HLG-60H-C series

70W Constant Current Mode LED Driver

User's Manual

(HLG-60H-C700 only) SELV (HLG-60H-C700 only) IP65 IP67

Features

- 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; Timer dimming
- Typical lifetime>62000 hours
- 7 years warranty

Applications

- LED street lighting
- LED fishing lamp
- LED harbor lighting
- LED building architectural lighting
- LED greenhouse lighting
- LED bay lighting

GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

Description

HLG-60H-C series is a 70W AC/DC LED driver featuring the constant current mode and high voltage output. HLG-60H-C operates from 90~305VAC and offers models with different rated current ranging between 350mA and 700mA. Thanks to the high efficiency up to 91%, with the fanless design, the entire series is able to operate for -40℃ ~ +80℃ 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. HLG-60H-C is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for LED lighting system.

Model Encoding

HLG - 60 H - C700 A

- A: Function options
- C700: Rated output current(350/700mA)
- H: High input voltage up to 305VAC
- 60: Rated wattage
- HLG: Series name

Type	IP Level	Function	Note
A	IP65	Io adjustable through built-in potentiometer.	In Stock
B	IP67	3 in 1 dimming function (1~10Vdc, 10V PWM signal and resistance)	In Stock
AB	IP65	Io adjustable through built-in potentiometer & 3 in 1 dimming function (1~10Vdc, 10V PWM signal and resistance)	In Stock
D	IP67	Timer dimming function, contact MEAN WELL for details(safety pending).	By request

MEAN WELL

70W Constant Current Mode LED Driver

HLG-60H-C series

SPECIFICATION

MODEL		HLG-60H-C350□	HLG-60H-C700□
OUTPUT	RATED CURRENT	350mA	700mA
	RATED POWER	70W	70W
	CONSTANT CURRENT REGION Note.2	100 ~ 200V	50 ~ 100V
	CURRENT ADJ. RANGE	Adjustable for A/AB-Type only (via built-in potentiometer)	
		210 ~ 350mA	420 ~ 700mA
	CURRENT RIPPLE	5.0% max. @rated current	
	CURRENT TOLERANCE	±5%	
	SET UP TIME Note.4	750ms/115VAC, 500ms/230VAC	
INPUT	VOLTAGE RANGE Note.3	90 ~ 305VAC 127 ~ 431VDC (Please refer to "STATIC CHARACTERISTIC" section)	
	FREQUENCY RANGE	47 ~ 63Hz	
	POWER FACTOR (Typ.)	PF≧0.98/115VAC, PF≧0.96/230VAC, PF≧0.94/277VAC @full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)	
	TOTAL HARMONIC DISTORTION	THD< 20% (@ load≧60% /115VAC, 230VAC; @ load≧75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION (THD)" section)	
	EFFICIENCY (Typ.)	91%	90.5%
	AC CURRENT (Typ.)	0.69A / 115VAC 0.35A / 230VAC 0.29A / 277VAC	
	INRUSH CURRENT(Typ.)	COLD START 60A(t_{width}=275μs measured at 50% I_{peak}) at 230VAC; Per NEMA 410	
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	8 units (circuit breaker of type B) / 13 units (circuit breaker of type C) at 230VAC	
	LEAKAGE CURRENT	<0.75mA / 277VAC	
PROTECTION	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed	
	OVER VOLTAGE	230 ~ 250V	120 ~ 140V
		Shut down o/p voltage with auto-recovery or re-power on to recovery	
	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover	
ENVIRONMENT	WORKING TEMP.	Tcase=-40 ~ +80℃ (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)	
	MAX. CASE TEMP.	Tcase=+80℃	
	WORKING HUMIDITY	10 ~ 95% RH non-condensing	
	STORAGE TEMP., HUMIDITY	-40 ~ +80℃, 10 ~ 95% RH	
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)	
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes	
SAFETY & EMC	SAFETY STANDARDS Note.6	UL8750, CSA C22.2 No. 250.0-08, BS EN/EN 61347-1,BS EN/EN 61347-2-13 independent, GB19510.1,GB19510.14, EAC TP TC 004,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℃/ 70% RH	
	EMC EMISSION Note.6	Compliance to BS EN/EN55015, BS EN/EN61000-3-2 Class C (@ load≧60%) ; EN61000-3-3,GB/T 17743 , GB17625.1, EAC TP TC 020	
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN61547, heavy industry level (surge immunity Line-Earth 4KV, Line-Line 2KV), EAC TP TC 020	
OTHERS	MTBF	3113.4K hrs min. Telcordia SR-332 (Bellcore) ; 336.0K hrs min. MIL-HDBK-217F (25℃)	
	DIMENSION	171*61.5*36.8 mm (L*W*H)	
	PACKING	0.73Kg; 20pcs/15.6Kg/0.9CUFT	

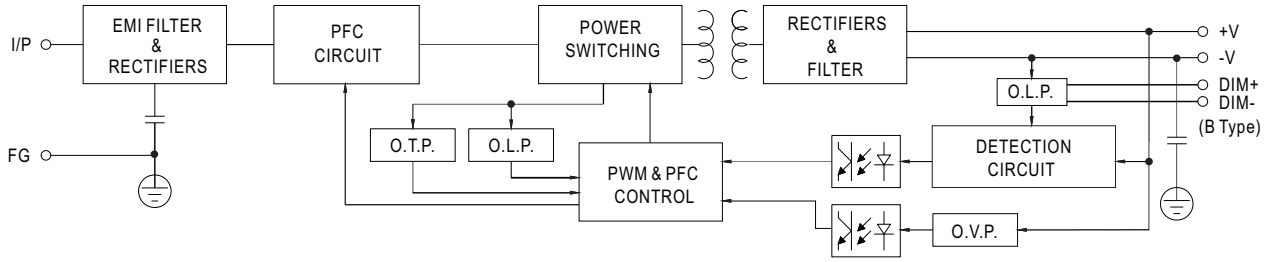
NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25℃ of ambient temperature.
2. Please refer to "DRIVING METHODS OF LED MODULE".
3. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.
4. Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to increase of the set up time.
5. 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. (as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf)
6. 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.
7. This series meets the typical life expectancy of >62,000 hours of operation when Tcase, particularly (tc) point (or TMP, per DLC), is about 75℃ or less.
8. Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.com.
9. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).
10. 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

※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

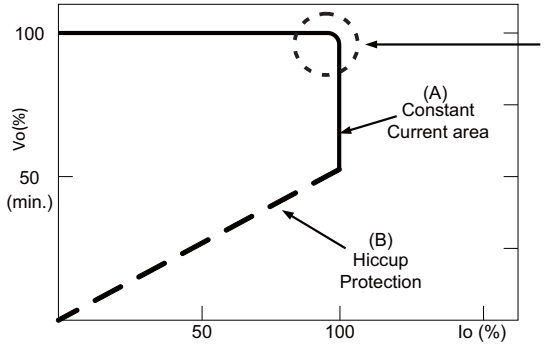
■ BLOCK DIAGRAM

PFC fosc : 60KHz
PWM fosc : 80KHz



■ 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.

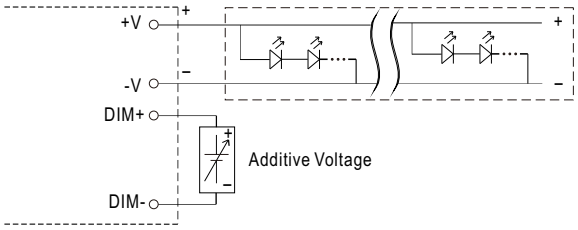
Should there be any compatibility issues, please contact MEAN WELL.

■ DIMMING OPERATION

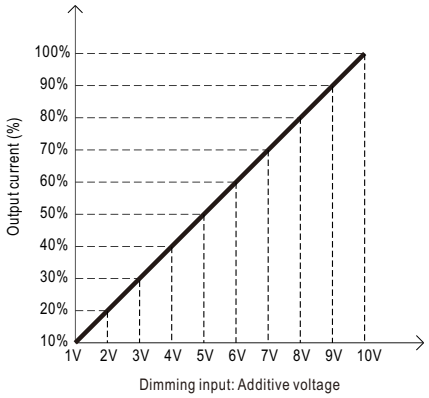
※ 3 in 1 dimming function (for B/AB-Type)

- Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-: 1 ~ 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.)

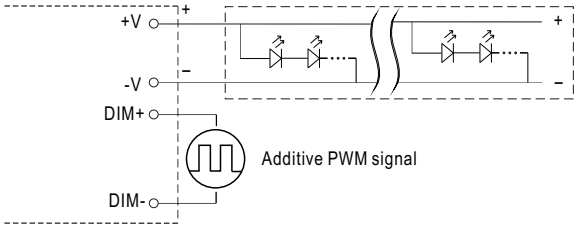
◎ Applying additive 1 ~ 10VDC



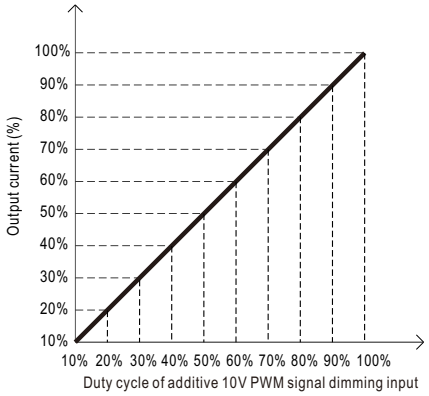
"DO NOT connect "DIM- to -V"



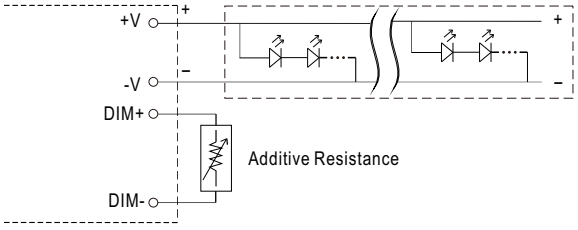
◎ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):



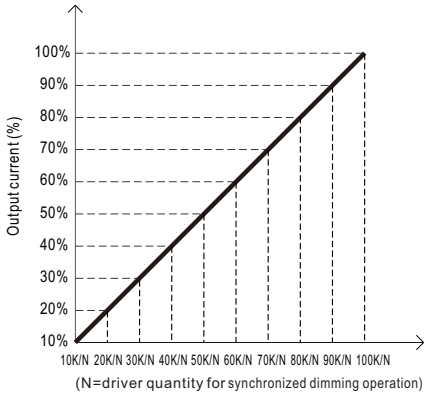
"DO NOT connect "DIM- to -V"



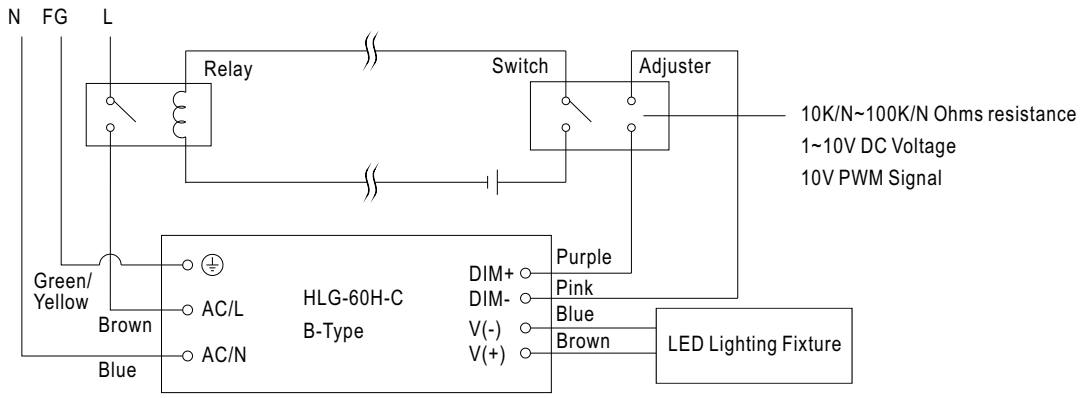
◎ Applying additive resistance:



"DO NOT connect "DIM- to -V"

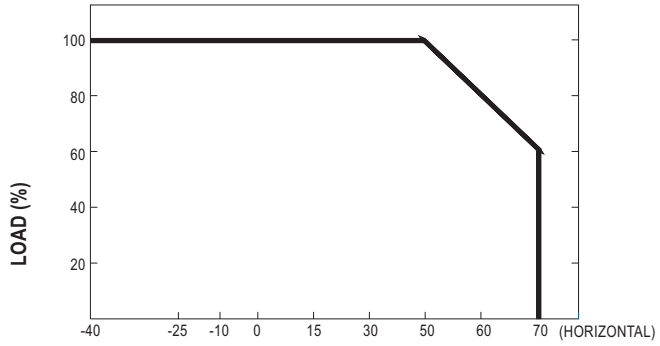


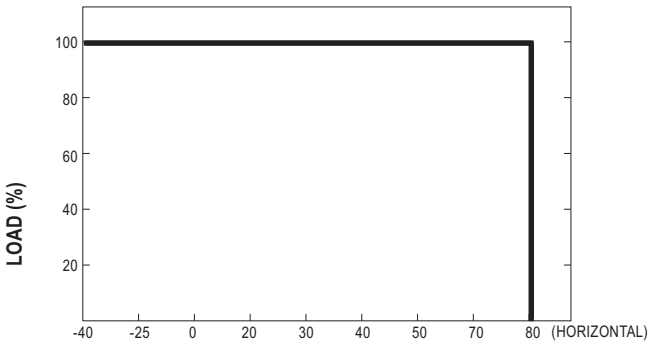
Note: In the case of turning the lighting fixture down to 0% brightness, please refer to the configuration as follow, or please contact MEAN WELL for other options.



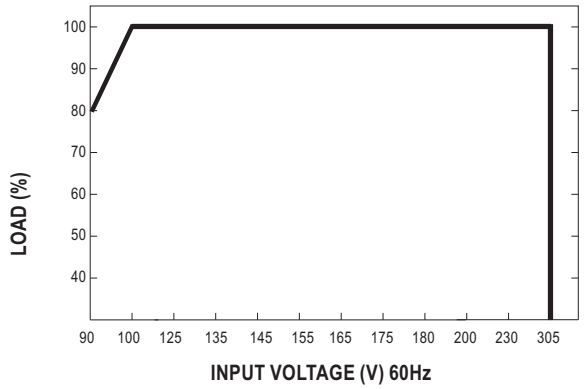
Using a switch and relay can turn ON/OFF the lighting fixture.

■ OUTPUT LOAD vs TEMPERATURE(Note.8)



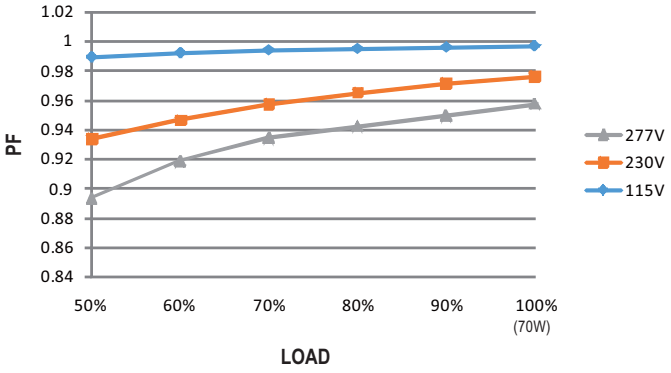


■ STATIC CHARACTERISTIC



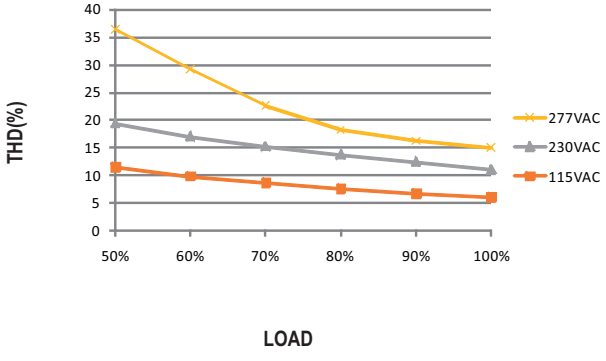
■ POWER FACTOR (PF) CHARACTERISTIC

※ Tcase at 70℃



■ TOTAL HARMONIC DISTORTION (THD)

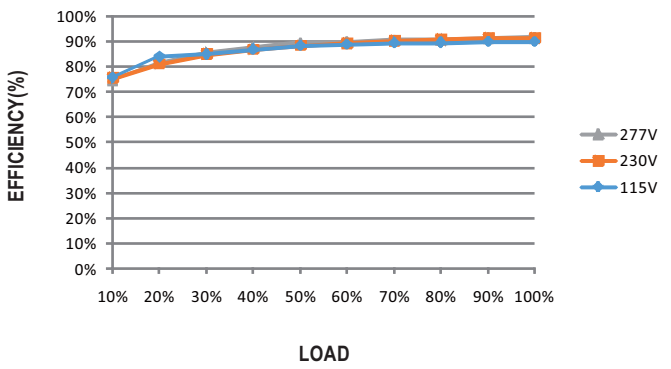
※ 350mA Model, Tcase at 70℃



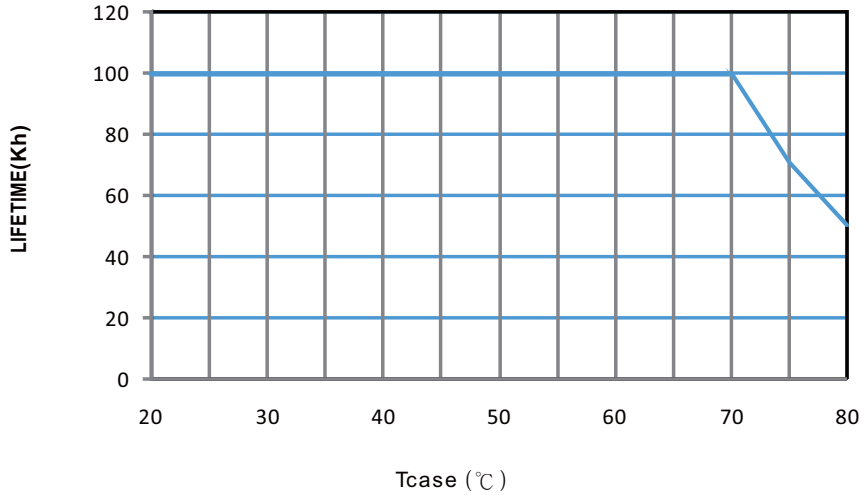
■ EFFICIENCY vs LOAD

HLG-60H-C series possess superior working efficiency that up to 91% can be reached in field applications.

