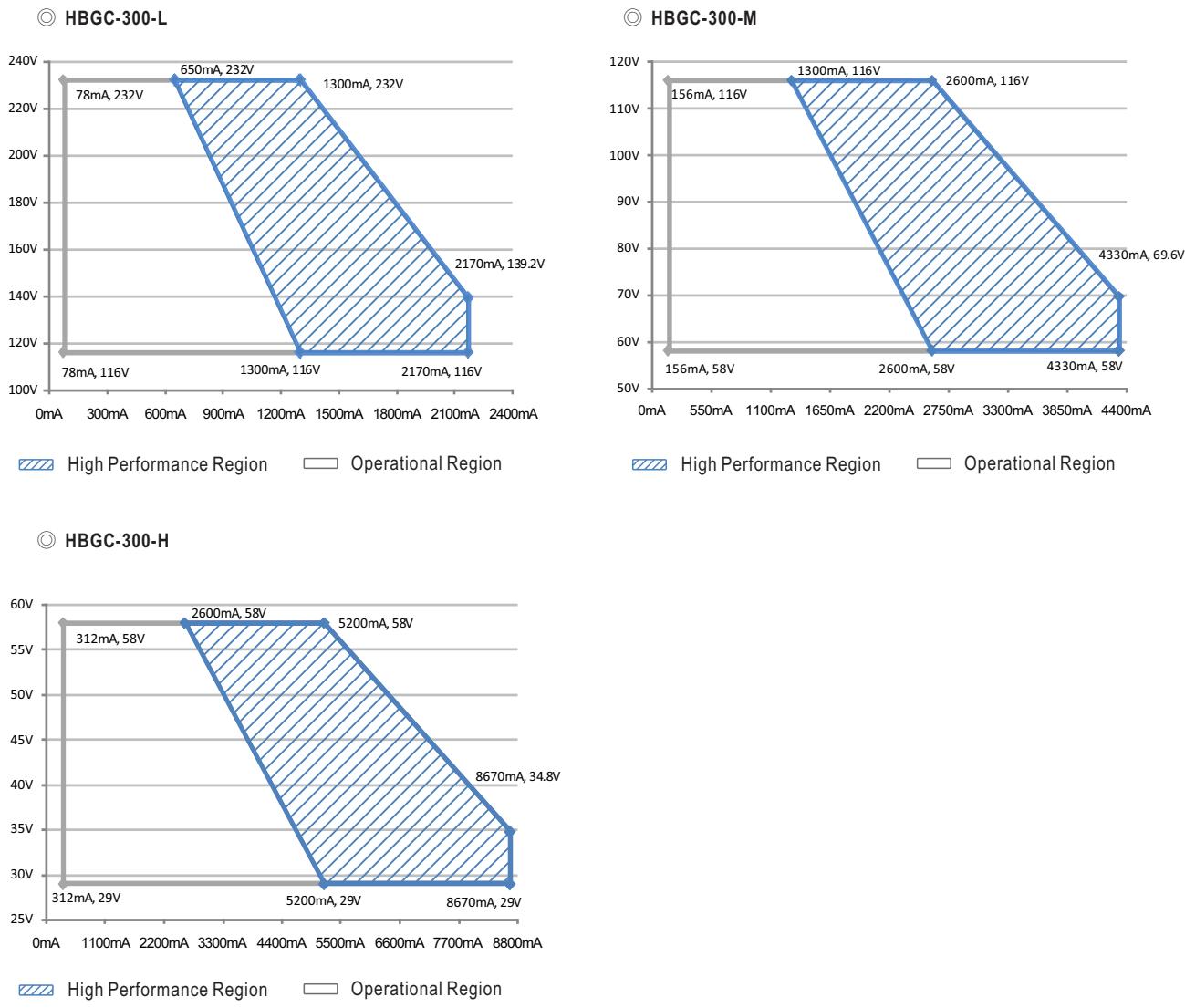
HBGC-300 series

■ BLOCK DIAGRAM

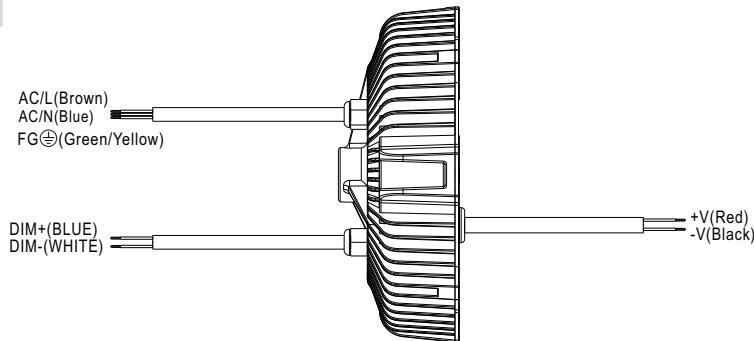


■ DRIVING METHODS OF LED MODULE

※ I-V Operating Area



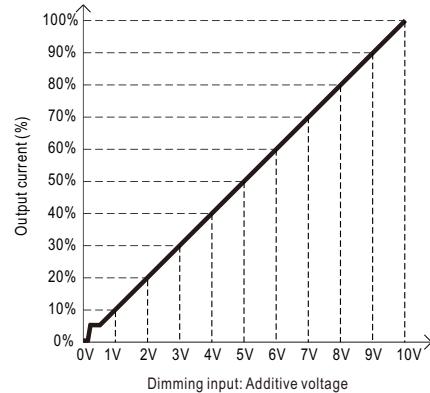
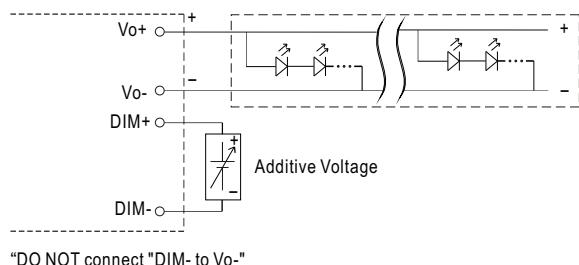
■ DIMMING OPERATION



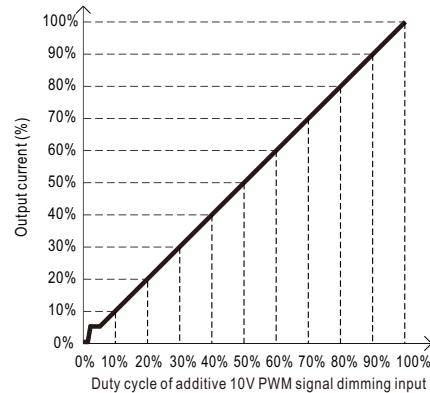
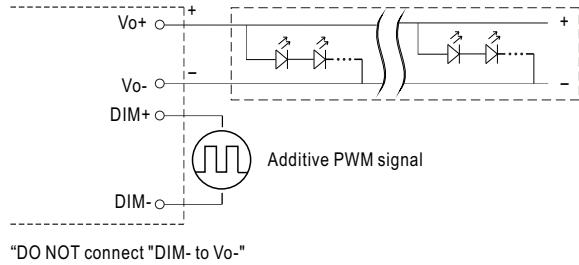
※ 3 in 1 dimming function (for AB-Type)

- 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: 100µA (typ.)

