



AC input with fixed cable



AC input with connector



SELV IP67



(Note 8)

 IS 15885(Part 2/Sec13)  
8  
R-41027766


## ■ Features

- Full power output at 70~100% constant power mode operation
- Wide input range 90 ~ 305VAC with active PFC function
- Metal housing design with IP67
- Function options: output adjustable via potentiometer; 3 in 1 dimming (dim-to-off and Isolation design)
- Typical lifetime>50000 hours and 5 years warranty
- AC input cable with connector for flexible application

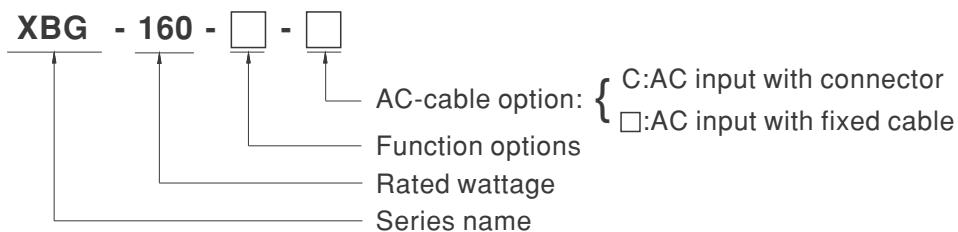
## ■ Applications

- LED bay lighting
- LED stage lighting
- LED spot lighting
- Explosion-proof lighting
- Type HL LED driver for class I division 2

## ■ Description

XBG-160 series is a 160W AC/DC LED driver featuring the constant power mode. XBG-160 operates from 90~305VAC and offers with different rated current ranging between 2850mA and 4100mA. Thanks to the high efficiency up to 93%, 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 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. XBG-160 series comply with the latest version of IEC61347/GB7000.1-2015 and UL8750 international safety regulations. The output and dimming circuit are also completely in accordance with the new regulations with isolation to ensure the safety of both users and luminaire system during installation.

## ■ Model Encoding



Type	IP Level	Function	Note
A	IP67	constant power adjustable via built-in potentiometer	In Stock
AB	IP67	constant power adjustable via built-in potentiometer + 3 in 1 dimming function (0~10Vdc, 10V PWM signal and resistance)	In Stock