※ 350mA Model, Tcase at 70℃



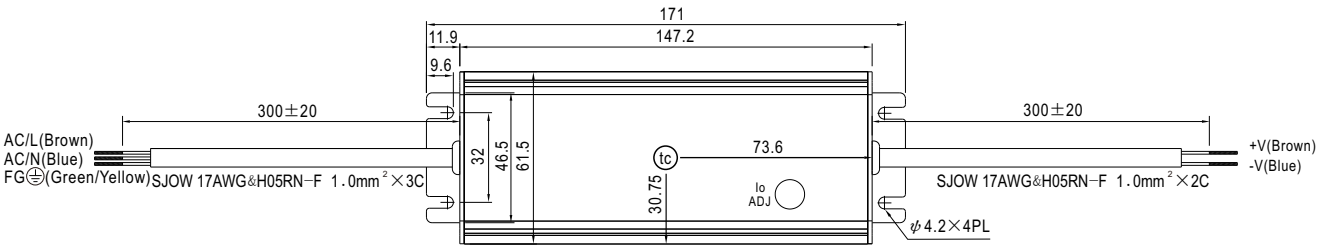
■ LIFE TIME



■ MECHANICAL SPECIFICATION

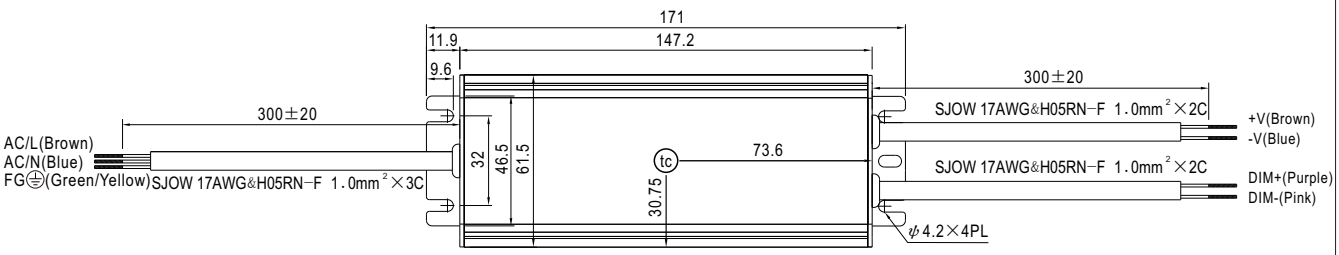
Case No.957 Unit:mm Tolerance:±1

※ **A-Type**

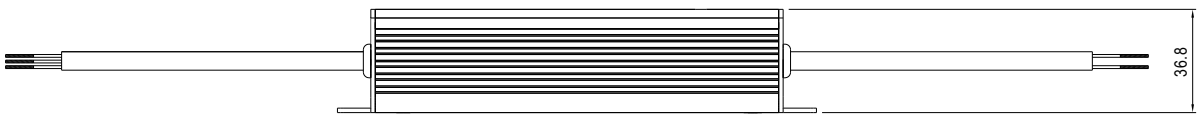


• tc : Max. Case Temperature

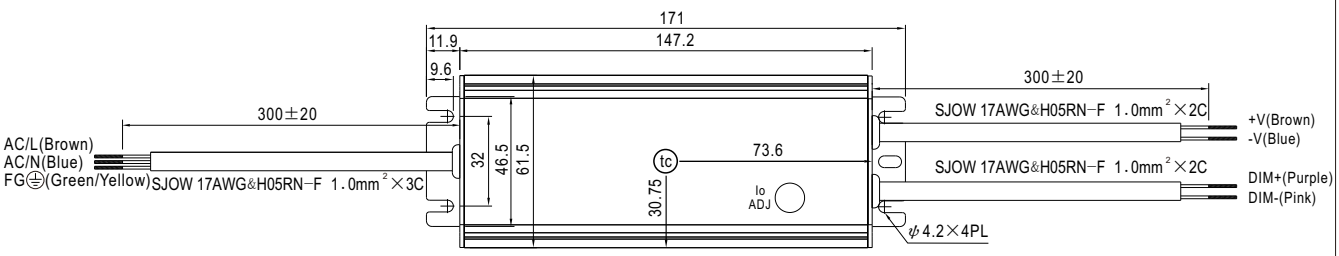
※ **B-Type**



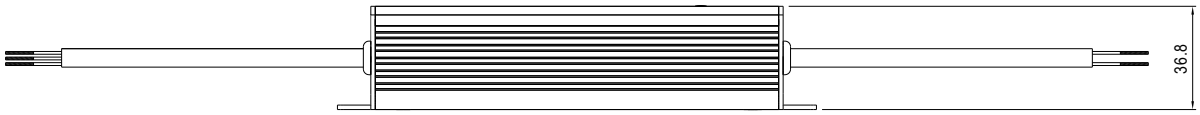
• tc : Max. Case Temperature



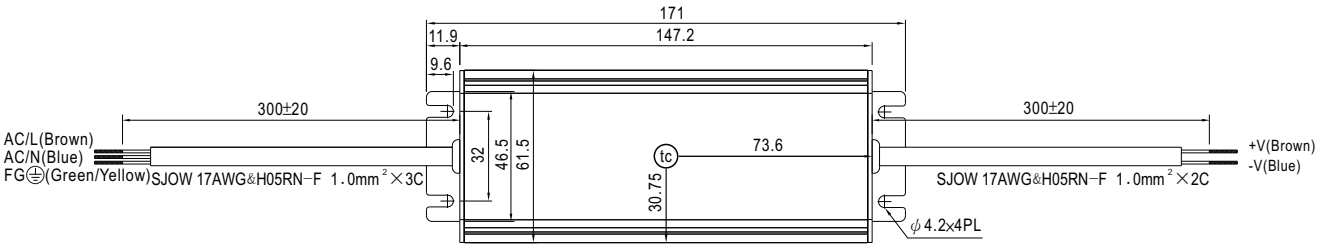
※ **AB-Type**



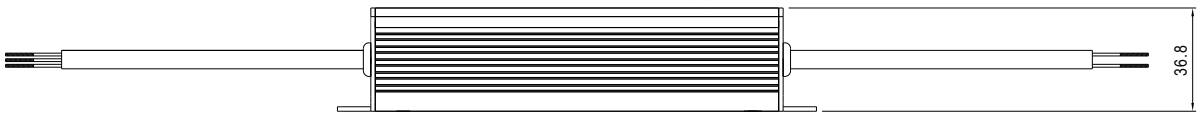
• tc : Max. Case Temperature



※ **D-Type**



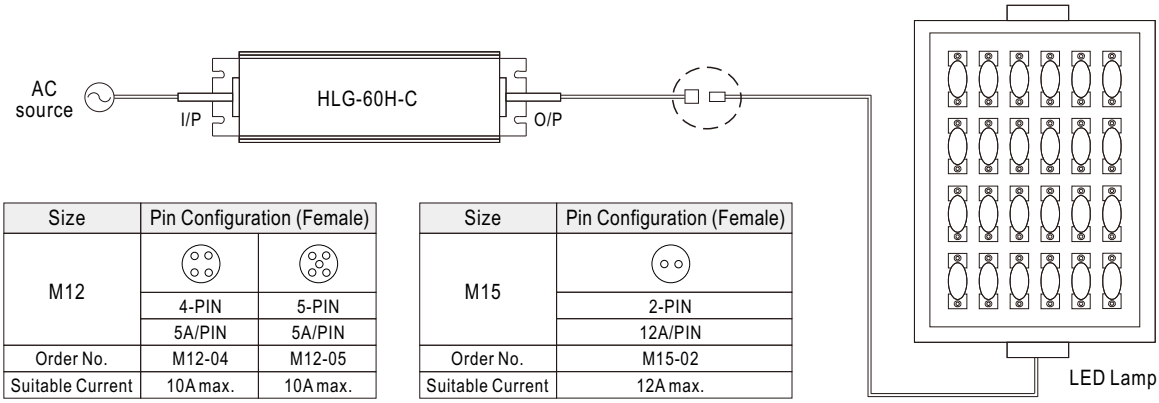
• tc : Max. Case Temperature



■ WATERPROOF CONNECTION

◎ Waterproof connector

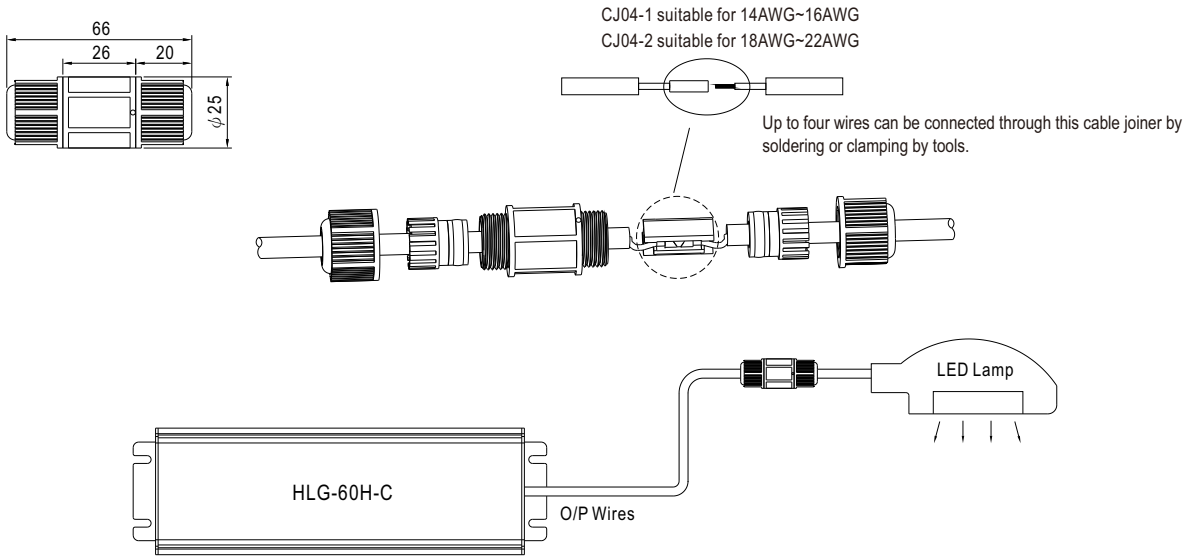
Waterproof connector can be assembled on the output cable of HLG-60H-C to operate in dry/wet/damp or outdoor environment.



Size	Pin Configuration (Female)	
M12		
	4-PIN	5-PIN
	5A/PIN	5A/PIN
Order No.	M12-04	M12-05
Suitable Current	10A max.	10A max.

Size	Pin Configuration (Female)
M15	
	2-PIN
	12A/PIN
Order No.	M15-02
Suitable Current	12A max.

◎ **Cable Joiner**



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

■ INSTALLATION MANUAL

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

90W Constant Current Mode LED Driver HLG-80H-C series

User's Manual

Features

- 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; Timer dimming
- Typical lifetime>62000 hours
- 7 years warranty

Applications

- LED street lighting
- LED fishing lamp
- LED harbor lighting
- LED building architectural lighting
- LED greenhouse lighting
- LED bay lighting

GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

Description

HLG-80H-C series is a 90W AC/DC LED driver featuring the constant current mode and high voltage output. HLG-80H-C operates from 90~305VAC and offers models with different rated current ranging between 350mA and 700mA. Thanks to the high efficiency up to 91.5%, with the fanless design, the entire series is able to operate for -40℃ ~ +80℃ 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. HLG-80H-C is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for LED lighting system.

Model Encoding

HLG - 80 H - C700 A

- A — Function options
- C700 — Rated output current(350/700mA)
- H — High input voltage up to 305VAC
- 80 — Rated wattage
- HLG — Series name

Type	IP Level	Function	Note
A	IP65	Io adjustable through built-in potentiometer.	In Stock
B	IP67	3 in 1 dimming function (1~10Vdc, 10V PWM signal and resistance)	In Stock
AB	IP65	Io adjustable through built-in potentiometer & 3 in 1 dimming function (1~10Vdc, 10V PWM signal and resistance)	In Stock
D	IP67	Timer dimming function, contact MEAN WELL for details(safety pending).	By request

90W Constant Current Mode LED Driver HLG-80H-C series

SPECIFICATION

MODEL		HLG-80H-C350□	HLG-80H-C700□
OUTPUT	RATED CURRENT	350mA	700mA
	RATED POWER	89.95W	90.3W
	CONSTANT CURRENT REGION Note.2	A-Type : 128V ~ 257V B-Type : 167V ~ 257V	A-Type : 64V ~ 129V B-Type : 84V ~ 129V
	CURRENT ADJ. RANGE	Adjustable for A/AB-Type only (via built-in potentiometer)	
		210 ~ 350mA	420 ~ 700mA
	CURRENT RIPPLE	8.0% max. @rated current	
	CURRENT TOLERANCE	±5%	
	SET UP TIME Note.4	500ms/115VAC, 230VAC	
INPUT	VOLTAGE RANGE Note.3	90 ~ 305VAC 127 ~ 431VDC (Please refer to "STATIC CHARACTERISTIC" section)	
	FREQUENCY RANGE	47 ~ 63Hz	
	POWER FACTOR (Typ.)	PF≧0.98/115VAC, PF≧0.96/230VAC, PF≧0.94/277VAC @full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)	
	TOTAL HARMONIC DISTORTION	THD< 20% (@ load≧60% /115VAC, 230VAC; @ load≧75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION (THD)" section)	
	EFFICIENCY (Typ.)	91.5%	91.5%
	AC CURRENT (Typ.)	0.88A / 115VAC 0.45A / 230VAC 0.38A / 277VAC	
	INRUSH CURRENT(Typ.)	COLD START 60A(t_{width}=410μs measured at 50% I_{peak}) at 230VAC; Per NEMA 410	
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	4 units (circuit breaker of type B) / 8 units (circuit breaker of type C) at 230VAC	
	LEAKAGE CURRENT	<0.75mA / 277VAC	
PROTECTION	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed	
	OVER VOLTAGE	300 ~ 340V	150 ~ 170V
		Shut down o/p voltage with auto-recovery or re-power on to recovery	
	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover	
ENVIRONMENT	WORKING TEMP.	Tcase=-40 ~ +80℃ (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)	
	MAX. CASE TEMP.	Tcase=+80℃	
	WORKING HUMIDITY	10 ~ 95% RH non-condensing	
	STORAGE TEMP., HUMIDITY	-40 ~ +80℃, 10 ~ 95% RH	
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)	
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes	
SAFETY & EMC	SAFETY STANDARDS Note.6	UL8750, CSA C22.2 No. 250.0-08, BS EN/EN/AS/NZS 61347-1,BS EN/EN/AS/NZS 61347-2-13 independent,GB19510.1, GB19510.14,EAC TP TC 004,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℃/ 70% RH	
	EMC EMISSION Note.6	Compliance to BS EN/EN55015, BS EN/EN61000-3-2 Class C (@ load≧50%) ; BS EN/EN61000-3-3,GB/T 17743 , GB17625.1, EAC TP TC 020	
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN61547, heavy industry level (surge immunity Line-Earth 4KV, Line-Line 2KV), EAC TP TC 020	
OTHERS	MTBF	3098.6K hrs min. Telcordia SR-332 (Bellcore) ; 309.8K hrs min. MIL-HDBK-217F (25℃)	
	DIMENSION	195.6*61.5*38.8 mm (L*W*H)	
	PACKING	0.84Kg; 16pcs/14.4Kg/0.54CUFT	

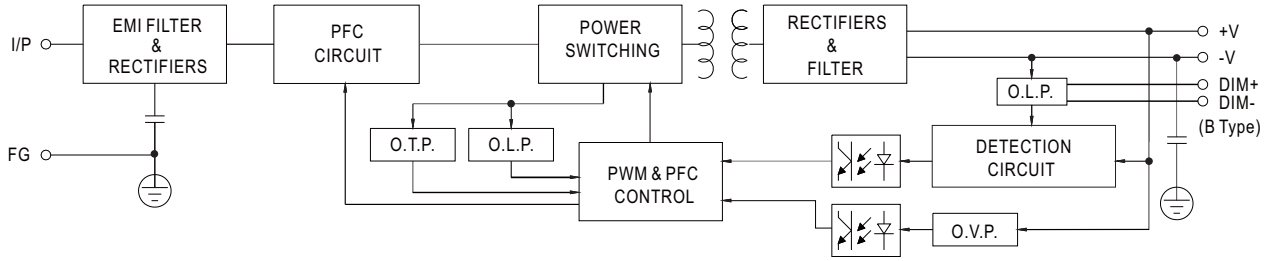
NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25℃ of ambient temperature.
2. Please refer to "DRIVING METHODS OF LED MODULE".
3. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.
4. Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to increase of the set up time.
5. 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. (as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf)
6. 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.
7. This series meets the typical life expectancy of >62,000 hours of operation when Tcase, particularly (tc) point (or TMP, per DLC), is about 70℃ or less.
8. Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.com.
9. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).
10. 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

※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

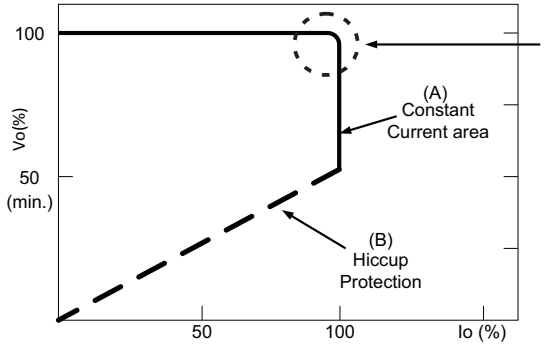
■ BLOCK DIAGRAM

PFC fosc : 70KHz
PWM fosc : 60KHz



■ 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.

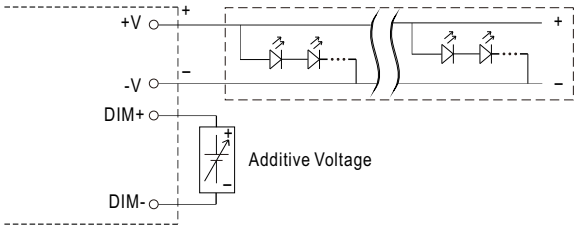
Should there be any compatibility issues, please contact MEAN WELL.

■ 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-: 1 ~ 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 1 ~ 10VDC



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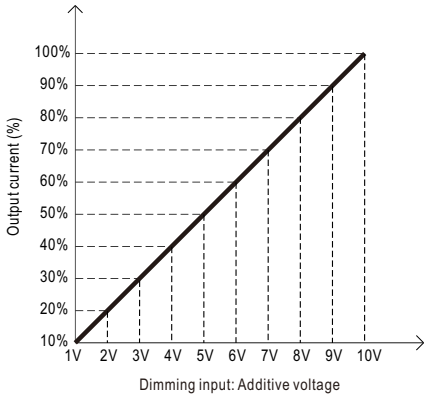
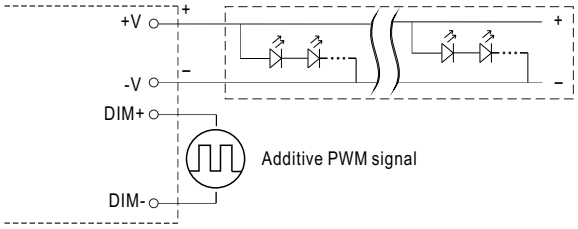


◎ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):



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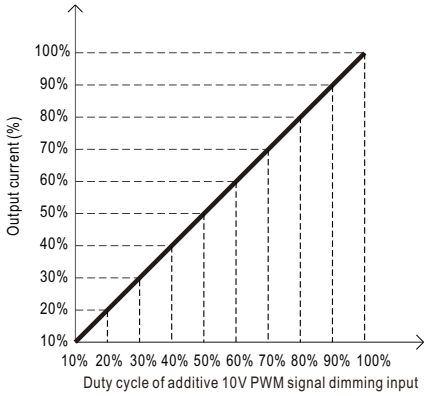
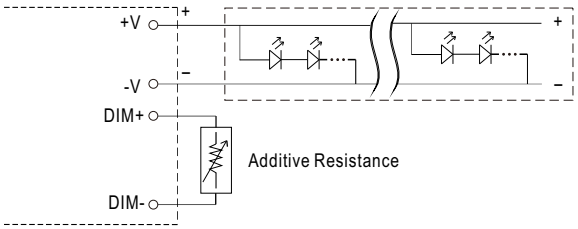


◎ Applying additive resistance:



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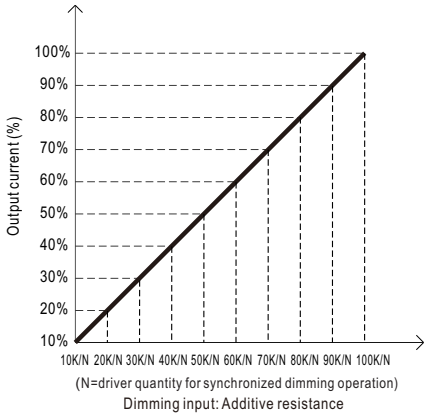
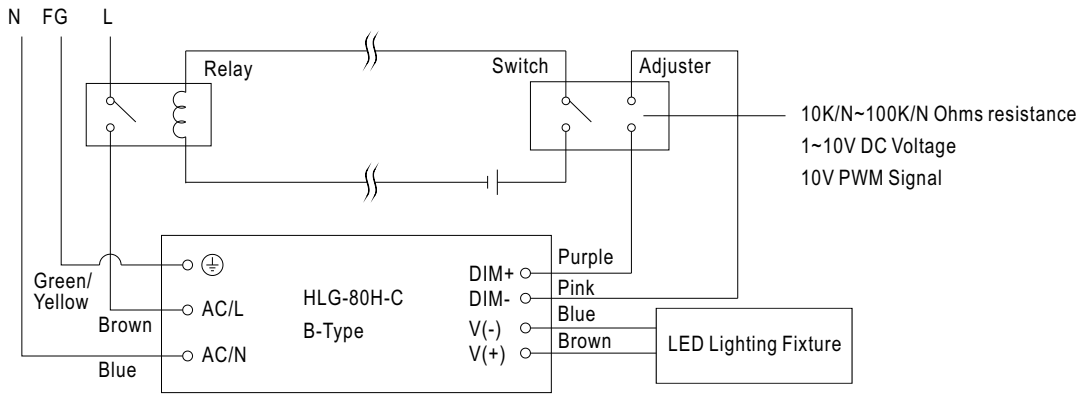
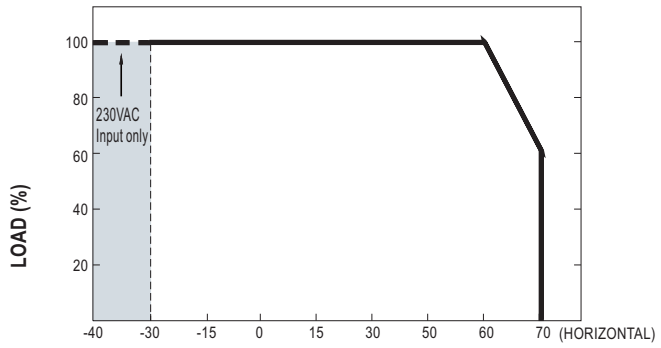


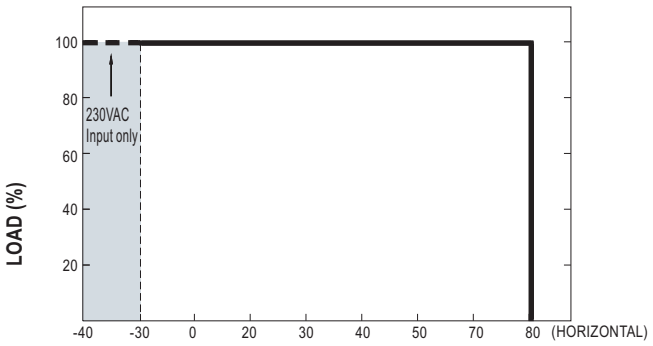
Note: In the case of turning the lighting fixture down to 0% brightness, please refer to the configuration as follow, or please contact MEAN WELL for other options.