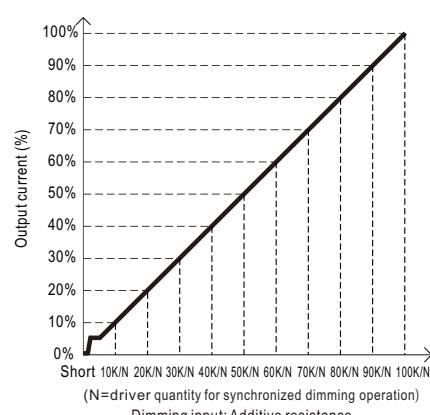
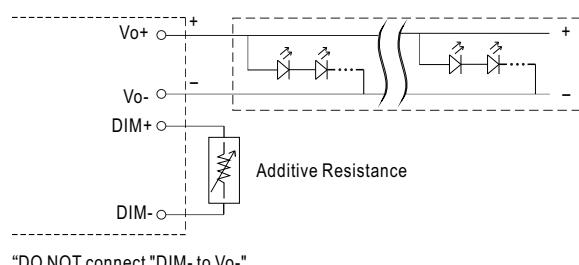
○ Applying additive 0 ~ 10VDC



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



○ Applying additive resistance:



Note : 1. Min. dimming level is about 8% and the output current is not defined when $0\% < I_{out} < 8\%$.

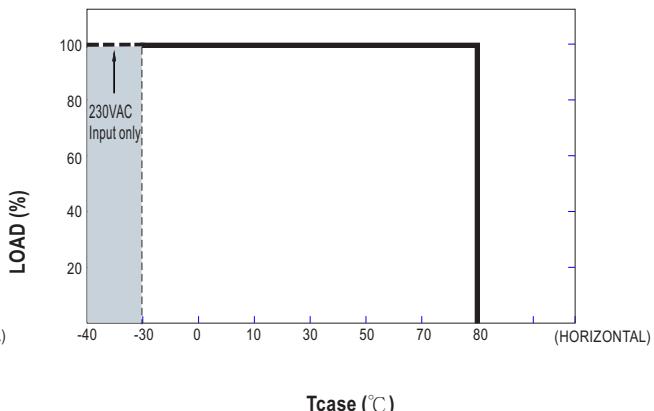
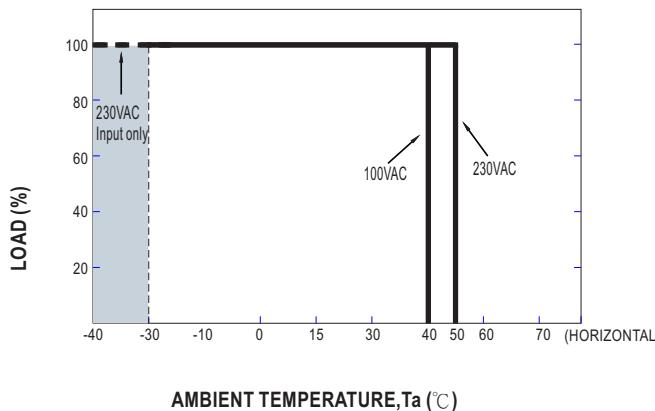
2. The output current could drop down to 0% when dimming input is about $0\text{ k}\Omega$ or 0 Vdc , or 10V PWM signal with 0% duty cycle.



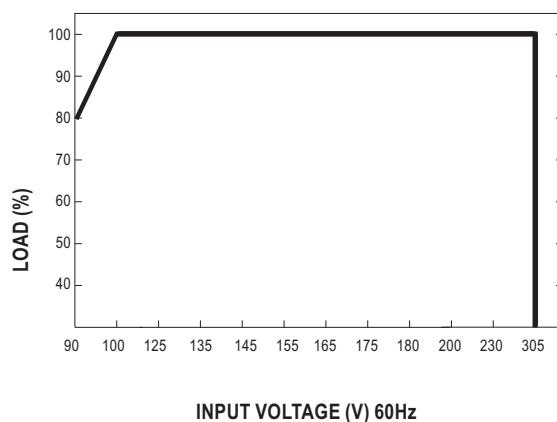
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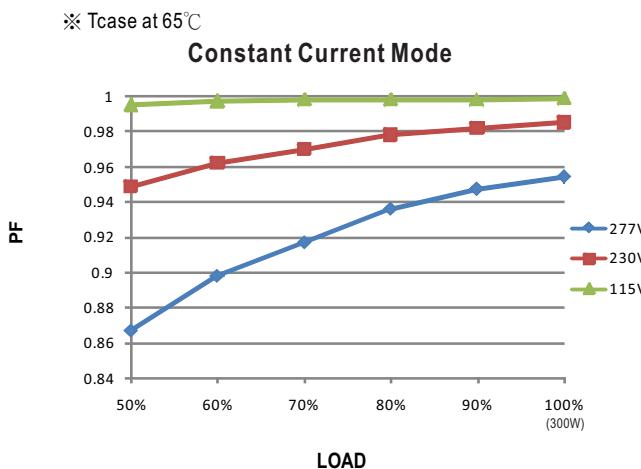
■ OUTPUT LOAD vs TEMPERATURE