## SPECIFICATION

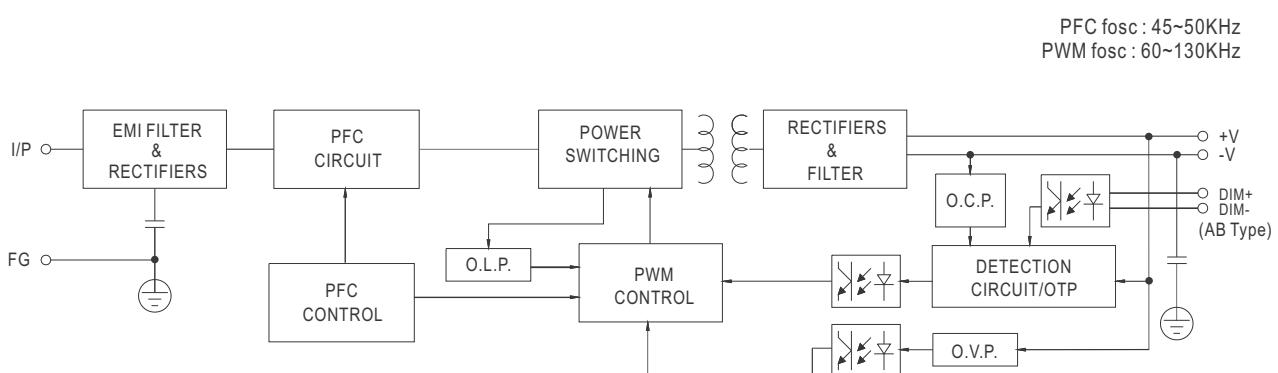
MODEL		XBG-160-□-□				
OUTPUT	DEFAULT CURRENT	3300mA				
	RATED POWER	159.9W				
	CONSTANT CURRENT REGION	34 ~ 56V				
	FULL POWER CURRENT RANGE	2850~4100mA				
	OPEN CIRCUIT VOLTAGE (max.)	60V				
	CURRENT ADJ. RANGE	1425~4100mA				
	CURRENT RIPPLE	5.0% max. @rated current				
	CURRENT TOLERANCE	±5%				
INPUT	SET UP TIME	Note.4 500ms/230VAC, 2000ms/115VAC				
	VOLTAGE RANGE	90 ~ 305VAC 127 ~ 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 $\geq$ 60% at 115VAC/230VAC, @load $\geq$ 75% at 277VAC) Please refer to "TOTAL HARMONIC DISTORTION (THD)" section				
	EFFICIENCY (Typ.)	93%				
	AC CURRENT (Typ.)	2.0A / 115VAC 0.8A / 230VAC 0.7A / 277VAC				
	INRUSH CURRENT(Typ.)	COLD START 50A(twidth=620 $\mu$ s measured at 50% Ipeak) at 230VAC; Per NEMA 410				
	MAX. NO. of PSUs on 16A CIRCUIT BREAKER	4 unit(circuit breaker of type B) / 7 units(circuit breaker of type C) at 230VAC				
	LEAKAGE CURRENT	<0.75mA / 277VAC				
PROTECTION	NO LOAD / STANDBY POWER CONSUMPTION	No load power consumption<0.5W for A-Type Standby power consumption<0.5W for AB-Type				
	OVER CURRENT	95 ~ 108% Constant current limiting, recovers automatically after fault condition is removed				
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed				
	OVER VOLTAGE	61 ~ 78V Shut down output voltage, re-power on to recovery				
ENVIRONMENT	OVER TEMPERATURE	Shut down output voltage, re-power on to recovery				
	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	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes				
	SAFETY STANDARDS	UL8750(type"HL"), CSA C22.2 No. 250.13-12; ENEC BS EN/EN61347-1, BS EN/EN61347-2-13 independent, BS EN/EN62384; IS15885(Parl2/Sec13);GB19510.1,GB19510.14;IP67;EAC TP TC 004 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	Parameter	Standard	Test Level/Note		
		Conducted	BS EN/EN55015(CISPR15)	----		
		Radiated	BS EN/EN55015(CISPR15)	----		
		Harmonic Current	BS EN/EN61000-3-2	Class C @load $\geq$ 50%		
		Voltage Flicker	BS EN/EN61000-3-3	----		
	EMC IMMUNITY	BS EN/EN55024 , BS EN/EN61204-3, BS EN/EN61000-6-2				
		Parameter	Standard	Test Level/Note		
		ESD	BS EN/EN61000-4-2	Level 3, 8KV air ; Level 2, 4KV contact		
		Radiated	BS EN/EN61000-4-3	Level 3		
		EFT/Burst	BS EN/EN61000-4-4	Level 3		
		Surge	BS EN/EN61000-4-5	4KV/Line-Line 6KV/Line-Earth		
		Conducted	BS EN/EN61000-4-6	Level 3		
		Magnetic Field	BS EN/EN61000-4-8	Level 4		
OTHERS	Voltage Dips and Interruptions	BS EN/EN61000-4-11	>95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods			
	MTBF	1100K hrs min.	Telcordia SR-332(Bellcore) ; 280K hrs min.			
	LIFETIME	Note.5 50000 hrs min.	MIL-HDBK-217F (25°C)			
	DIMENSION	φ 151.5mm *60mm(D*H)				
NOTE	PACKING	1.25Kg; 8pcs/11.5Kg/0.93CUFT				
	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. 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.					
	5. 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.					
	6. 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.					
	7. Please refer to the warranty statement on MEAN WELL's website at <a href="http://www.meanwell.com">http://www.meanwell.com</a>					
	8. 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).					
	9. Products sourced from the Americas regions may not have the PSE/CCC/BIS/KC logo. Please contact your MEAN WELL sales for more information.					
	10. For any application note and IP water proof function installation caution, please refer our user manual before using. <a href="https://www.meanwell.com/Upload/PDF/LED_EN.pdf">https://www.meanwell.com/Upload/PDF/LED_EN.pdf</a>					
※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a>			File Name:XBG-160-SPEC 2021-09-10			