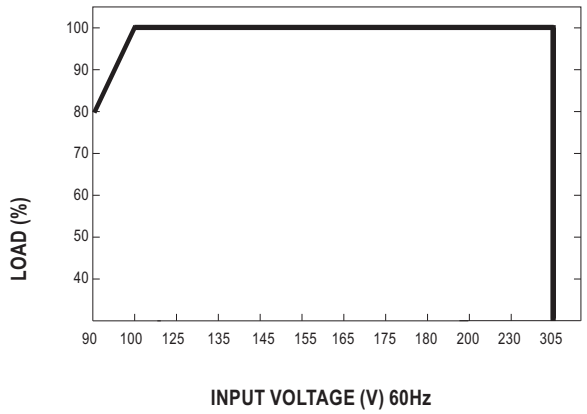
Using a switch and relay can turn ON/OFF the lighting fixture.

■ OUTPUT LOAD vs TEMPERATURE(Note.8)



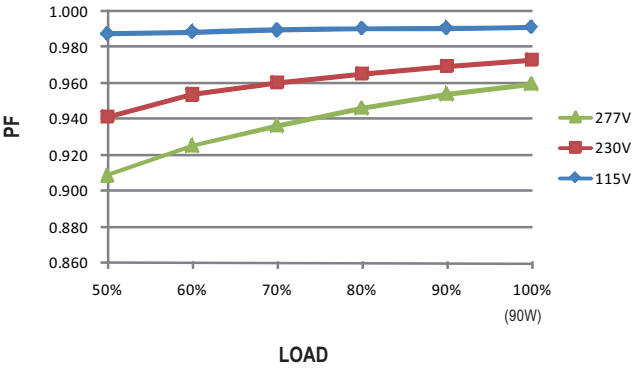


■ STATIC CHARACTERISTIC



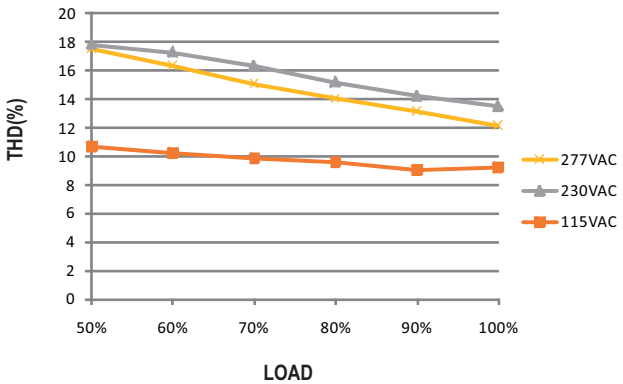
■ POWER FACTOR (PF) CHARACTERISTIC

※ Tcase at 70℃



■ TOTAL HARMONIC DISTORTION (THD)

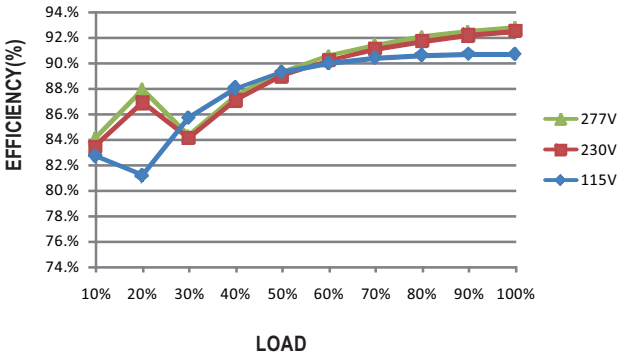
※ 350mA Model, Tcase at 70℃



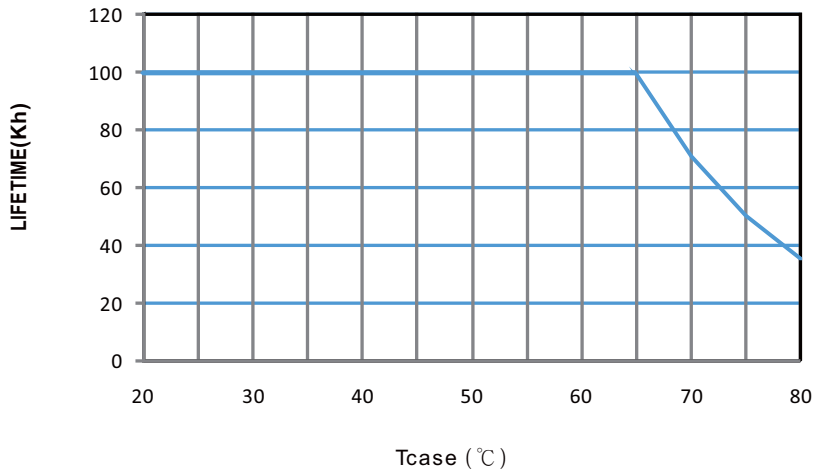
■ EFFICIENCY vs LOAD

HLG-80H-C series possess superior working efficiency that up to 91.5% can be reached in field applications.

※ 350mA Model, Tcase at 70℃



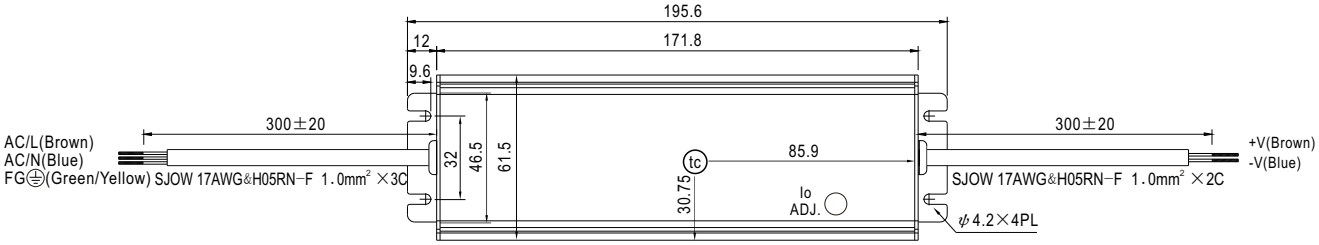
■ LIFE TIME



■ MECHANICAL SPECIFICATION

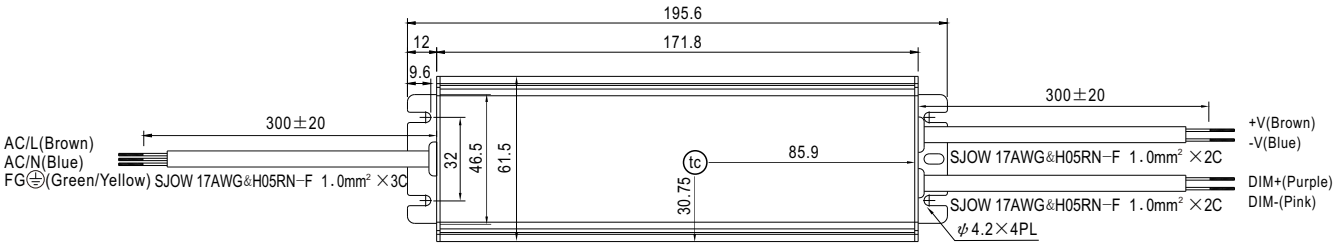
Case No.997 Unit:mm Tolerance:±1

※ **A-Type**



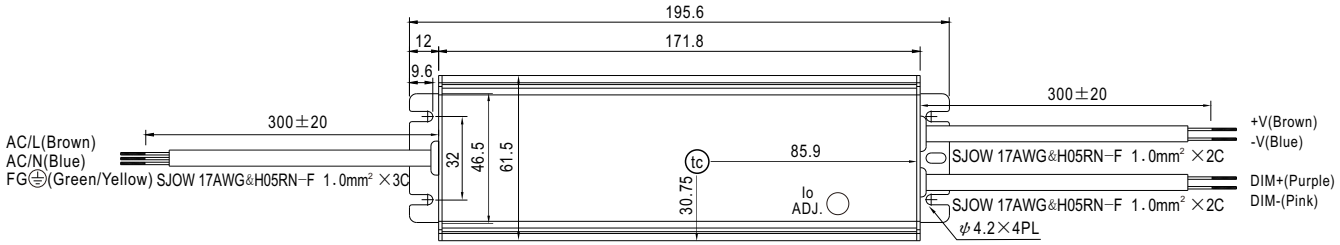
• ⓣc : Max. Case Temperature

※ **B-Type**



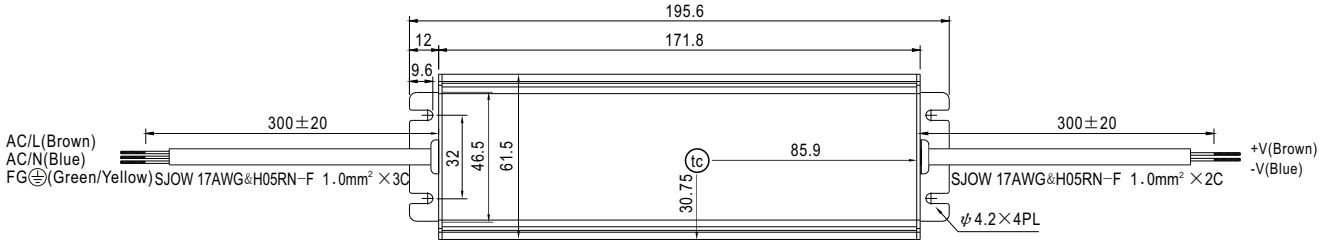
• ⓣc : Max. Case Temperature

※ **AB-Type**



• (tc) : Max. Case Temperature

※ **D-Type**

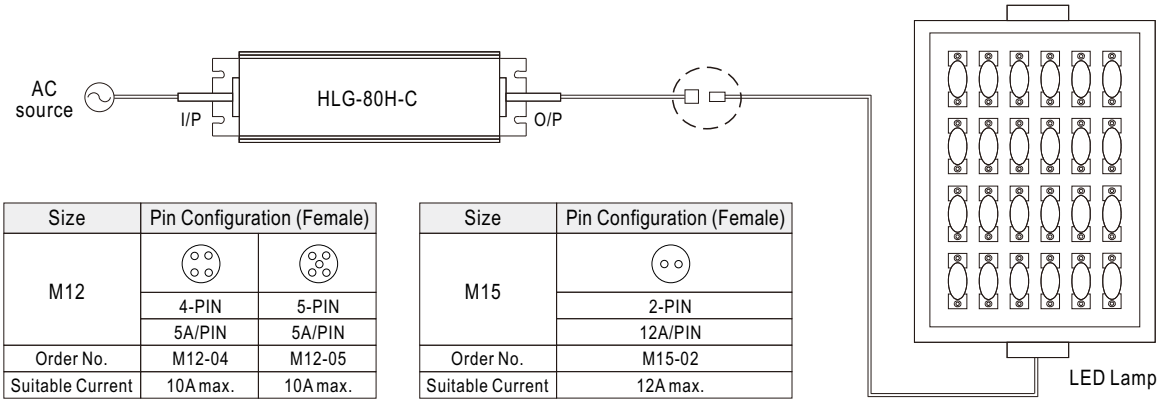


• (tc) : Max. Case Temperature

■ WATERPROOF CONNECTION

◎ Waterproof connector

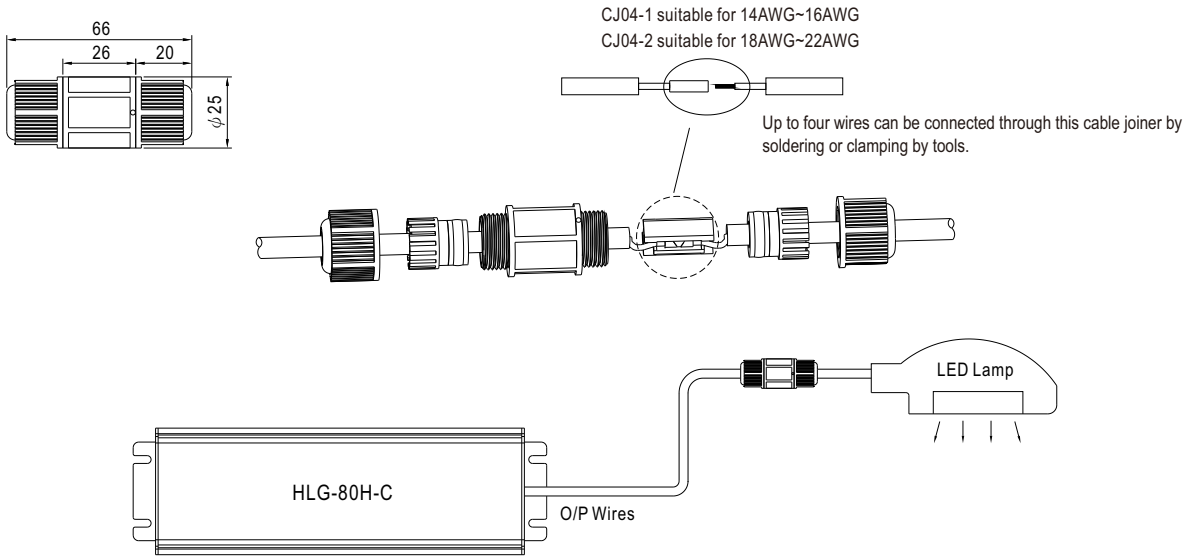
Waterproof connector can be assembled on the output cable of HLG-80H-C to operate in dry/wet/damp or outdoor environment.



Size	Pin Configuration (Female)	
M12		
	4-PIN	5-PIN
	5A/PIN	5A/PIN
Order No.	M12-04	M12-05
Suitable Current	10A max.	10A max.

Size	Pin Configuration (Female)
M15	
	2-PIN
	12A/PIN
Order No.	M15-02
Suitable Current	12A max.

◎ **Cable Joiner**



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

■ INSTALLATION MANUAL

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

150W Constant Current Mode LED Driver HLG-120H-C series

User's Manual

Features

- 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; Timer dimming
- Typical lifetime>62000 hours
- 7 years warranty

Applications

- LED street lighting
- LED fishing lamp
- LED harbor lighting
- LED building architectural lighting
- LED greenhouse lighting
- LED bay lighting

GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

Description

HLG-120H-C series is a 150W AC/DC LED driver featuring the constant current mode and high voltage output. HLG-120H-C operates from 90~305VAC and offers models with different rated current ranging between 350mA and 1400mA. Thanks to the high efficiency up to 94%, with the fanless design, the entire series is able to operate for -40℃ ~ +90℃ 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. HLG-120H-C is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for LED lighting system.

Model Encoding

HLG - 120H - C500 A

- A — Function options
- C500 — Rated output current(350/500/700/1050/1400mA)
- 120H — High input voltage up to 305VAC
- HLG - 120H — Rated wattage
- HLG — Series name

Type	IP Level	Function	Note
A	IP65	Io adjustable through built-in potentiometer.	In Stock
B	IP67	3 in 1 dimming function (1~10Vdc, 10V PWM signal and resistance)	In Stock
AB	IP65	Io adjustable through built-in potentiometer & 3 in 1 dimming function (1~10Vdc, 10V PWM signal and resistance)	In Stock
D	IP67	Timer dimming function, contact MEAN WELL for details(safety pending).	By request

150W Constant Current Mode LED Driver HLG-120H-C series

SPECIFICATION

MODEL		HLG-120H-C350□	HLG-120H-C500□	HLG-120H-C700□	HLG-120H-C1050□	HLG-120H-C1400□
OUTPUT	RATED CURRENT	350mA	500mA	700mA	1050mA	1400mA
	RATED POWER	150.5W	150W	150.5W	155.4W	151.2W
	CONSTANT CURRENT REGION Note.2	215 ~ 430V	150V ~ 300V	107V ~ 215V	74V ~ 148V	54V ~ 108V
	CURRENT ADJ. RANGE	Adjustable for A/AB-Type only (via built-in potentiometer)				
		175 ~ 350mA	250 ~ 500mA	350 ~ 700mA	525 ~ 1050mA	700 ~ 1400mA
	CURRENT RIPPLE	8.0% max. @rated current				
	CURRENT TOLERANCE	±5%				
	SET UP TIME Note.4	1000ms / 115VAC 500ms / 230VAC				
INPUT	VOLTAGE RANGE Note.3	90 ~ 305VAC 127 ~ 431VDC (Please refer to "STATIC CHARACTERISTIC" section)				
	FREQUENCY RANGE	47 ~ 63Hz				
	POWER FACTOR (Typ.)	PF≧0.98/115VAC, PF≧0.96/230VAC, PF≧0.93/277VAC @full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)				
	TOTAL HARMONIC DISTORTION	THD< 20% (@ load≧50% /115VAC, 230VAC; @ load≧75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION (THD)" section)				
	EFFICIENCY (Typ.)	94%	94%	94%	94%	93.5%
	AC CURRENT (Typ.)	1.6A / 115VAC 0.8 A / 230VAC 0.7A / 277VAC				
	INRUSH CURRENT(Typ.)	COLD START 50A(t_{width}=600μs measured at 50% I_{peak}) at 230VAC; 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 230VAC				
	LEAKAGE CURRENT	<0.75mA / 277VAC				
PROTECTION	SHORT CIRCUIT	Constant current limiting, recovers automatically after fault condition is removed				
	OVER VOLTAGE	475 ~ 495V	335 ~ 355V	240 ~ 260V	165 ~ 175V	120 ~ 130V
		Shut down o/p voltage with auto-recovery or re-power on to recovery				
	OVER TEMPERATURE Note.7	Shut down o/p voltage, recovers automatically after temperature goes down				
ENVIRONMENT	WORKING TEMP.	Tcase=-40 ~ +90℃ (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)				
	MAX. CASE TEMP.	Tcase=+90℃				
	WORKING HUMIDITY	10 ~ 95% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-40 ~ +80℃, 10 ~ 95% RH				
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)				
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes				
SAFETY & EMC	SAFETY STANDARDS Note.6	UL8750, CSA C22.2 No. 250.13-12, BS EN/EN/AS/NZS 61347-1, BS EN/EN/AS/NZS 61347-2-13, BS EN/EN62384 independent,GB19510.1, GB19510.14, IP65 or IP67, J61347-1, J61347-2-13, 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℃/ 70% RH				
	EMC EMISSION Note.6	Compliance to BS EN/EN55015, BS EN/EN61000-3-2 Class C (@ load≧50%) ; BS EN/EN61000-3-3,GB/T 17743 , GB17625.1, 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 4KV, Line-Line 2KV), EAC TP TC 020				
OTHERS	MTBF	2456.4K hrs min. Telcordia SR-332 (Bellcore) ; 191.1K hrs min. MIL-HDBK-217F (25℃)				
	DIMENSION	220*68*38.8mm (L*W*H)				
	PACKING	1.04Kg; 12pcs/13.5Kg/0.8CUFT				

NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25℃ of ambient temperature.
2. Please refer to "DRIVING METHODS OF LED MODULE".
3. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.
4. Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to increase of the set up time.
5. 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. (as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf)
6. 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.
7. For OTP which triggered at light load/no load condition, proceed AC repower on to recovery.
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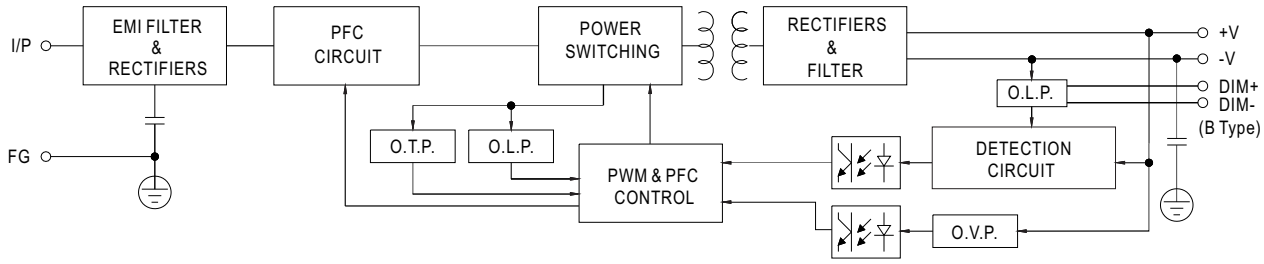
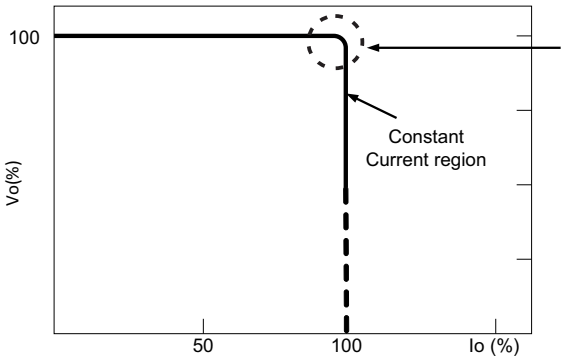


■ DRIVING METHODS OF LED MODULE

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



Typical output current normalized by rated current (%)

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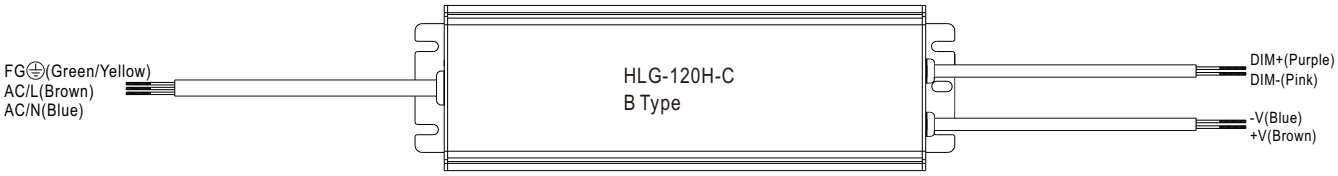
■ DIMMING OPERATION



※ 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-: 1 ~ 10VDC, or 10V PWM signal or resistance.
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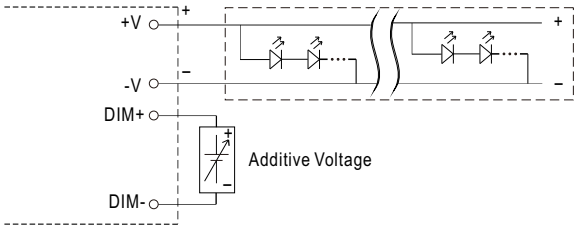
- Dimming source current from power supply: 100μA (typ.)