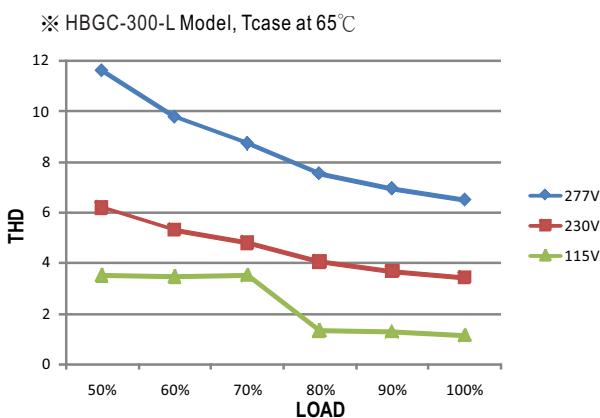
■ STATIC CHARACTERISTIC



■ POWER FACTOR (PF) CHARACTERISTIC



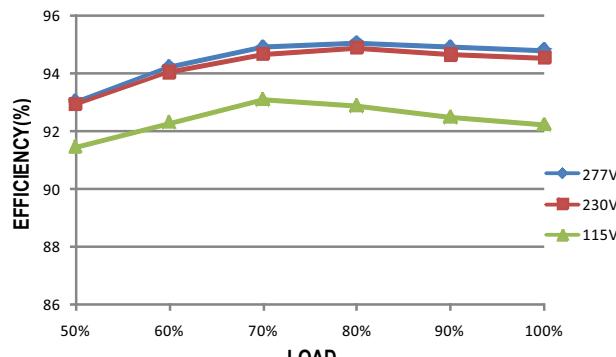
■ TOTAL HARMONIC DISTORTION (THD)