160W Constant Power Mode LED Driver

**XBG-160** series

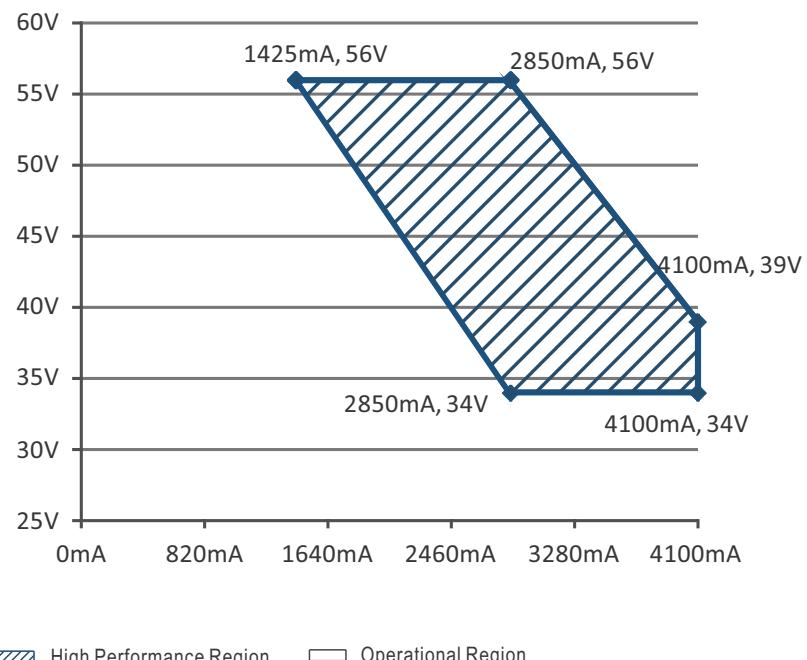
■ BLOCK DIAGRAM



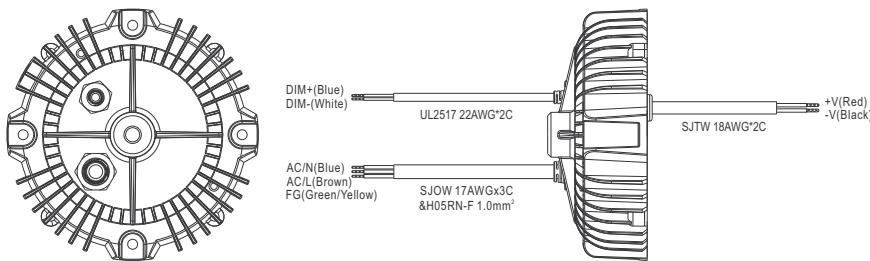
■ DRIVING METHODS OF LED MODULE

※ I-V Operating Area

◎ XBG-160



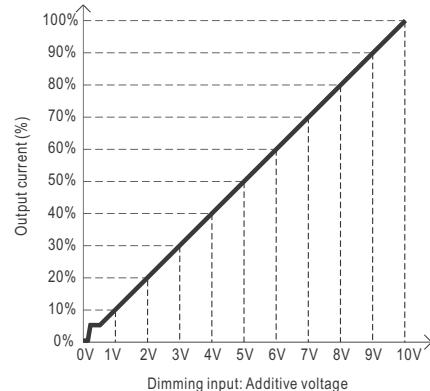
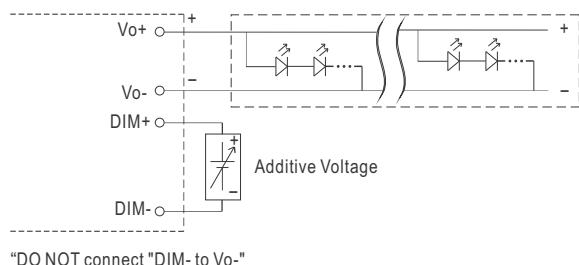