◎ Applying additive 1 ~ 10VDC



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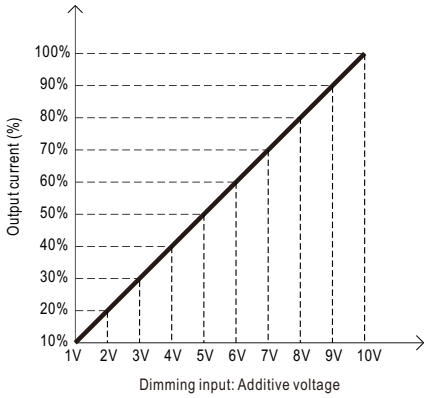
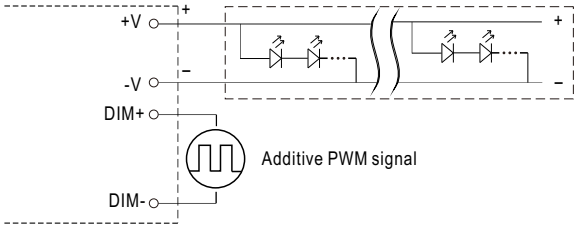


◎ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):



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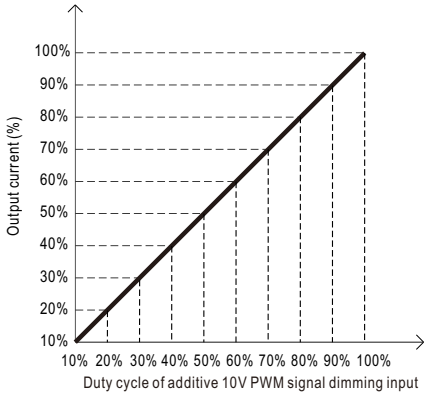
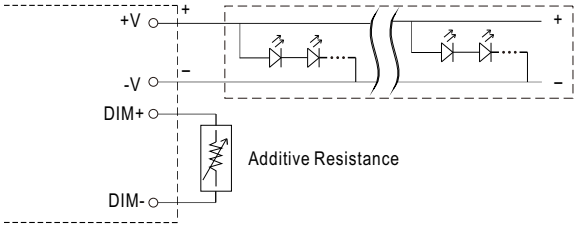


◎ Applying additive resistance:



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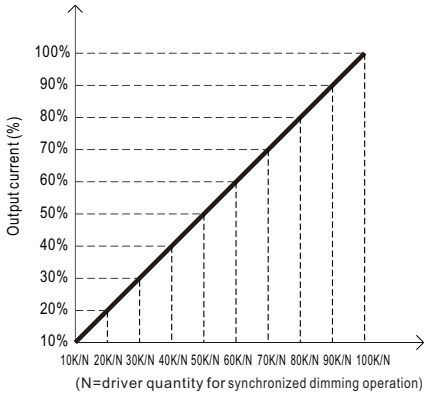

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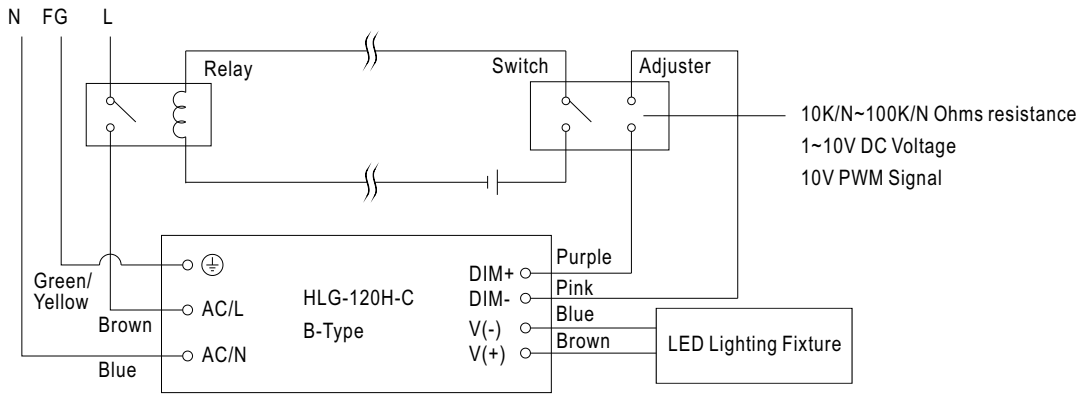
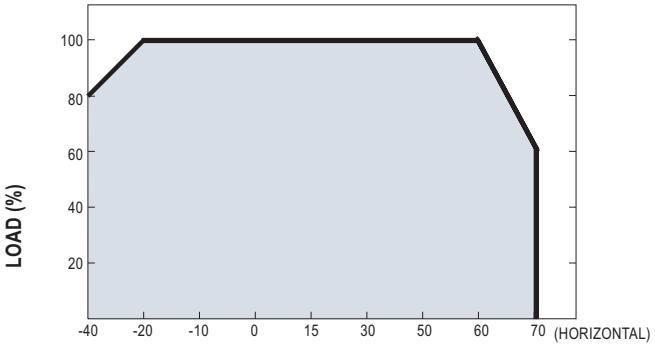
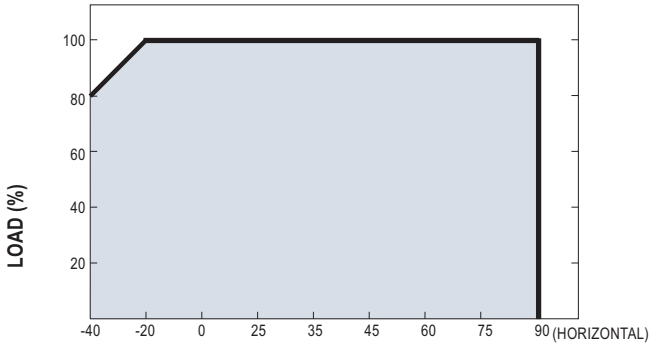


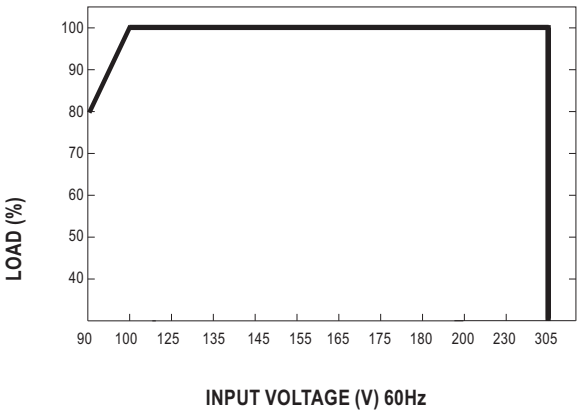
Using a switch and relay can turn ON/OFF the lighting fixture.

■ OUTPUT LOAD vs TEMPERATURE(Note.8)



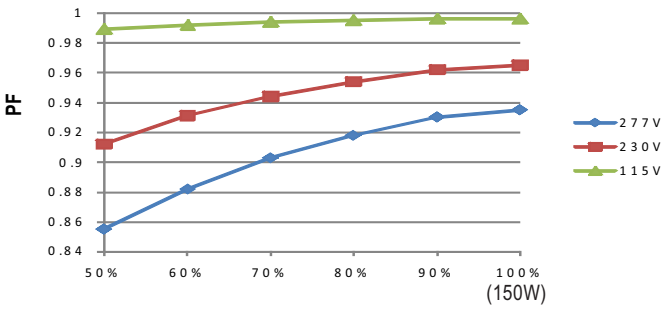


■ STATIC CHARACTERISTIC



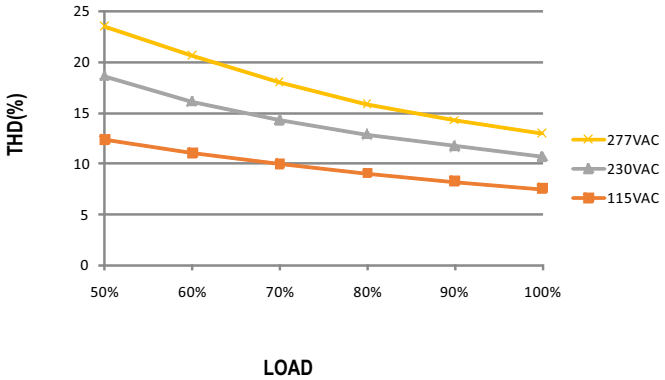
■ POWER FACTOR (PF) CHARACTERISTIC

※ Tcase at 80℃



■ TOTAL HARMONIC DISTORTION (THD)

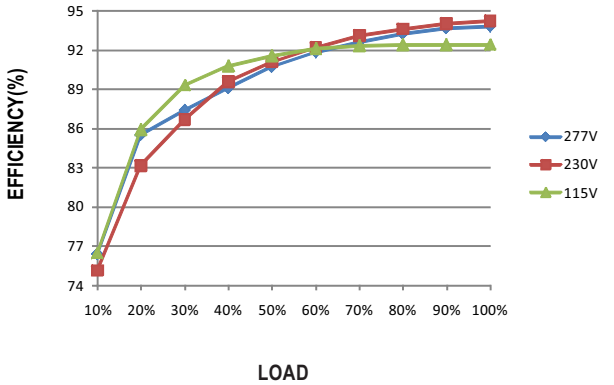
※ 700mA Model, Tcase at 80℃



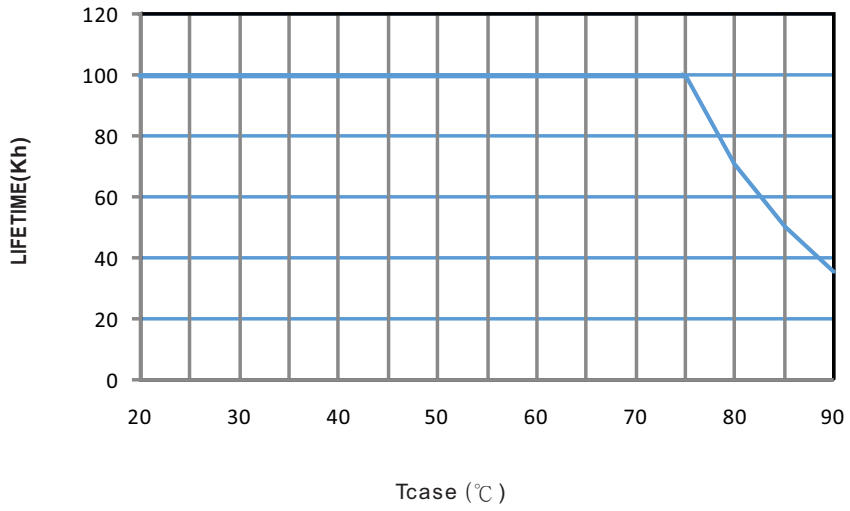
■ EFFICIENCY vs LOAD

HLG-120H-C series possess superior working efficiency that up to 94% can be reached in field applications.