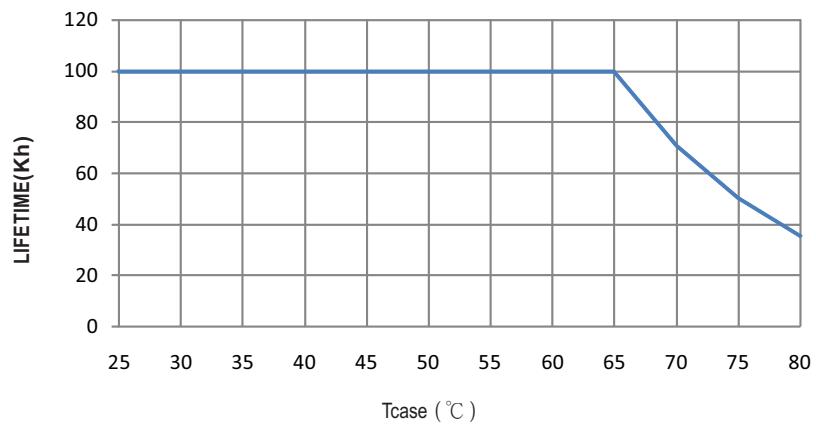


■ EFFICIENCY vs LOAD

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

※ HBGC-300-L Model, T_{case} at 65°C



LIFE TIME



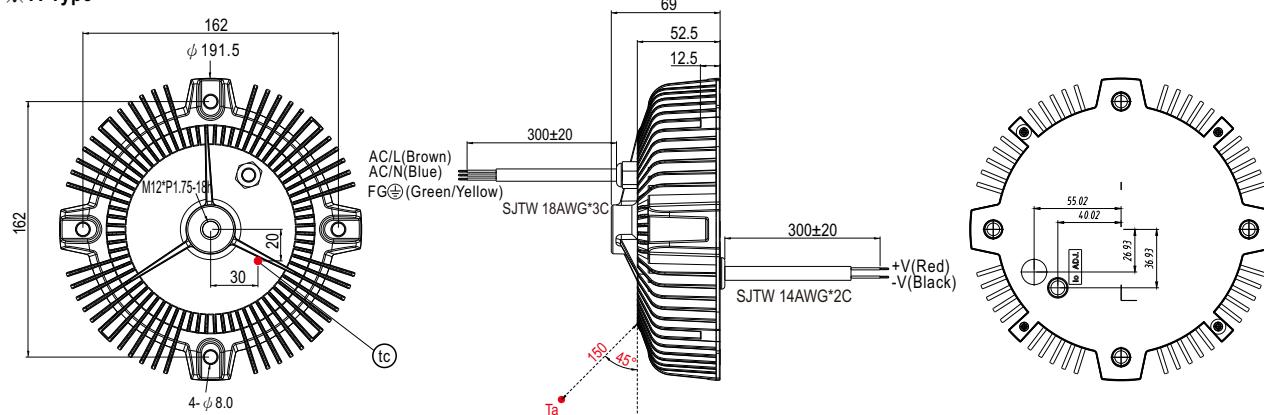
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HBGC-300 series

■ MECHANICAL SPECIFICATION

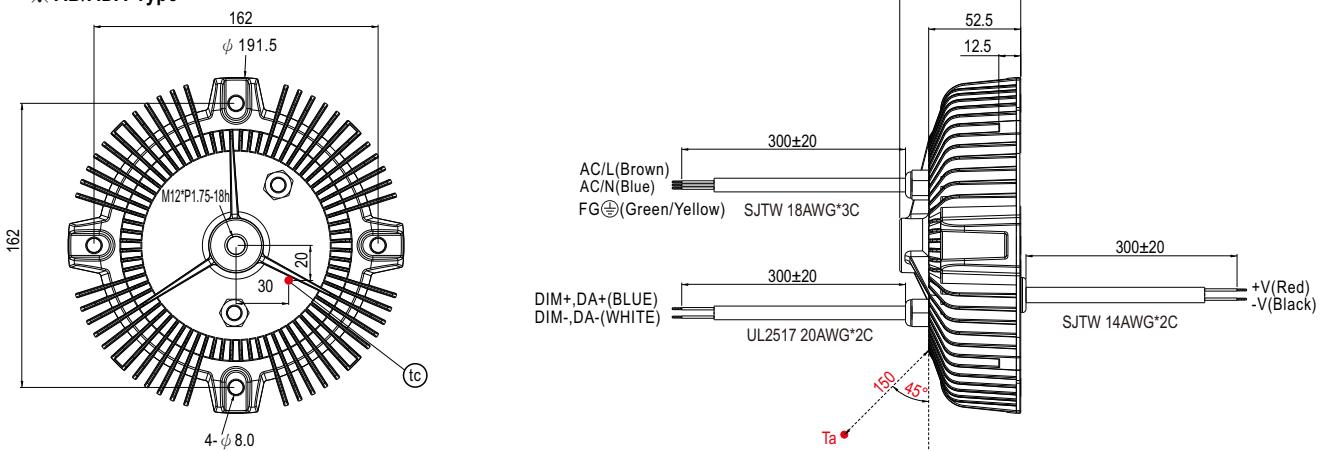
Case No.213 Unit:mm

※ A-Type



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

※ AB/ADA-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>