## ■ DIMMING OPERATION



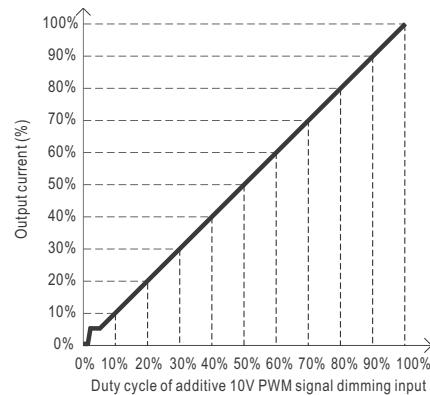
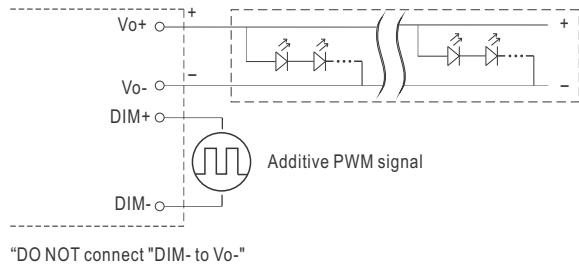
## ※ 3 in 1 dimming function (for AB-Type)

- 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.)

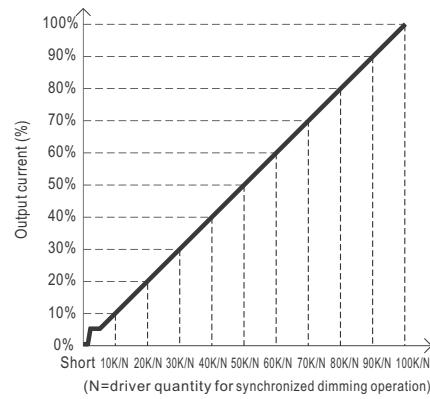
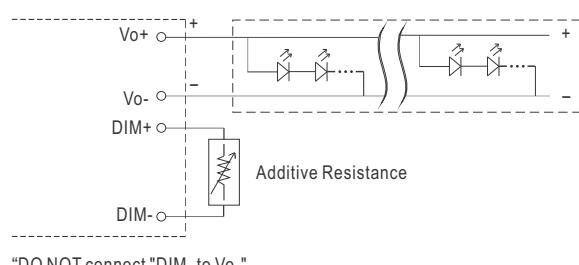
## ◎ Applying additive 0 ~ 10VDC