※ 700mA Model, Tcase at 80℃



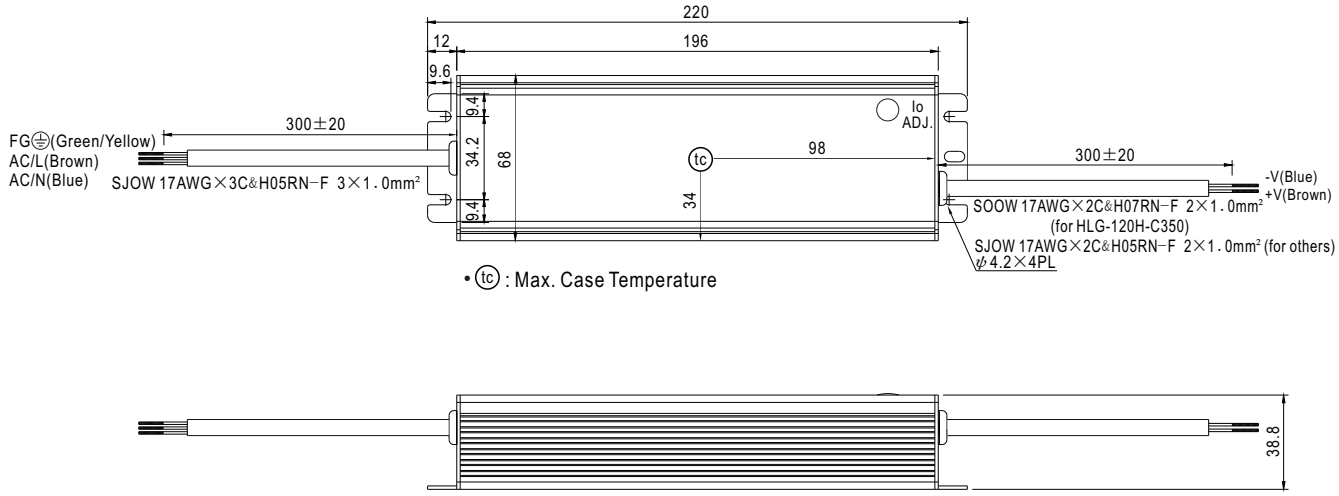
■ LIFE TIME



■ MECHANICAL SPECIFICATION

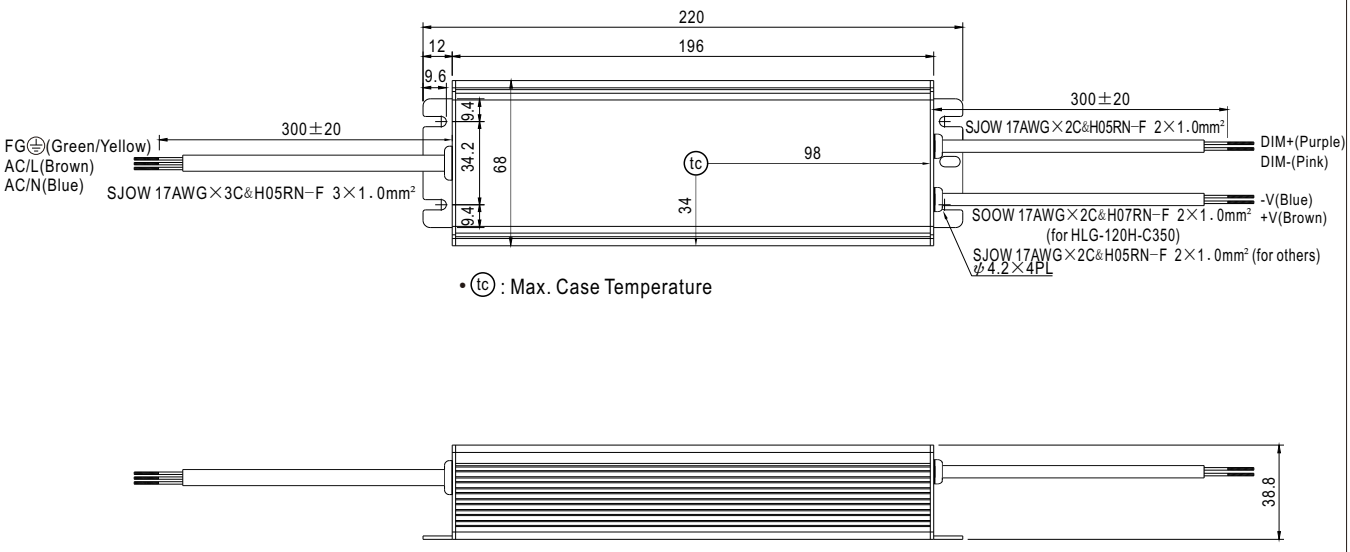
Case No.994 Unit:mm Tolerance:±1

※ **A-Type**



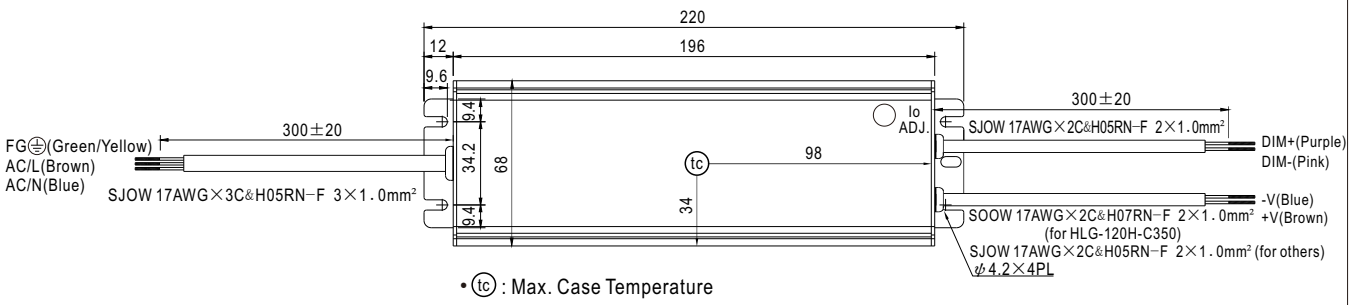
• tc : Max. Case Temperature

※ **B-Type**



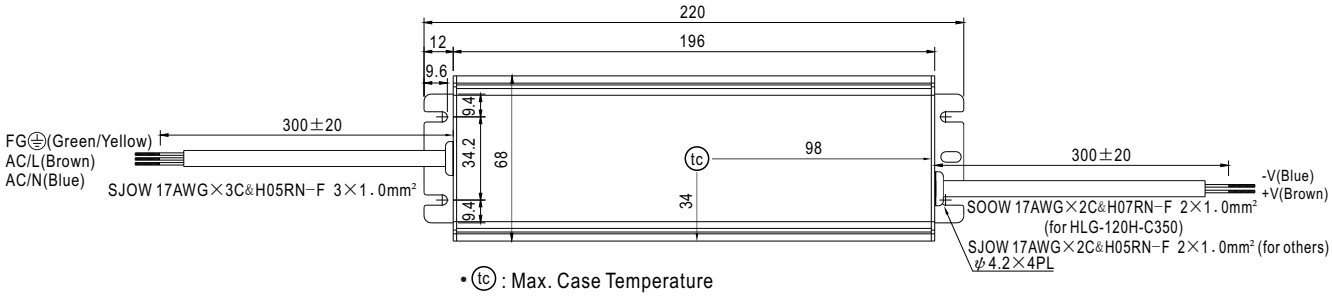
• tc : Max. Case Temperature

※ **AB-Type**



• tc : Max. Case Temperature

※ **D-Type**

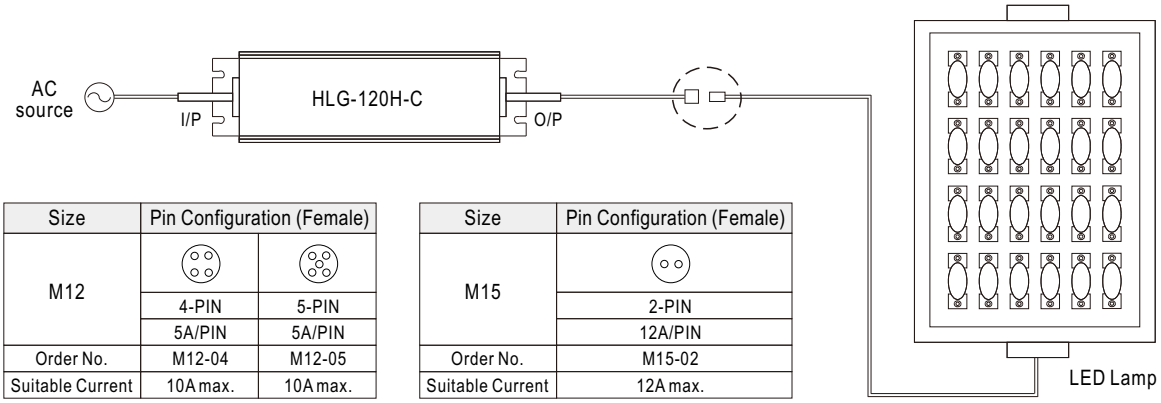


• tc : Max. Case Temperature

■ WATERPROOF CONNECTION

◎ Waterproof connector

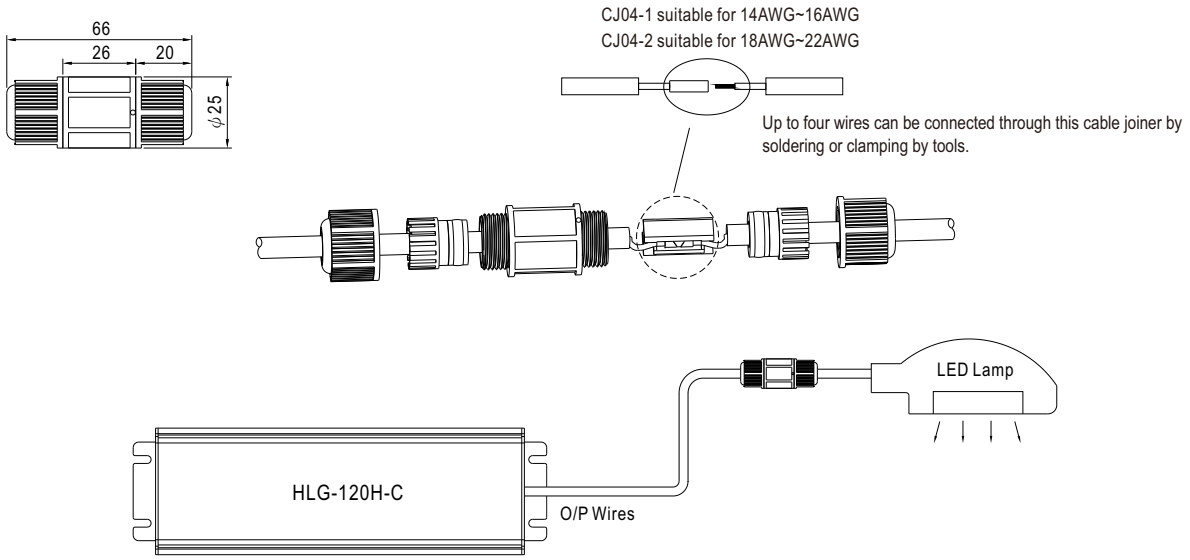
Waterproof connector can be assembled on the output cable of HLG-120H-C to operate in dry/wet/damp or outdoor environment.



Size	Pin Configuration (Female)	
M12		
	4-PIN	5-PIN
	5A/PIN	5A/PIN
Order No.	M12-04	M12-05
Suitable Current	10A max.	10A max.

Size	Pin Configuration (Female)
M15	
	2-PIN
	12A/PIN
Order No.	M15-02
Suitable Current	12A max.

◎ **Cable Joiner**



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

■ INSTALLATION MANUAL

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

200W Constant Current Mode LED Driver HLG-185H-C series

User's Manual

IP65 IP67

Features

- 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; Timer dimming
- Typical lifetime>62000 hours
- 7 years warranty

Applications

- LED street lighting
- LED fishing lamp
- LED harbor lighting
- LED building architectural lighting
- LED bay lighting

GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

Description

HLG-185H-C series is a 200W AC/DC LED power supply featuring the constant current mode and high voltage output. HLG-185H-C operates from 90~305VAC and offers models with different rated current ranging between 500mA and 1400mA. Thanks to the high efficiency up to 94%, with the fanless design, the entire series is able to operate for -40℃ ~ +90℃ 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. HLG-185H-C is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for LED lighting system.

Model Encoding

HLG - 185H - C700 A

- A: Function options
- C700: Rated output current(500/700/1050/1400mA)
- 185H: High input voltage up to 305VAC
- HLG: Rated wattage
- HLG: Series name

Type	IP Level	Function	Note
A	IP65	Io adjustable through built-in potentiometer.	In Stock
B	IP67	3 in 1 dimming function (1~10Vdc, 10V PWM signal and resistance)	In Stock
AB	IP65	Io adjustable through built-in potentiometer & 3 in 1 dimming function (1~10Vdc, 10V PWM signal and resistance)	In Stock
D	IP67	Timer dimming function, contact MEAN WELL for details(safety pending).	By request

200W Constant Current Mode LED Driver HLG-185H-C series

SPECIFICATION

MODEL		HLG-185H-C500□	HLG-185H-C700 □	HLG-185H-C1050□	HLG-185H-C1400□
OUTPUT	RATED CURRENT	500mA	700mA	1050mA	1400mA
	RATED POWER	200W	200.2W	199.5W	200.2W
	CONSTANT CURRENT REGION Note.2	200V ~ 400V	143V ~ 286V	95V ~ 190V	71V ~ 143V
	CURRENT ADJ. RANGE	Can be adjusted by internal potentiometer (A/AB type only)			
		250 ~ 500mA	350 ~ 700mA	525 ~ 1050mA	700 ~ 1400mA
	CURRENT RIPPLE	5.0% max. @rated current			
	CURRENT TOLERANCE	±5%			
	SET UP TIME Note.4	1000ms/115VAC 500ms/230VAC			
INPUT	VOLTAGE RANGE Note.3	90 ~ 305VAC 127 ~ 431VDC (Please refer to "STATIC CHARACTERISTIC" section)			
	FREQUENCY RANGE	47 ~ 63Hz			
	POWER FACTOR (Typ.)	PF≧0.98/115VAC or PF≧0.96/230VAC or PF≧0.93/277VAC @full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)			
	TOTAL HARMONIC DISTORTION	THD< 20%@≧50% load/115VAC, or 230VAC, or @≧75% load/277VAC (Please refer to "TOTAL HARMONIC DISTORTION" section)			
	EFFICIENCY (Typ.)	94%	94%	94%	94%
	AC CURRENT (Typ.)	2A / 115VAC 1A / 230VAC 0.85A / 277VAC			
	INRUSH CURRENT(Typ.)	COLD START 55A(t_{width}=900μs measured at 50% I_{peak}) at 230VAC; Per NEMA 410			
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	2 units (circuit breaker of type B) / 3 units (circuit breaker of type C) at 230VAC			
	LEAKAGE CURRENT	<0.75mA / 277VAC			
PROTECTION	SHORT CIRCUIT	Constant current limiting, recovers automatically after fault condition is removed			
	OVER VOLTAGE	450 ~ 470V	320 ~ 340V	210 ~ 225V	160 ~ 170V
		Shut down o/p voltage with auto-recovery or re-power on to recovery			
	OVER TEMPERATURE Note.7	Shut down o/p voltage, recovers automatically after temperature goes down			
ENVIRONMENT	WORKING TEMP.	Tcase=-40 ~ +90℃ (Refer to "Derating Curve")			
	MAX. CASE TEMP.	Tcase=+90℃			
	WORKING HUMIDITY	10 ~ 95% RH non-condensing			
	STORAGE TEMP., HUMIDITY	-40 ~ +80℃, 10 ~ 95% RH			
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)			
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes;			
SAFETY & EMC	SAFETY STANDARDS	UL8750, CSA C22.2 No. 250.13-12, BS EN/EN/AS/NZS 61347-1, BS EN/EN/AS/NZS 61347-2-13, BS EN/EN62384 independent, GB19510.1,GB19510.14;IP65 or IP67, J61347-1, J61347-2-13, 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℃/ 70% RH			
	EMC EMISSION	Compliance to BS EN/EN55015, BS EN/EN61000-3-2 Class C (≧50% load) ; BS EN/EN61000-3-3,GB/T 17743 , GB17625.1, EAC TP TC 020			
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN61547, heavy industry level (surge immunity Line-Earth 4KV, Line-Line 2KV), EAC TP TC 020			
OTHERS	MTBF	2458.6K hrs min. Telcordia SR-332 (Bellcore) ; 191.9K hrs min. MIL-HDBK-217F (25℃)			
	DIMENSION	228*68*38.8mm (L*W*H)			
	PACKING	1.15Kg; 12pcs/14.8Kg/0.8CUFT			

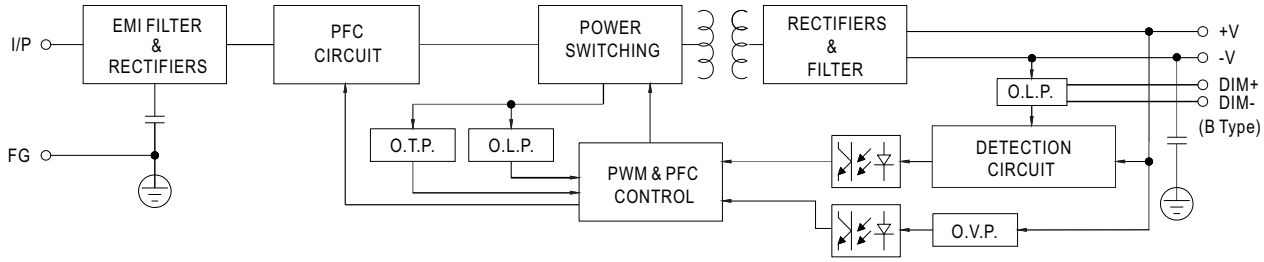
NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25℃ of ambient temperature.
2. Please refer to "DRIVING METHODS OF LED MODULE".
3. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.
4. Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to increase of the set up time.
5. 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. (as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf)
6. 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.
7. For OTP which triggered at light load/no load condition, proceed AC repower on to recovery.
8. This series meets the typical life expectancy of >62,000 hours of operation when Tcase, particularly (tc) point (or TMP, per DLC), is about 75℃ or less.
9. Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.com.
10. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).
11. 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

※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

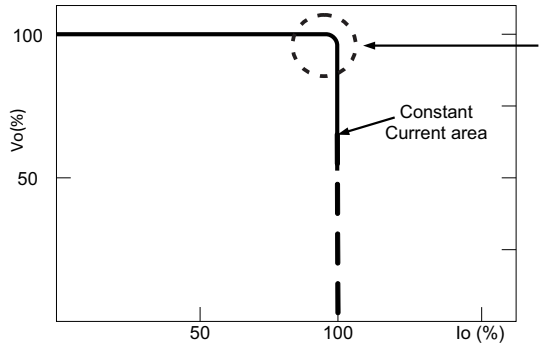
■ BLOCK DIAGRAM

PFC fosc : 70KHz
PWM fosc : 60KHz



■ DRIVING METHODS OF LED MODULE

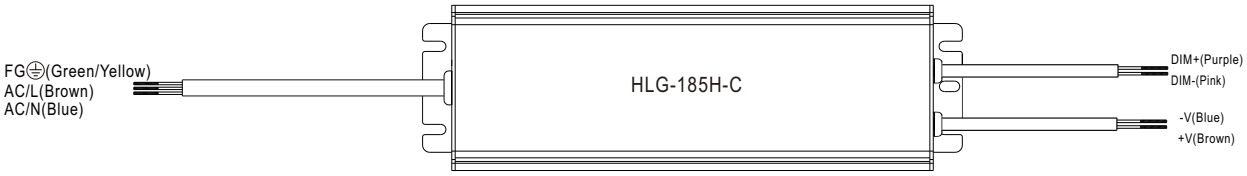
※ This series works in constant current mode to directly drive the LEDs.



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

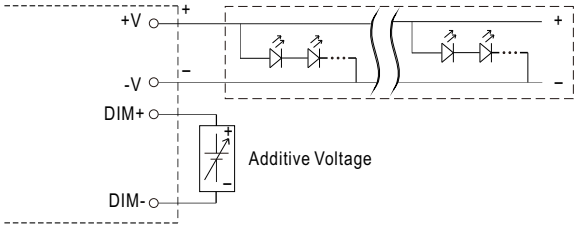
■ DIMMING OPERATION



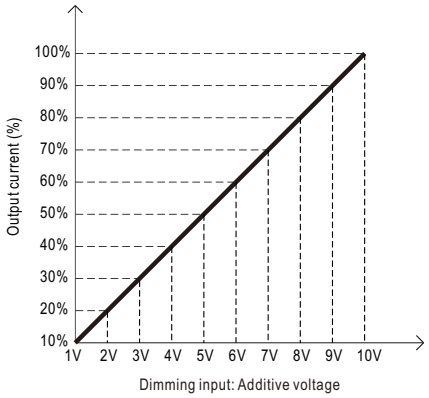
※ 3 in 1 dimming function (for B/AB-Type)

- Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-: 1 ~ 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.)

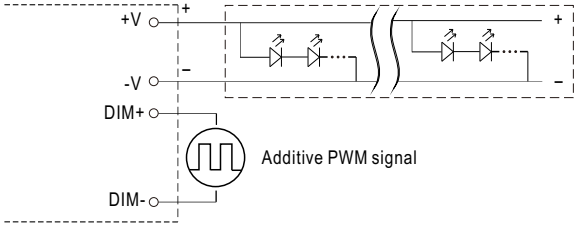
◎ Applying additive 1 ~ 10VDC



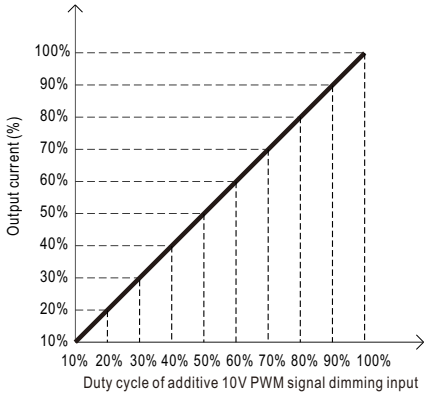
"DO NOT connect "DIM- to -V"



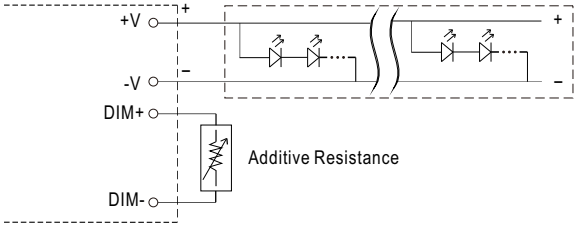
◎ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):



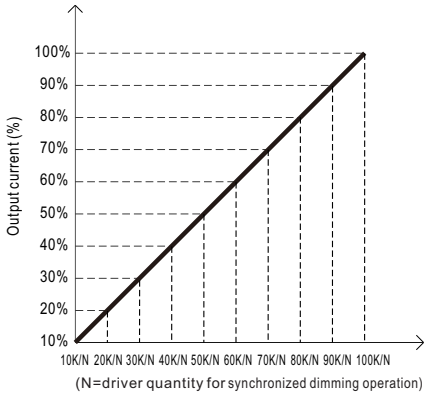
"DO NOT connect "DIM- to -V"



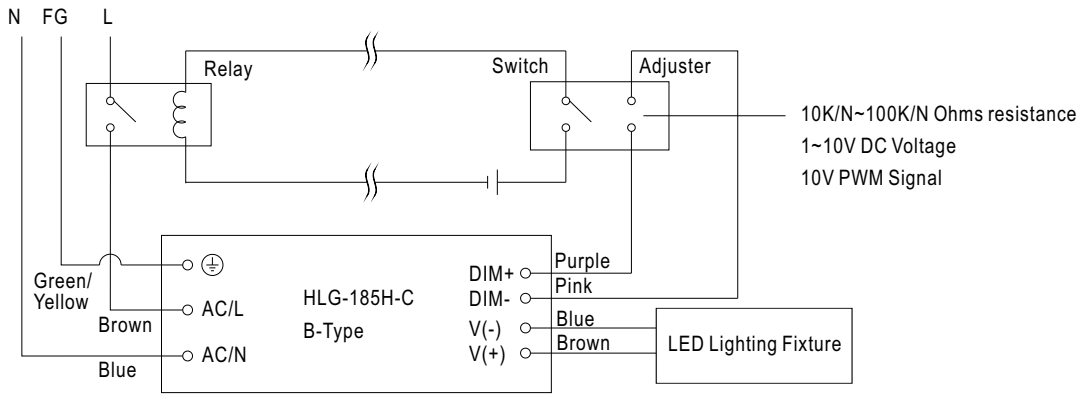
◎ Applying additive resistance:



"DO NOT connect "DIM- to -V"

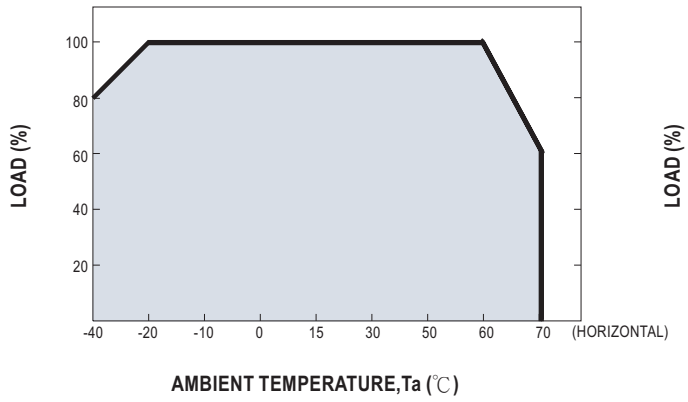


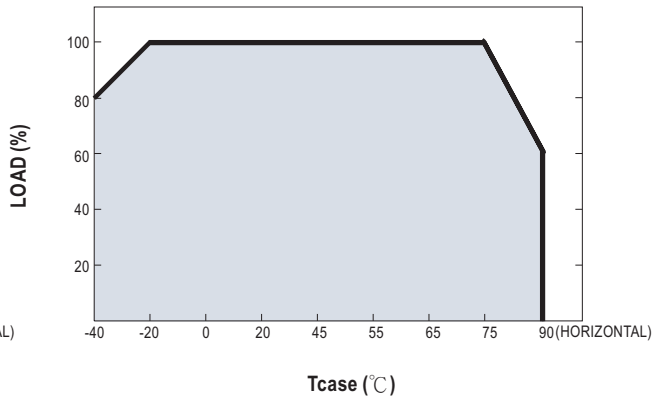
Note: In the case of turning the lighting fixture down to 0% brightness, please refer to the configuration as follow, or please contact MEAN WELL for other options.



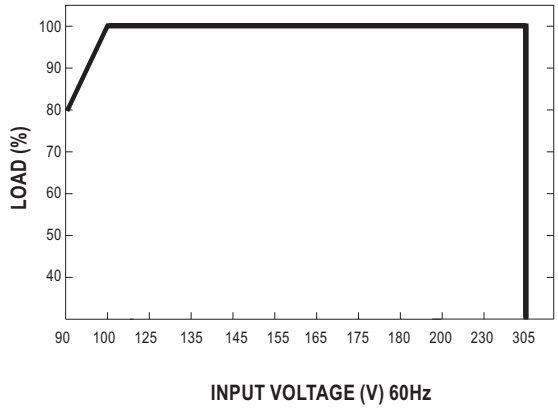
Using a switch and relay can turn ON/OFF the lighting fixture.

■ OUTPUT LOAD vs TEMPERATURE(Note.8)



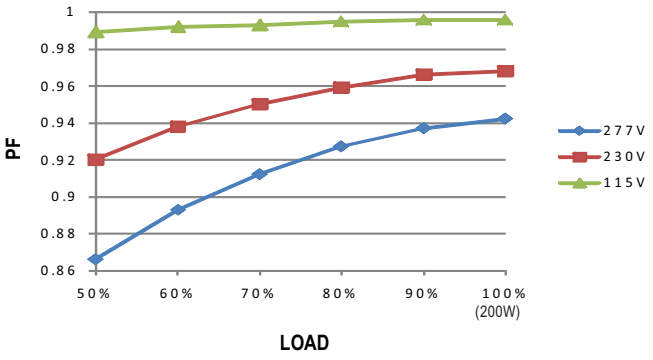


■ STATIC CHARACTERISTIC



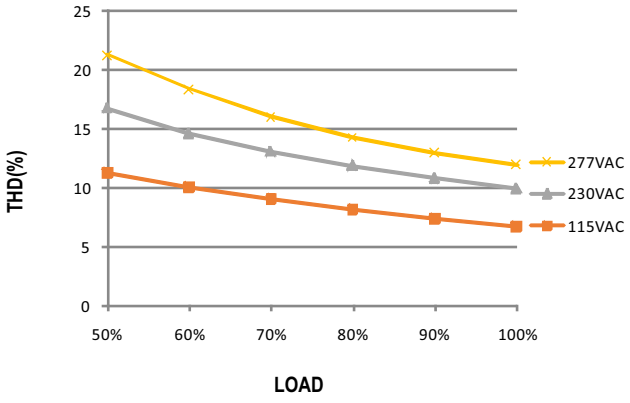
■ POWER FACTOR (PF) CHARACTERISTIC

※ Tcase at 80℃



■ TOTAL HARMONIC DISTORTION (THD)

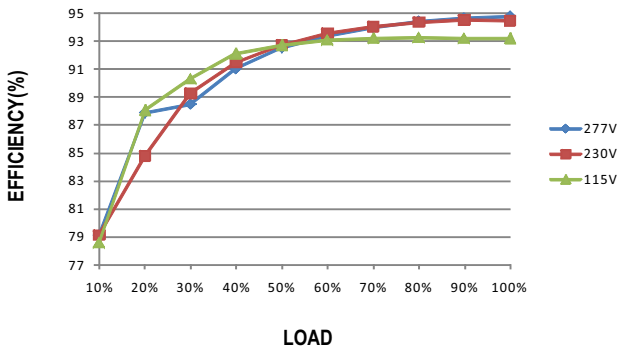
※ 700mA Model, Tcase at 80℃



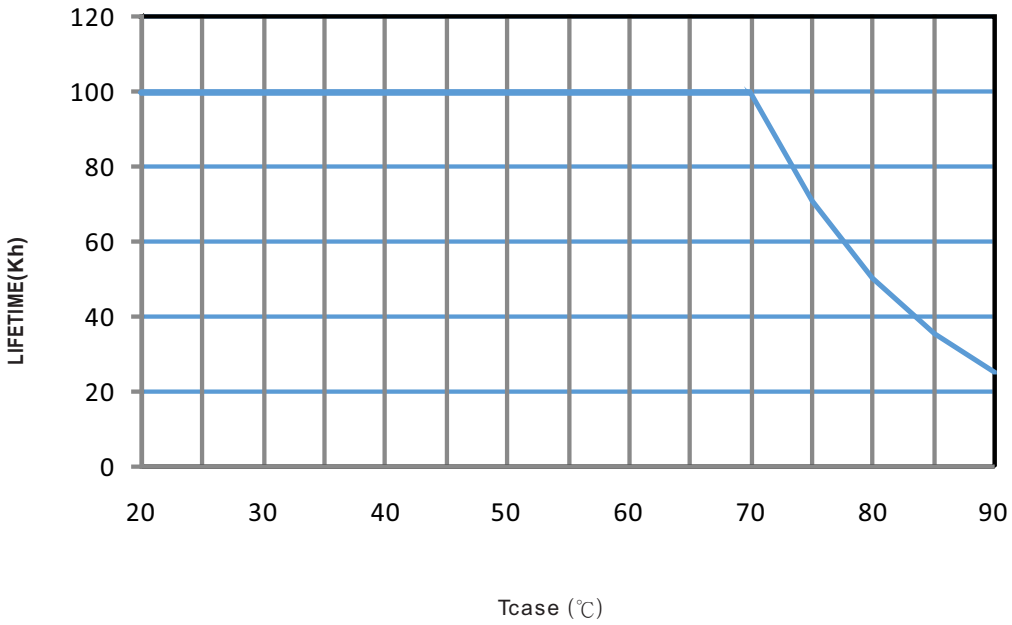
■ EFFICIENCY vs LOAD

HLG-185H-C series possess superior working efficiency that up to 94% can be reached in field applications.

※ 700mA Model, Tcase at 80℃



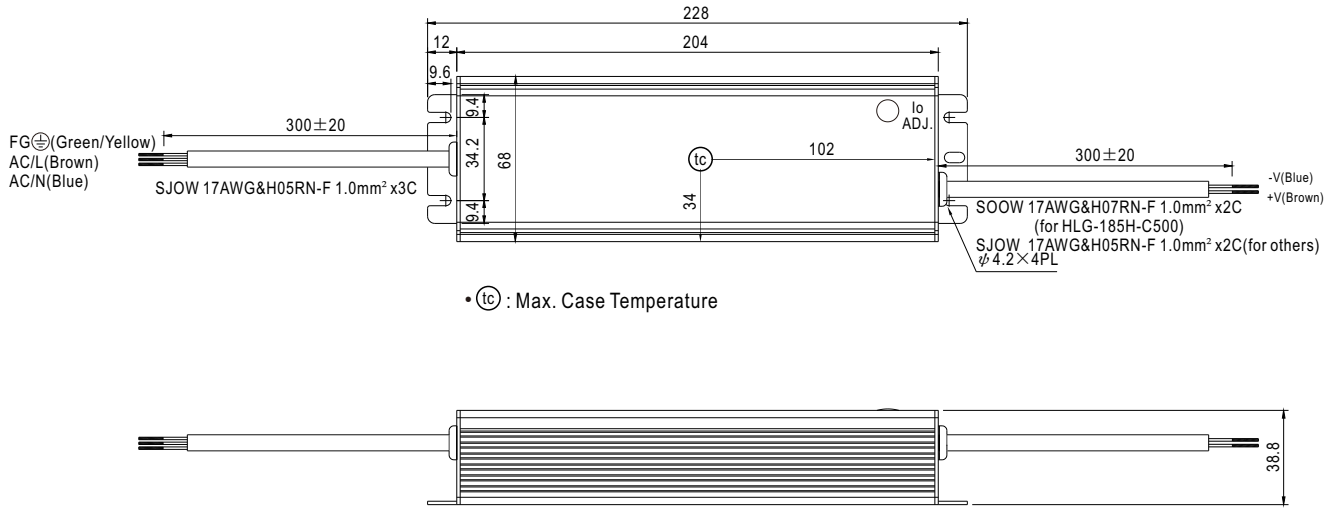
■ LIFE TIME



■ MECHANICAL SPECIFICATION

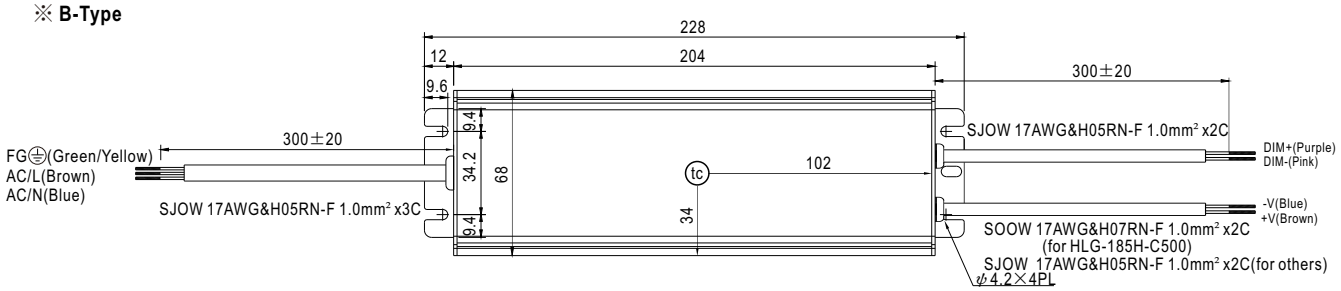
Case No.994D Unit:mm Tolerance:±1

※ A-Type



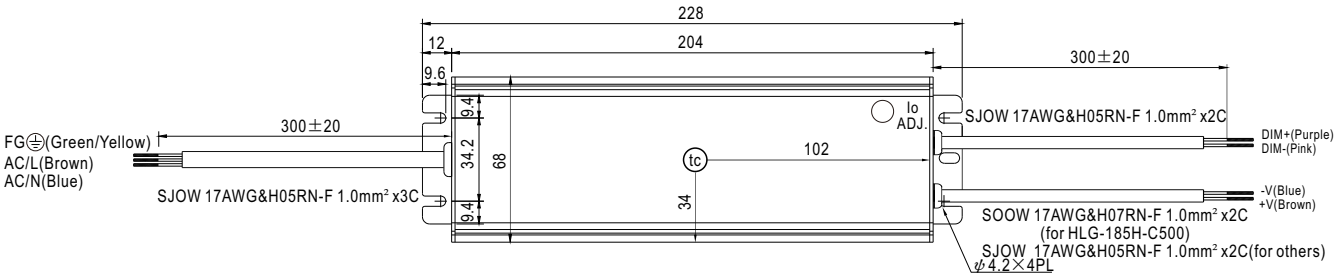
• tc : Max. Case Temperature

※ B-Type



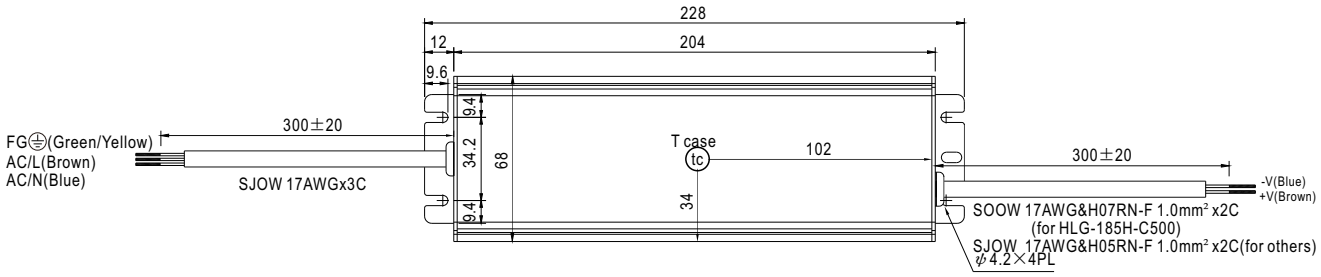
• tc : Max. Case Temperature

※ **AB-Type**



• tc : Max. Case Temperature

※ **D-Type**

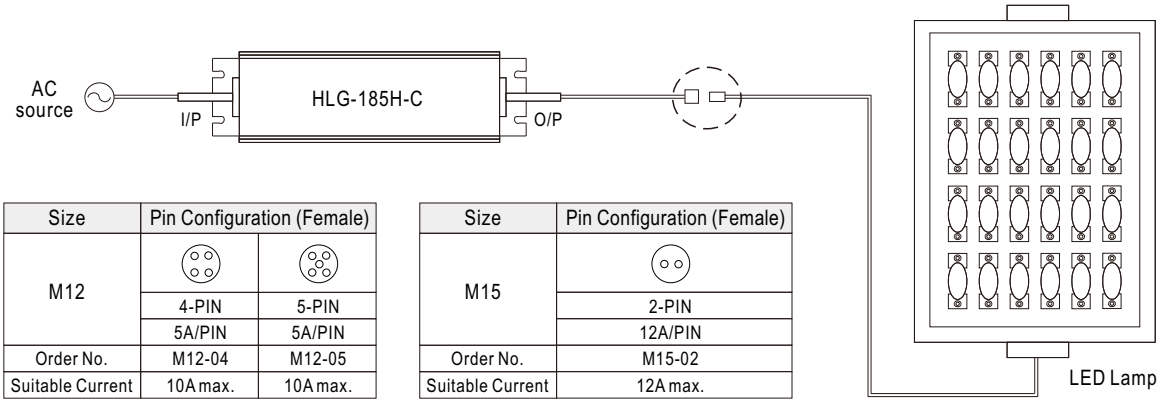


• tc : Max. Case Temperature

■ WATERPROOF CONNECTION

◎ Waterproof connector

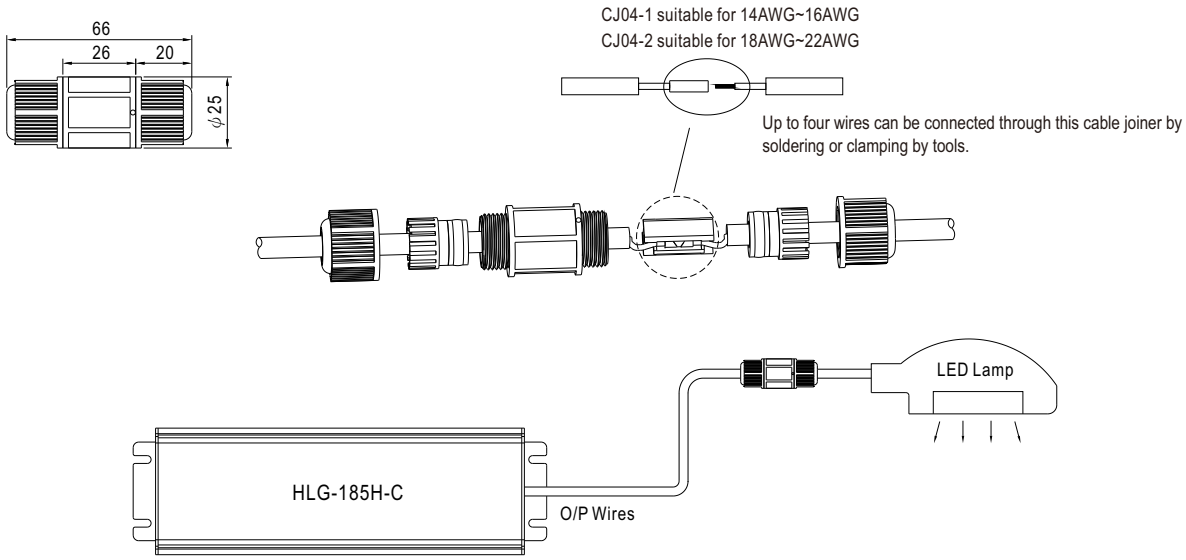
Waterproof connector can be assembled on the output cable of HLG-185H-C to operate in dry/wet/damp or outdoor environment.



Size	Pin Configuration (Female)	
M12		
	4-PIN	5-PIN
	5A/PIN	5A/PIN
Order No.	M12-04	M12-05
Suitable Current	10A max.	10A max.

Size	Pin Configuration (Female)
M15	
	2-PIN
	12A/PIN
Order No.	M15-02
Suitable Current	12A max.

◎ **Cable Joiner**



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

■ INSTALLATION MANUAL

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

250W Constant Current Mode LED Driver HLG-240H-C series

User's Manual

IP65 IP67 Type HL

Features

- 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; Smart timer dimming
- Typical lifetime>62000 hours
- 7 years warranty

Applications

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

GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

Description

HLG-240H-C series is a 250W LED AC/DC LED driver featuring the constant current mode and high voltage output. HLG-240H-C operates from 90~305VAC and offers models with different rated current ranging between 700mA and 2100mA. Thanks to the high efficiency up to 94%, with the fanless design, the entire series is able to operate for -40℃ ~ +90℃ 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. HLG-240H-C is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for LED lighting system.

Model Encoding

HLG - 240H - C1050 A

- A — Function options
- C1050 — Rated output current(700/1050/1400/1750/2100mA)
- 240H — High input voltage up to 305VAC
- HLG — Rated wattage
- Series name

Type	IP Level	Function	Note
A	IP65	Io adjustable through built-in potentiometer.	In Stock
B	IP67	3 in 1 dimming function (1~10Vdc, 10V PWM signal and resistance)	In Stock
AB	IP65	Io adjustable through built-in potentiometer & 3 in 1 dimming function (1~10Vdc, 10V PWM signal and resistance)	In Stock
Dx	IP67	Built-in Smart timer dimming function by user request.	By request
D2	IP67	Built-in Smart timer dimming and programmable function.	By request

MEAN WELL

250W Constant Current Mode LED Driver

HLG-240H-C series

SPECIFICATION

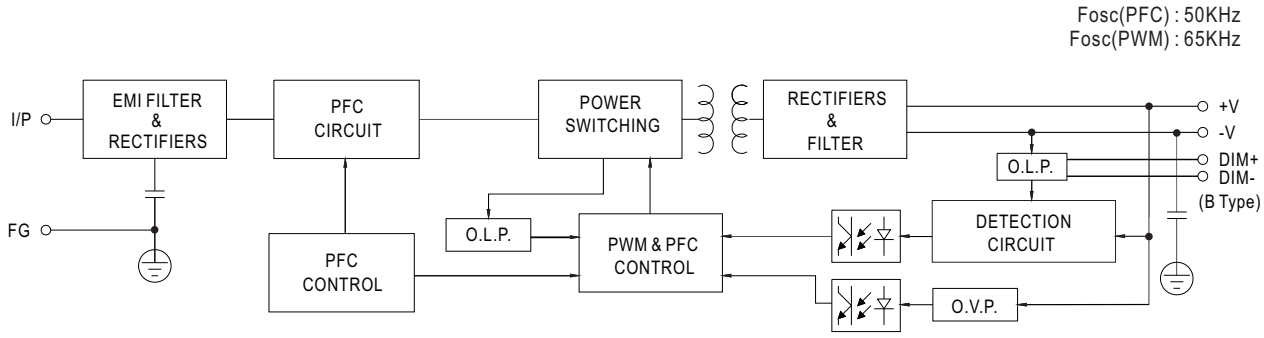
MODEL		HLG-240H-C700□	HLG-240H-C1050□	HLG-240H-C1400□	HLG-240H-C1750□	HLG-240H-C2100□
OUTPUT	RATED CURRENT	700mA	1050mA	1400mA	1750mA	2100mA
	RATED POWER	249.9W	249.9W	250.6W	250.25W	249.9W
	CONSTANT CURRENT REGION Note.2	178 ~ 357V	119 ~ 238V	89 ~ 179V	71 ~ 143V	59 ~ 119V
	OPEN CIRCUIT VOLTAGE (max.)	360V	241V	182V	146V	122V
	CURRENT ADJ. RANGE	Can be adjusted by internal potentiometer (A/AB type only)				
		350 ~ 700mA	525 ~ 1050mA	700 ~ 1400mA	875 ~ 1750mA	1050 ~ 2100mA
	CURRENT RIPPLE	5.0% max. @rated current				
	CURRENT TOLERANCE	±5%				
	SET UP TIME Note.4	1000ms/115VAC, or 500ms/230VAC				
INPUT	VOLTAGE RANGE Note.3	90 ~ 305VAC 127 ~ 431VDC (Please refer to "STATIC CHARACTERISTIC" section)				
	FREQUENCY RANGE	47 ~ 63Hz				
	POWER FACTOR (Typ.)	PF≧0.98/115VAC, PF≧0.95/230VAC, PF≧0.92/277VAC @full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)				
	TOTAL HARMONIC DISTORTION	THD< 20% (@ load≧50% /115VAC, 230VAC; @ load≧75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION (THD)" section)				
	EFFICIENCY (Typ.)	93.5%	93.5%	94%	94%	93.5%
	AC CURRENT (Typ.)	2.5A / 115VAC 1.3A / 230VAC 1.1A / 277VAC				
	INRUSH CURRENT(Typ.)	COLD START 75A(t_{width}=700μs measured at 50% I_{peak}) at 230VAC; Per NEMA 410				
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	2 units (circuit breaker of type B) / 3 units (circuit breaker of type C) at 230VAC				
	LEAKAGE CURRENT	<0.75mA / 277VAC				
PROTECTION	SHORT CIRCUIT	Constant current limiting, recovers automatically after fault condition is removed				
	OVER VOLTAGE	375 ~ 410V	250 ~ 275V	188 ~ 206V	150 ~ 165V	125 ~ 137V
		Shut down and latch off o/p voltage, re-power on to recover				
	OVER TEMPERATURE	Shut down o/p voltage, recovers automatically after temperature goes down				
ENVIRONMENT	WORKING TEMP.	Tcase=-40 ~ +90℃ (Refer to "Derating Curve")				
	MAX. CASE TEMP.	Tcase=+90℃				
	WORKING HUMIDITY	20 ~ 95% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-40 ~ +80℃, 10 ~ 95% RH				
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)				
	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; BS EN/EN/AS/NZS 61347-1, BS EN/EN/AS/NZS 61347-2-13, BS EN/EN62384 independent; GB19510.1,GB19510.14; IP65 or 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℃/ 70% RH				
	EMC EMISSION	Compliance to BS EN/EN55015, BS EN/EN61000-3-2 Class C (@ load≧50%) ; BS EN/EN61000-3-3,GB/T 17743 , GB17625.1, 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 4KV, Line-Line 2KV),EAC TP TC 020				
OTHERS	MTBF	2513.7K hrs min. Telcordia SR-332 (Bellcore) ; 228.5K hrs min. MIL-HDBK-217F (25℃)				
	DIMENSION	244.2*68*38.8mm (L*W*H)				
	PACKING	1.3Kg; 12pcs/16.6Kg/0.84CUFT				

NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25℃ of ambient temperature.
2. Please refer to "DRIVING METHODS OF LED MODULE".
3. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.
4. Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to increase of the set up time.
5. 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. (as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf)
6. 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.
7. This series meets the typical life expectancy of >62,000 hours of operation when Tcase, particularly (tc) point (or TMP, per DLC), is about 75℃ or less.
8. Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.com.
9. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).
10. 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
11. For A/AB type need to consider build in using to comply with Type HL application.