## ◎ 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% < Iout < 8%.

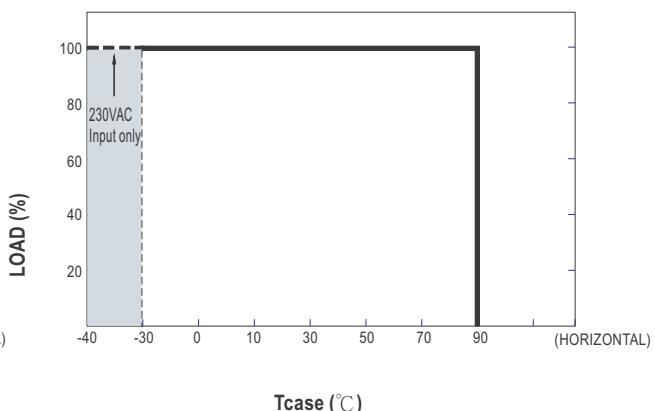
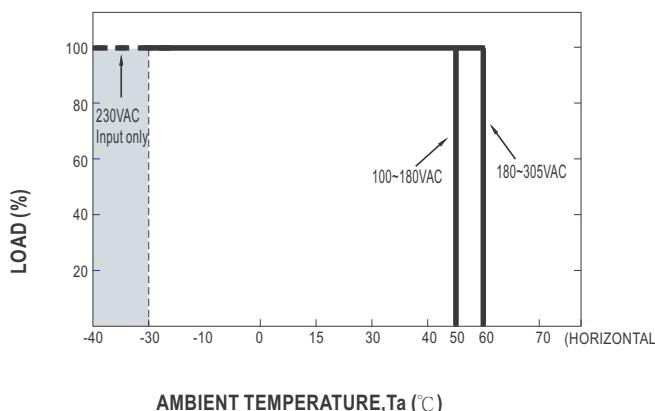
2. The output current could drop down to 0% when dimming input is about 0kΩ or 0Vdc, or 10V PWM signal with 0% duty cycle.



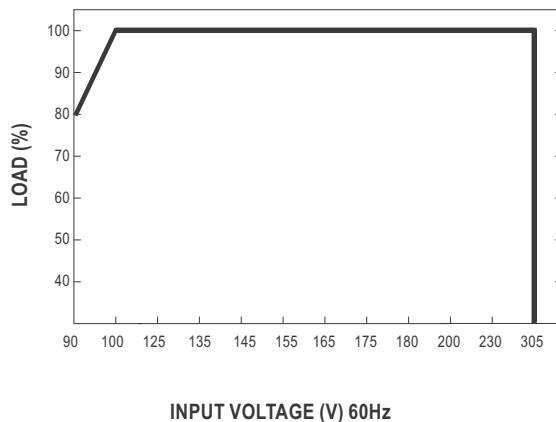
160W Constant Power Mode LED Driver

**XBG-160** series

■ OUTPUT LOAD vs TEMPERATURE



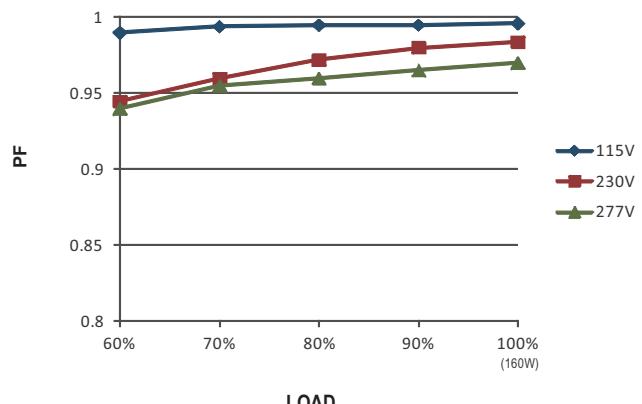
■ STATIC CHARACTERISTIC



■ POWER FACTOR (PF) CHARACTERISTIC

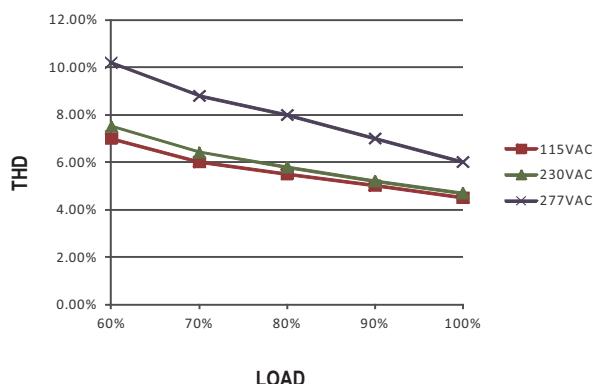
※  $T_{case}$  at 65°C

Constant Current Mode



■ TOTAL HARMONIC DISTORTION (THD)

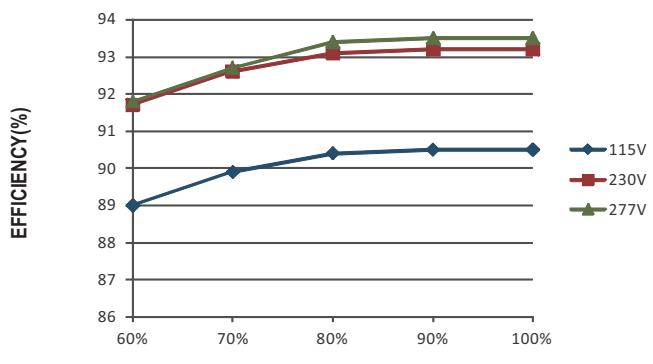
※ 2850mA Model,  $T_{case}$  at 65°C

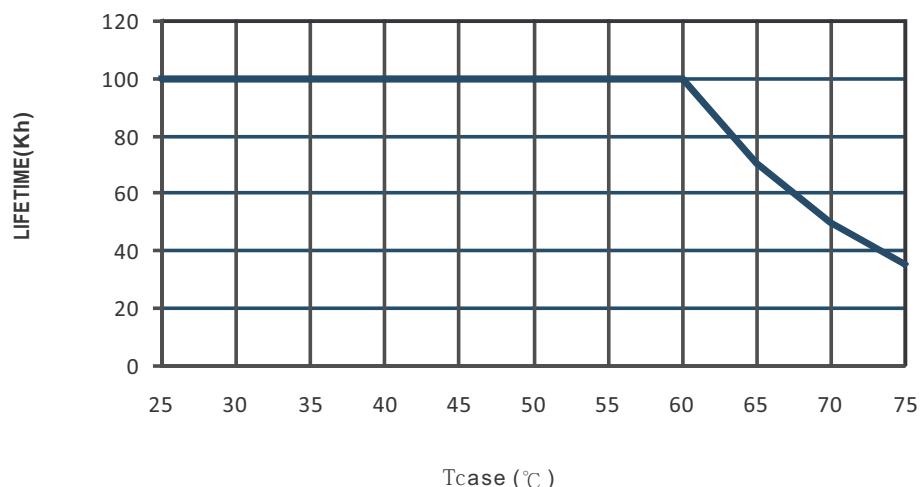


■ EFFICIENCY vs LOAD

XBG-160 series possess superior working efficiency that up to 93% can be reached in field applications.

※ 2850mA Model,  $T_{case}$  at 65°C



**LIFE TIME**



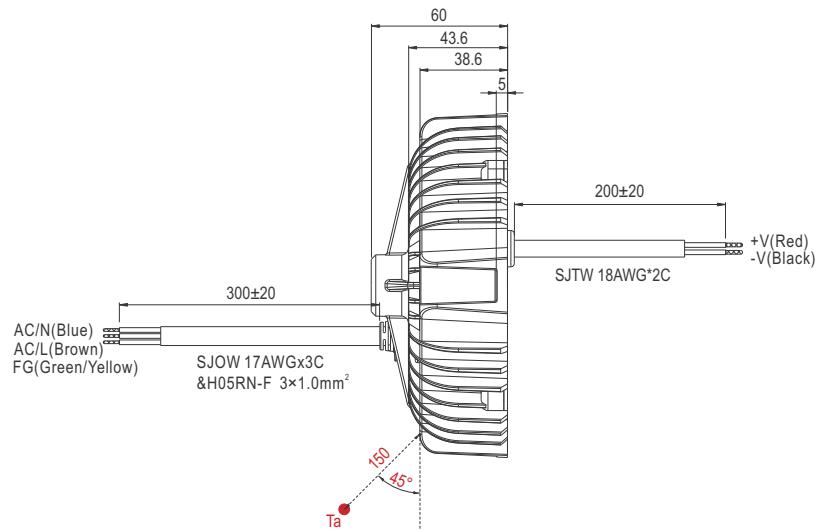
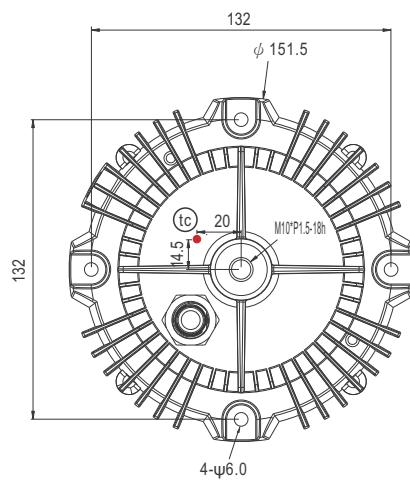
160W Constant Power Mode LED Driver