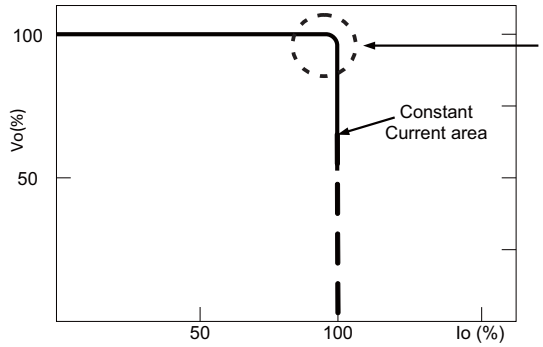
※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

■ BLOCK DIAGRAM



■ DRIVING METHODS OF LED MODULE

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

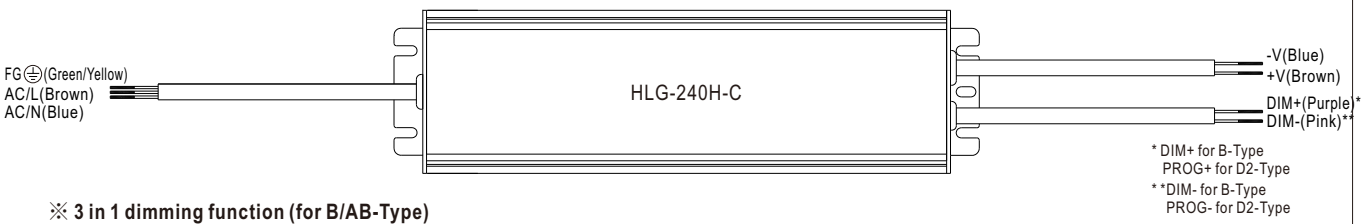


Typical output current normalized by rated current (%)

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

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

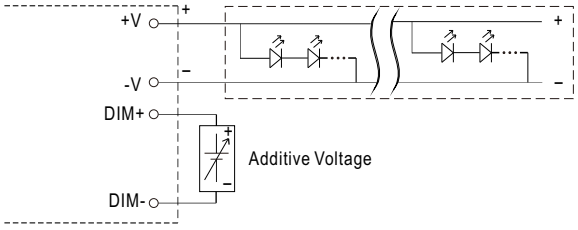
■ DIMMING OPERATION



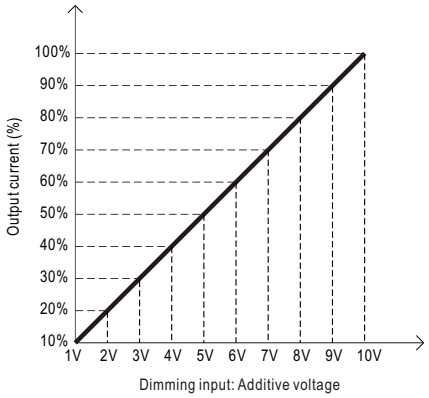
※ 3 in 1 dimming function (for B/AB-Type)

- Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-: 1 ~ 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.)

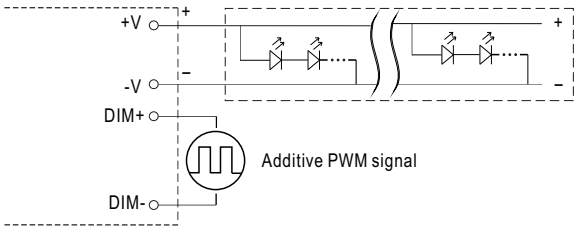
◎ Applying additive 1 ~ 10VDC



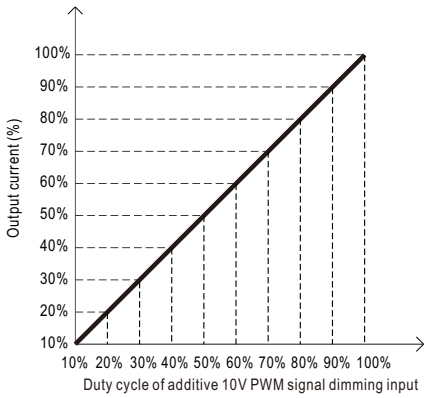
"DO NOT connect "DIM- to -V"



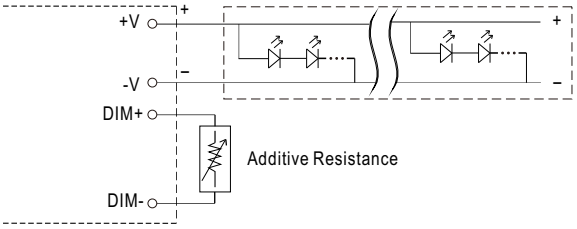
◎ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):



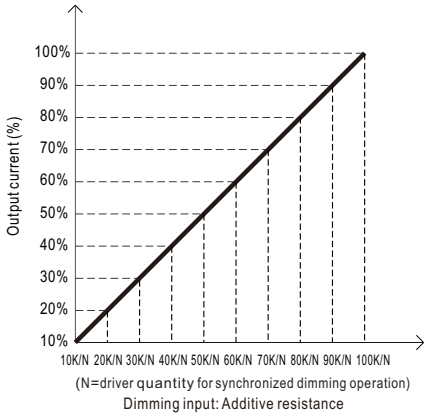
"DO NOT connect "DIM- to -V"



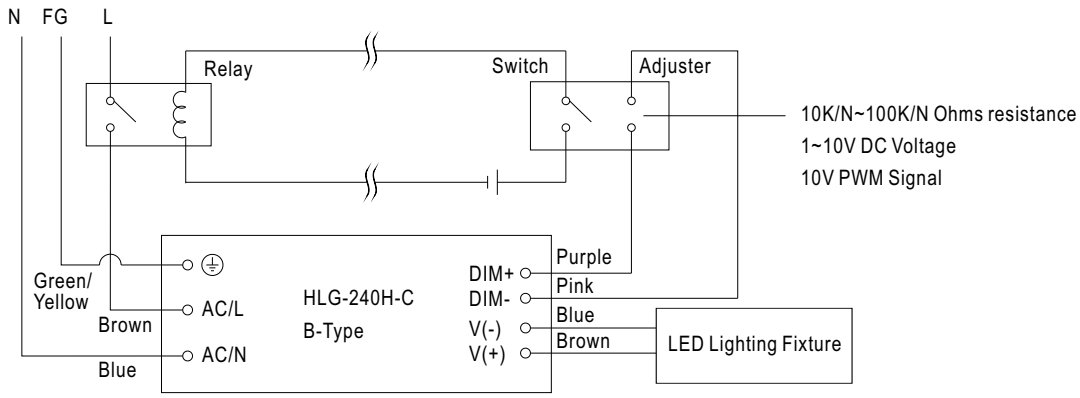
◎ Applying additive resistance:



"DO NOT connect "DIM- to -V"



Note: In the case of turning the lighting fixture down to 0% brightness, please refer to the configuration as follow, or please contact MEAN WELL for other options.

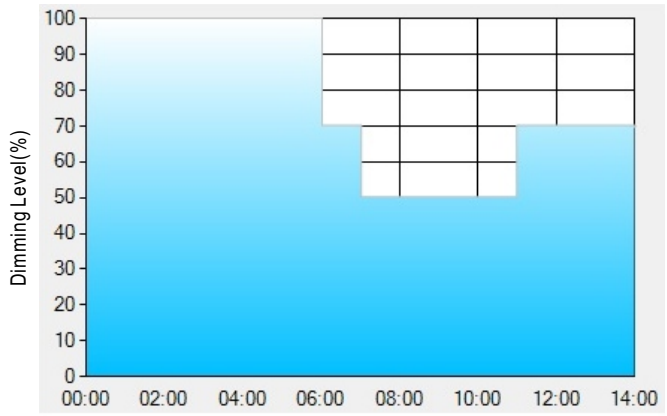


Using a switch and relay can turn ON/OFF the lighting fixture.

※ **Smart timer dimming function (for Dxx-Type by User definition)**

MEAN WELL Smart timer dimming primarily provides the adaptive proportion dimming profile for the output constant current level to perform up to 14 consecutive hours. 3 dimming profiles hereunder are defined accounting for the most frequently seen applications. If other options may be needed, please contact MEAN WELL for details.

Ex : ◎ D01-Type: the profile recommended for residential lighting



Set up for D01-Type in Smart timer dimming software program:

	T1	T2	T3	T4
TIME**	06:00	07:00	11:00	---
LEVEL**	100%	70%	50%	70%

**: TIME matches Operating Time in the diagram whereas LEVEL matches Dimming Level.

Example: If a residential lighting application adopts D01-Type, when turning on the power supply at 6:00pm, for instance:

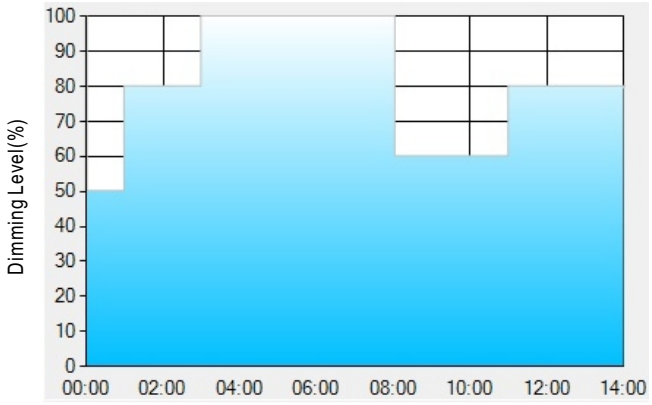
[1] The power supply will switch to the constant current level at 100% starting from 6:00pm.

[2] The power supply will switch to the constant current level at 70% in turn, starting from 0:00am, which is 06:00 after the power supply turns on.

[3] The power supply will switch to the constant current level at 50% in turn, starting from 1:00am, which is 07:00 after the power supply turns on.

[4] The power supply will switch to the constant current level at 70% in turn, starting from 5:00am, which is 11:00 after the power supply turns on. The constant current level remains till 8:00am, which is 14:00 after the power supply turns on.

Ex: ◎ D02-Type: the profile recommended for street lighting

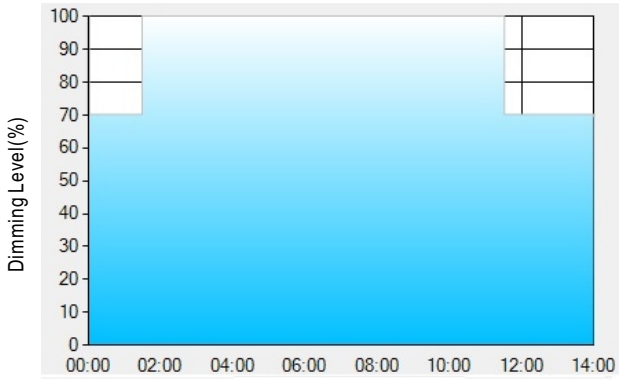


Set up for D02-Type in Smart timer dimming software program:

	T1	T2	T3	T4	T5
TIME**	01:00	03:00	8:00	11:00	---
LEVEL**	50%	80%	100%	60%	80%

**: TIME matches Operating Time in the diagram whereas LEVEL matches Dimming Level.
Example: If a street lighting application adopts D02-Type, when turning on the power supply at 5:00pm, for instance:
[1] The power supply will switch to the constant current level at 50% starting from 5:00pm.
[2] The power supply will switch to the constant current level at 80% in turn, starting from 6:00pm, which is 01:00 after the power supply turns on.
[3] The power supply will switch to the constant current level at 100% in turn, starting from 8:00pm, which is 03:00 after the power supply turns on.
[4] The power supply will switch to the constant current level at 60% in turn, starting from 1:00am, which is 08:00 after the power supply turns on.
[5] The power supply will switch to the constant current level at 80% in turn, starting from 4:00am, which is 11:00 after the power supply turns on. The constant current level remains till 6:30am, which is 14:00 after the power supply turns on.

Ex: ◎ D03-Type: the profile recommended for tunnel lighting

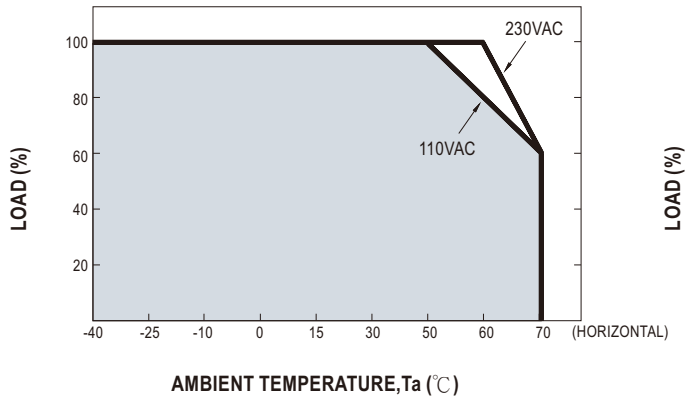


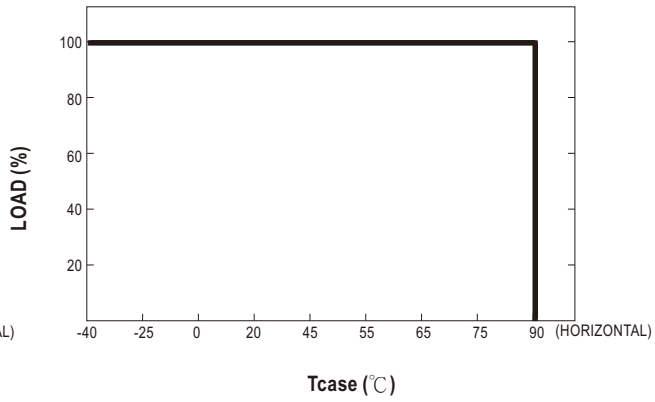
Set up for D03-Type in Smart timer dimming software program:

	T1	T2	T3
TIME**	01:30	11:00	---
LEVEL**	70%	100%	70%

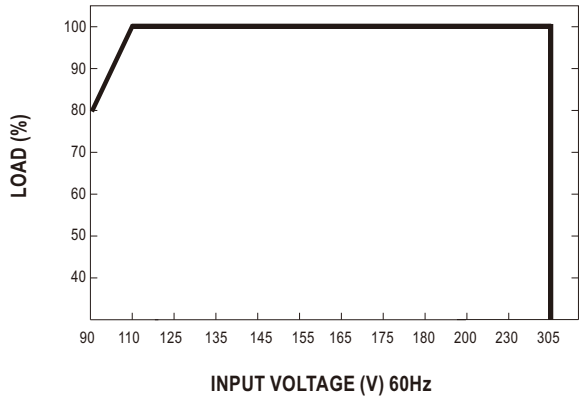
**: TIME matches Operating Time in the diagram whereas LEVEL matches Dimming Level.
Example: If a tunnel lighting application adopts D03-Type, when turning on the power supply at 4:30pm, for instance:
[1] The power supply will switch to the constant current level at 70% starting from 4:30pm.
[2] The power supply will switch to the constant current level at 100% in turn, starting from 6:00pm, which is 01:30 after the power supply turns on.
[3] The power supply will switch to the constant current level at 70% in turn, starting from 5:00am, which is 11:00 after the power supply turns on.
The constant current level remains till 6:30am, which is 14:00 after the power supply turns on.

■ OUTPUT LOAD vs TEMPERATURE(Note.8)



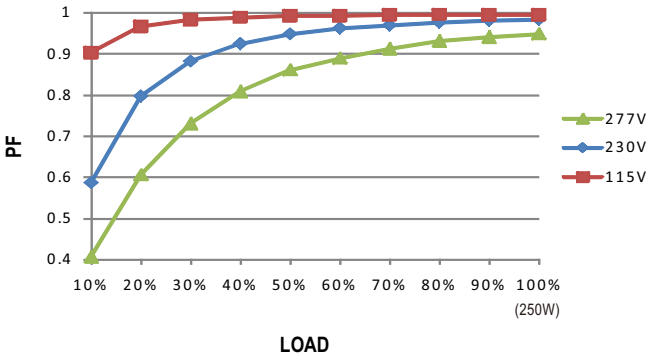


■ STATIC CHARACTERISTIC



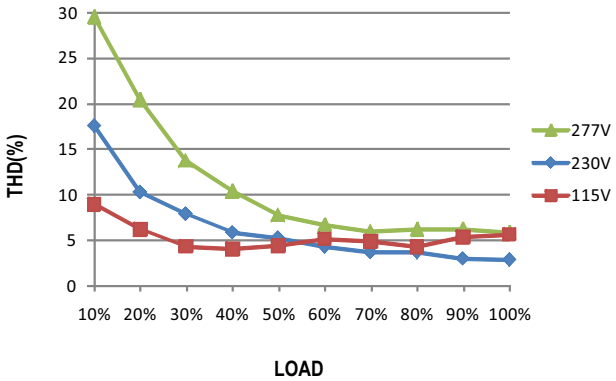
■ POWER FACTOR (PF) CHARACTERISTIC

※ Tcase at 80℃



■ TOTAL HARMONIC DISTORTION (THD)

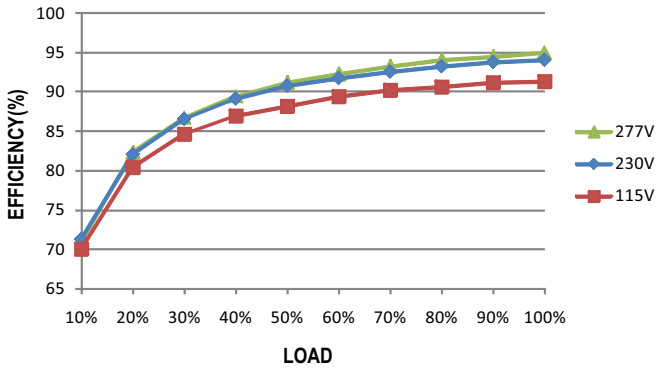
※ 1400mA Model, Tcase at 80℃



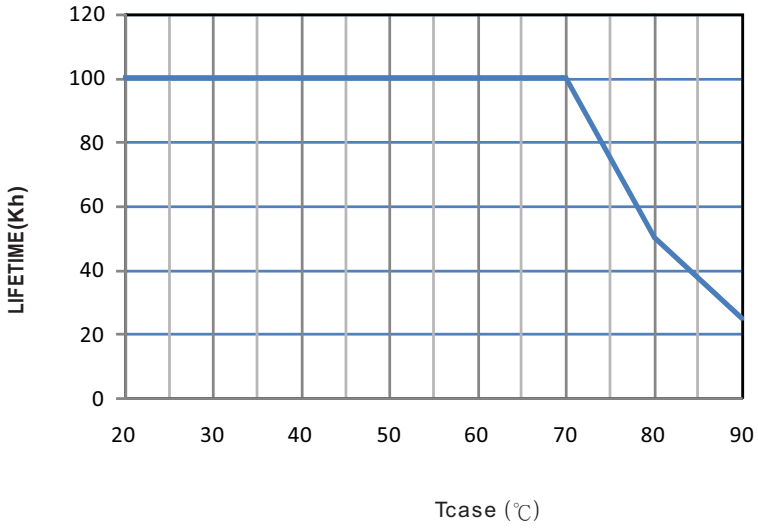
■ EFFICIENCY vs LOAD

HLG-240H-C series possess superior working efficiency that up to 94% can be reached in field applications.