XBG-160 series

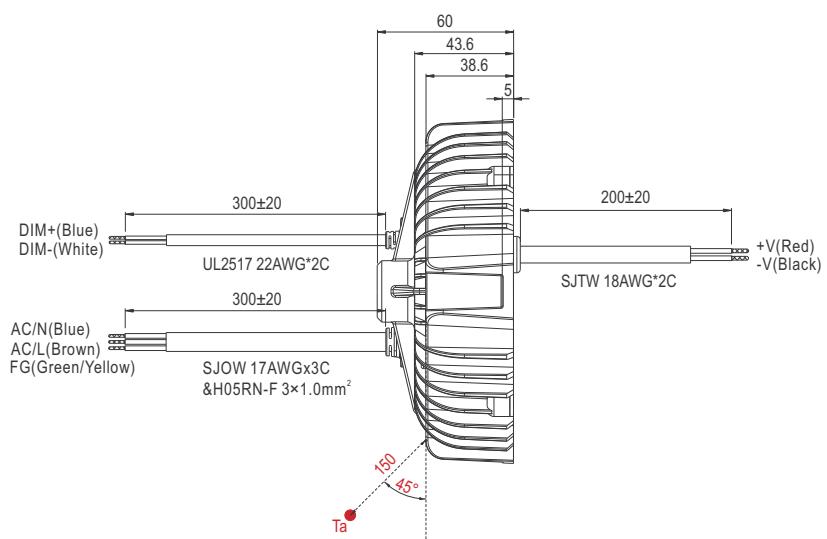
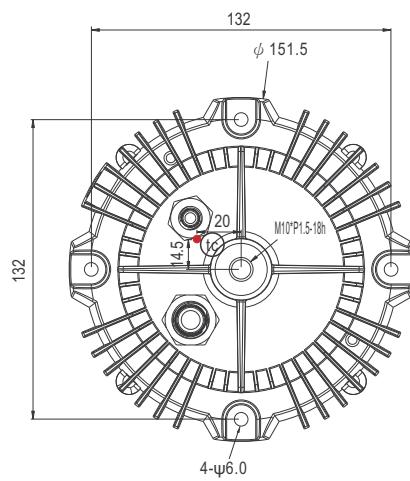
## ■ MECHANICAL SPECIFICATION

Case No.271 Unit:mm

※ A-Type(AC input with fixed cable)

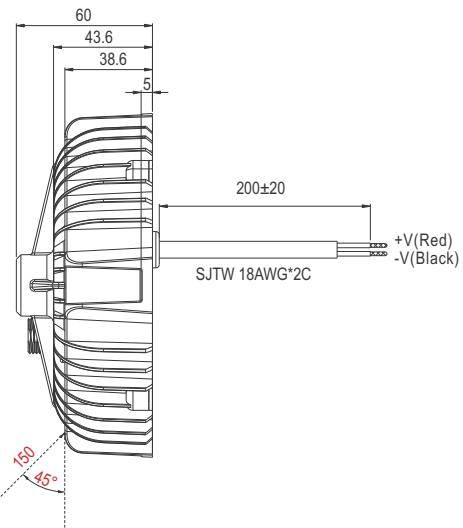
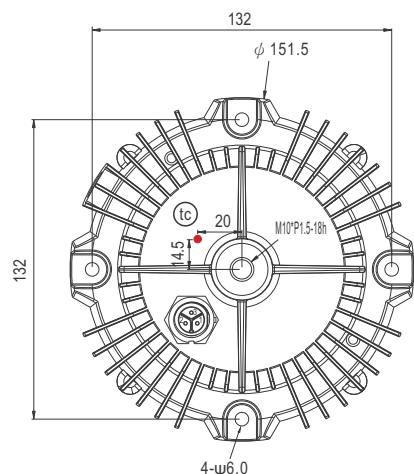


※ AB-Type

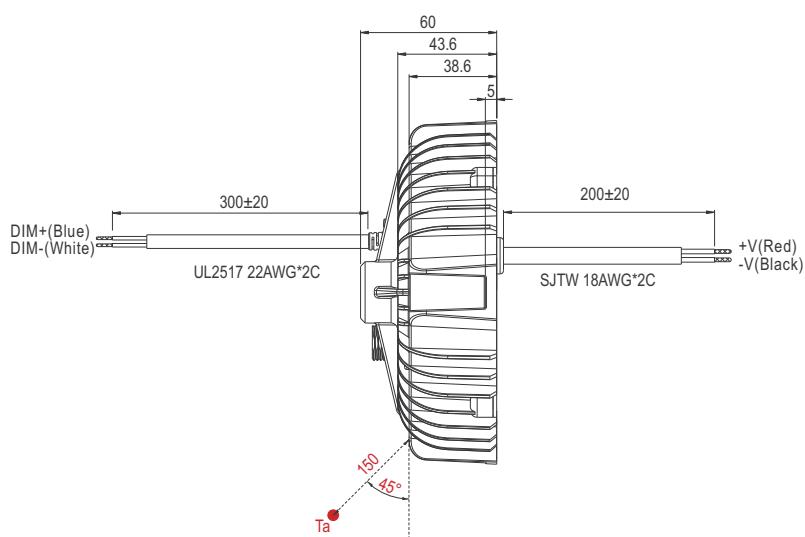
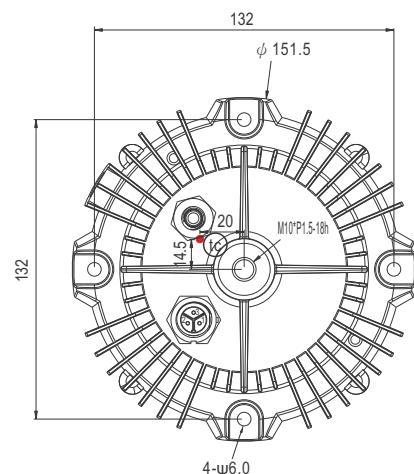


- $(T_c)$ : Max. Case Temperature.(case temperature measured point)
- $T_a$  : Ambient Temperature measured point

※ A-C-Type(AC input with connector)



※ AB-C-Type



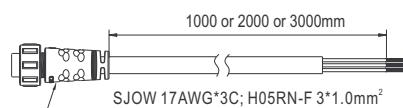
Terminal Pin No. Assignment(CHOGORI 22003515-01)

Pin No.	Assignment	Drawing
1	AC/L	
2	AC/N	
3	FG $\pm$	

AC input cable is optional, needs extra charge

Item	Order Code	Note
100cm	F61-XBG-AC-CABLE-100	In Stock
200cm	F61-XBG-AC-CABLE-200	By Request
300cm	F61-XBG-AC-CABLE-300	By Request

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



CHOGORI 22003213-01

## ■ INSTALLATION MANUAL

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