※ 1400mA Model, Tcase at 80℃



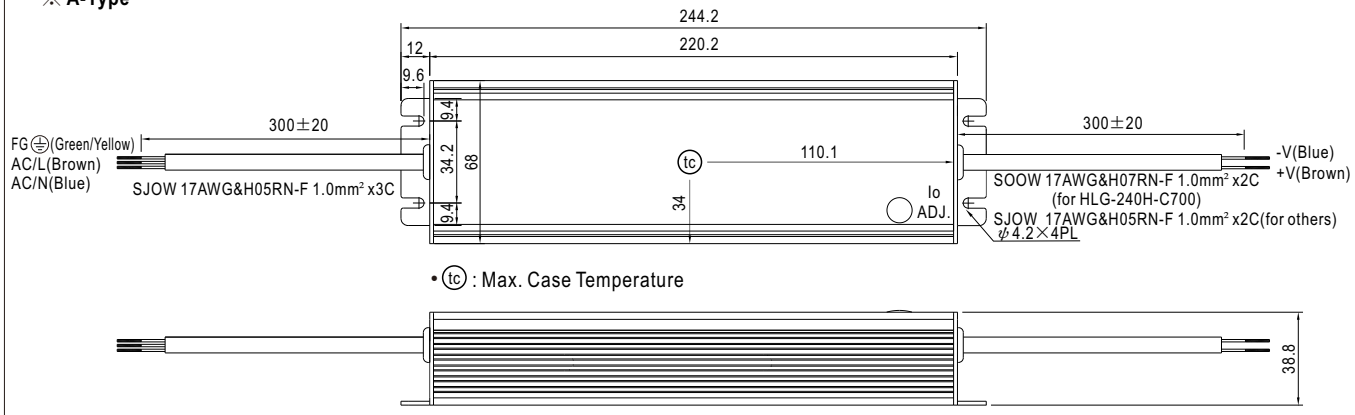
LIFE TIME



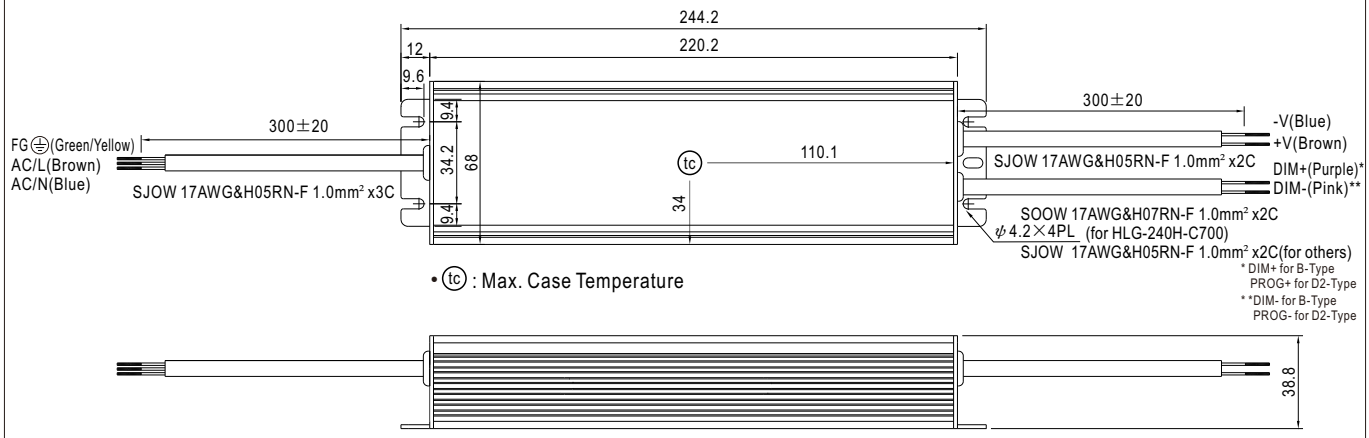
■ MECHANICAL SPECIFICATION

Case No.954F Unit:mm Tolerance:±1

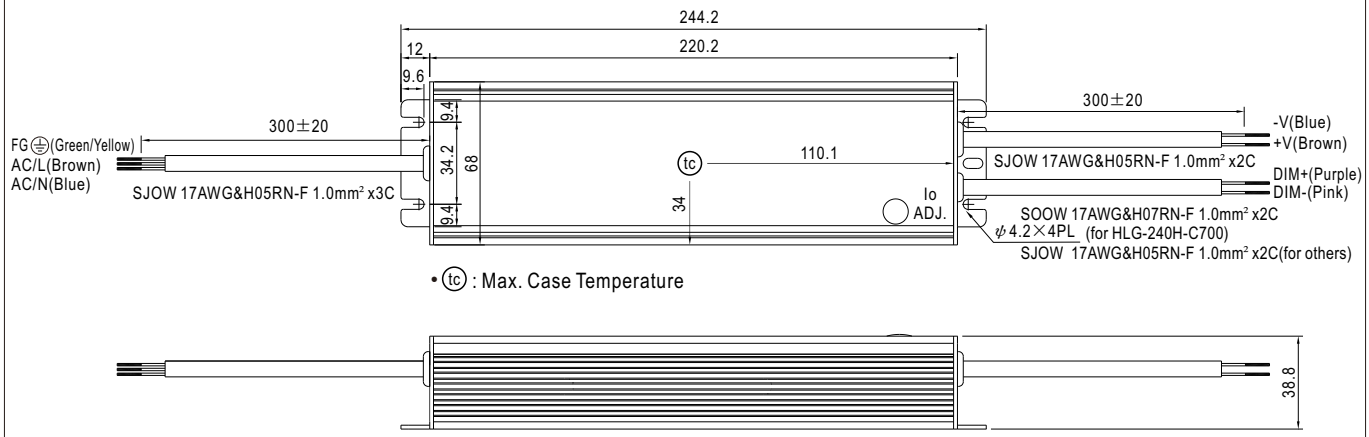
※ **A-Type**



※ **B/D2-Type**



※ **AB-Type**



■ INSTALLATION MANUAL

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

320W Constant Current Mode LED Driver HLG-320H-C series

User's Manual

(for DA-Type only) Type HL

Features

- 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
- Typical lifetime>62000 hours
- 7 years warranty

Applications

- LED street lighting
- LED fishing lamp
- LED harbor lighting
- LED building architectural lighting
- LED greenhouse lighting
- LED bay lighting
- Type "HL" for use in Class I , Division 2 hazardous (Classified) location.

GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

Description

HLG-320H-C series is a 320W LED AC/DC LED driver featuring the constant current mode and high voltage output. HLG-320H-C operates from 90~305VAC and offers models with different rated current ranging between 700mA and 3500mA. Thanks to the high efficiency up to 94%, with the fanless design, the entire series is able to operate for -40℃ ~ +85℃ 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. HLG-320H-C is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for LED lighting system.

Model Encoding

HLG - 320H - C1050 A

- A — Function options
- C1050 — Rated output current(700/1050/1400/1750/2100/2800/3500mA)
- 320H — High input voltage up to 305VAC
- HLG — Rated wattage
- Series name

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
DA	IP67	DALI control technology.	In Stock
AB	IP65	Io adjustable through built-in potentiometer & 3 in 1 dimming function (0~10Vdc, 10V PWM signal and resistance)	In Stock
Dx	IP67	Built-in Smart timer dimming function by user request.	By request
D2	IP67	Built-in Smart timer dimming and programmable function.	In Stock

MEAN WELL

320W Constant Current Mode LED Driver

HLG-320H-C series

SPECIFICATION

MODEL		HLG-320H-C700□	HLG-320H-C1050□	HLG-320H-C1400□	HLG-320H-C1750□	HLG-320H-C2100□	HLG-320H-C2800□	HLG-320H-C3500□
OUTPUT	RATED CURRENT	700mA	1050mA	1400mA	1750mA	2100mA	2800mA	3500mA
	RATED POWER	299.6W	320.25W	320.6W	320.25W	319.2W	319.2W	318.5W
	CONSTANT CURRENT REGION Note.2	214 ~ 428V	152 ~ 305V	114 ~ 229V	91 ~ 183V	76 ~ 152V	57 ~ 114V	46 ~ 91V
	OPEN CIRCUIT VOLTAGE (max.)	435V	311V	234V	187V	156V	118V	95V
	CURRENT ADJ. RANGE	Adjustable for A/AB-Type only (via built-in potentiometer)						
		350 ~ 700mA	525 ~ 1050mA	700 ~ 1400mA	875 ~ 1750mA	1050 ~ 2100mA	1400 ~ 2800mA	1750 ~ 3500mA
	CURRENT RIPPLE	5.0% max. @rated current						
	CURRENT TOLERANCE	±5%						
	SET UP TIME Note.4	1000ms/115VAC, or 500ms/230VAC						
INPUT	VOLTAGE RANGE Note.3	90 ~ 305VAC 127~417VDC (Please refer to "STATIC CHARACTERISTIC" section)						
	FREQUENCY RANGE	47 ~ 63Hz						
	POWER FACTOR (Typ.)	PF≧0.98/115VAC, PF≧0.95/230VAC, PF≧0.92/277VAC @full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)						
	TOTAL HARMONIC DISTORTION	THD< 20% (@ load≧50% /115VAC, 230VAC; @ load≧70%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION (THD)" section)						
	EFFICIENCY (Typ.)	94%	94%	94%	94%	94%	94%	94%
	AC CURRENT (Typ.)	3.5A / 115VAC 1.65A / 230VAC 1.45A / 277VAC						
	INRUSH CURRENT(Typ.)	COLD START 70A(t_{width}=1200μs measured at 50% I_{peak}) at 230VAC; Per NEMA 410						
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	2 units (circuit breaker of type B) / 3 units (circuit breaker of type C) at 230VAC						
	LEAKAGE CURRENT	<0.75mA / 277VAC						
PROTECTION	SHORT CIRCUIT	Constant current limiting, recovers automatically after fault condition is removed						
	OVER VOLTAGE	436 ~ 460V	320 ~ 352V	235 ~ 252V	192 ~ 211V	160 ~ 175V	120 ~ 132V	96 ~ 105V
		Shut down and latch off o/p voltage, re-power on to recover						
	OVER TEMPERATURE	Shut down and latch off o/p voltage, re-power on to recover						
ENVIRONMENT	WORKING TEMP.	Tcase=-40 ~ +85℃ (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)						
	MAX. CASE TEMP.	Tcase=+85℃						
	WORKING HUMIDITY	20 ~ 95% RH non-condensing						
	STORAGE TEMP., HUMIDITY	-40 ~ +80℃, 10 ~ 95% RH						
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)						
	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, BS EN/EN62384 independent; GB19510.1,GB19510.14,EAC TP TC 004, IP65 or IP67 approved						
	DALI STANDARDS	Compliance to IEC62386-101,102,(207 by request) for DA 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℃/ 70% RH						
	EMC EMISSION	Compliance to BS EN/EN55015, BS EN/EN61000-3-2 Class C (@ load≧50%) ; BS EN/EN61000-3-3,GB/T 17743 , GB17625.1,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 4KV, Line-Line 2KV), EAC TP TC 020						
OTHERS	MTBF	1847.6K hrs min. Telcordia SR-332 (Bellcore) ; 182.3K hrs min. MIL-HDBK-217F (25℃)						
	DIMENSION	252*90*43.8mm (L*W*H)						
	PACKING	1.88Kg; 8pcs/16Kg/0.92CUFT						

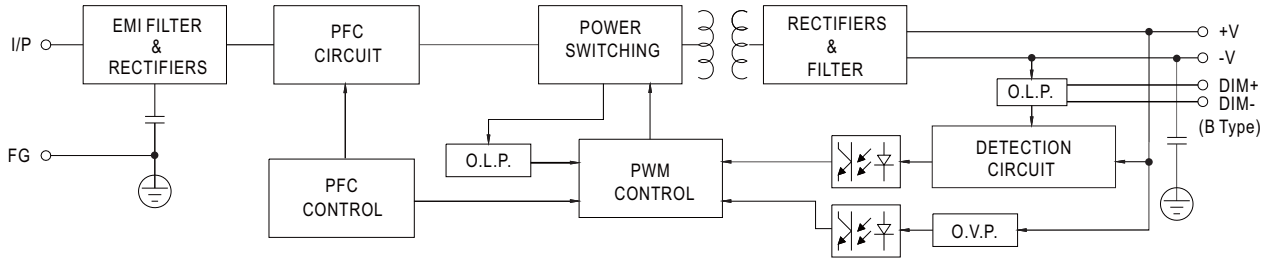
NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25℃ of ambient temperature.
2. Please refer to "DRIVING METHODS OF LED MODULE".
3. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.
4. Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to increase of the set up time.
5. 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. (as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf)
6. 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.
7. This series meets the typical life expectancy of >62,000 hours of operation when Tcase, particularly (tc) point (or TMP, per DLC), is about 75℃ or less.
8. Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.com
9. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).
10. 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
11. For A/AB type need to consider build in using to comply with Type HL application.

※ Product Liability Disclaimer：For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

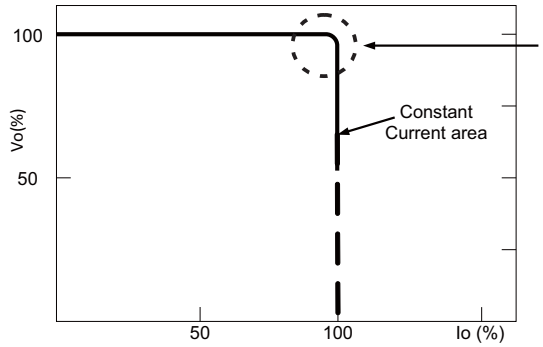
■ BLOCK DIAGRAM

Fosc(PFC) : 45KHz
Fosc(PWM) : 70KHz



■ DRIVING METHODS OF LED MODULE

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



Typical output current normalized by rated current (%)

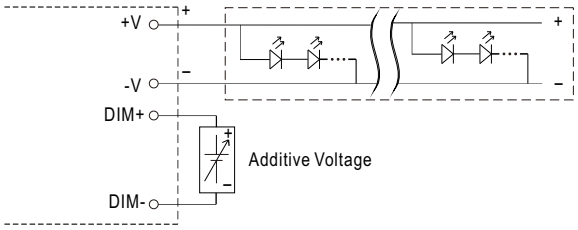
In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.
Should there be any compatibility issues, please contact MEAN WELL.

■ DIMMING OPERATION

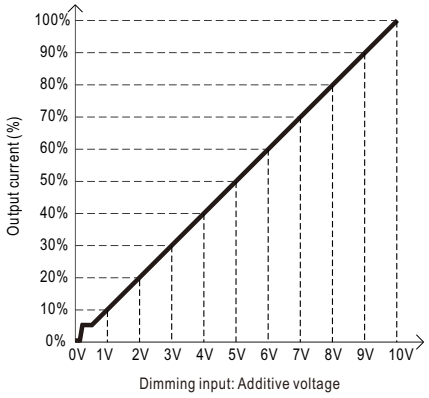
※ 3 in 1 dimming function (for B/AB-Type)

- 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: 100μA (typ.)

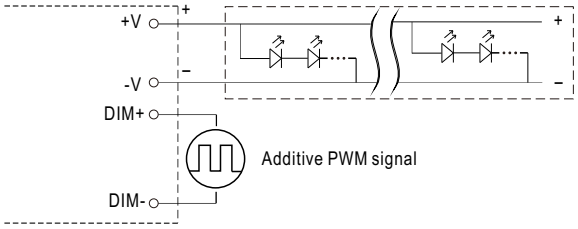
◎ Applying additive 0 ~ 10VDC



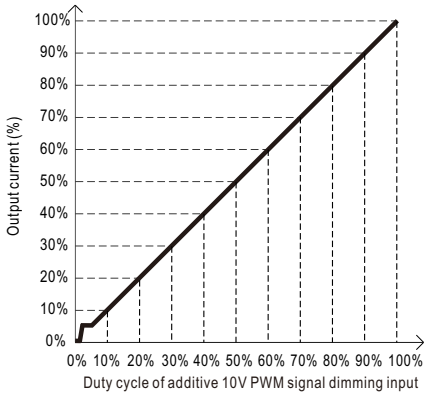
"DO NOT connect "DIM- to -V"



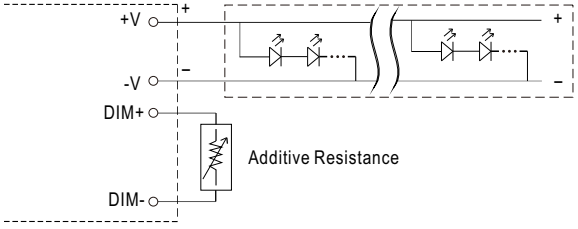
◎ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):



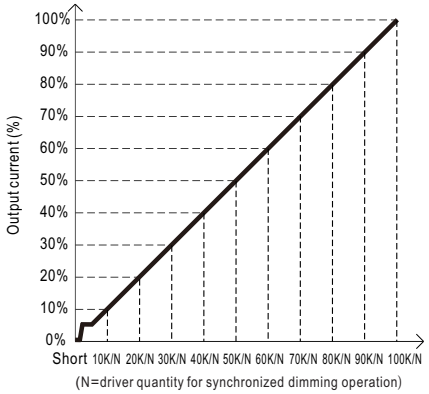
"DO NOT connect "DIM- to -V"



◎ Applying additive resistance:



"DO NOT connect "DIM- to -V"



Note : 1. Min. dimming level is about 6% and the output current is not defined when 0%< Iout<6%.
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.

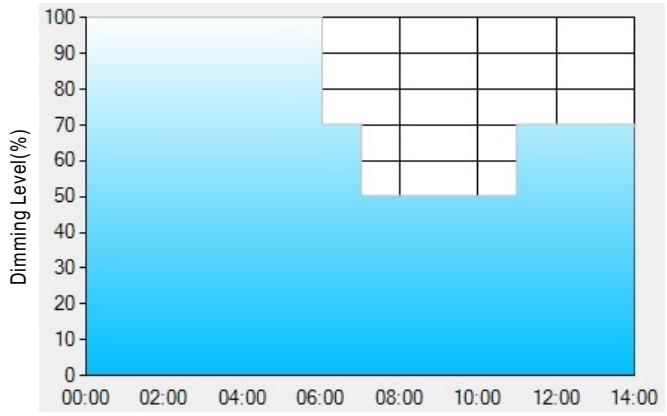
※ **DALI Interface (primary side; for DA-Type)**

- Apply DALI signal between DA+ and DA-.
- DALI protocol comprises 16 groups and 64 addresses.
- First step is fixed at 8% of output. Please contact MEAN WELL for other setup.

※ **Smart timer dimming function (for Dxx-Type by User definition)**

MEAN WELL Smart timer dimming primarily provides the adaptive proportion dimming profile for the output constant current level to perform up to 14 consecutive hours. 3 dimming profiles hereunder are defined accounting for the most frequently seen applications. If other options may be needed, please contact MEAN WELL for details.

Ex : ◎ D01-Type: the profile recommended for residential lighting



Set up for D01-Type in Smart timer dimming software program:

	T1	T2	T3	T4
TIME**	06:00	07:00	11:00	---
LEVEL**	100%	70%	50%	70%

**: TIME matches Operating Time in the diagram whereas LEVEL matches Dimming Level.

Example: If a residential lighting application adopts D01-Type, when turning on the power supply at 6:00pm, for instance:

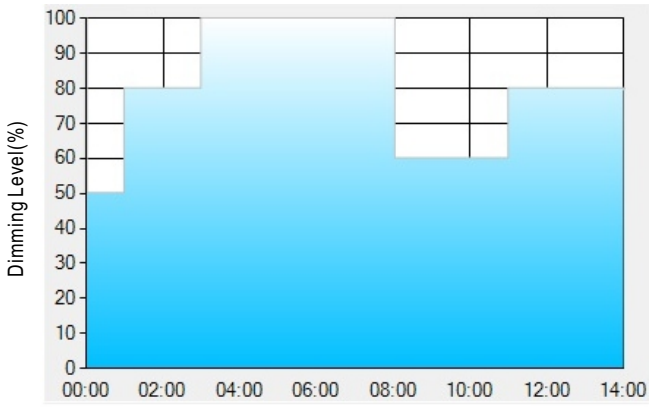
[1] The power supply will switch to the constant current level at 100% starting from 6:00pm.

[2] The power supply will switch to the constant current level at 70% in turn, starting from 0:00am, which is 06:00 after the power supply turns on.

[3] The power supply will switch to the constant current level at 50% in turn, starting from 1:00am, which is 07:00 after the power supply turns on.

[4] The power supply will switch to the constant current level at 70% in turn, starting from 5:00am, which is 11:00 after the power supply turns on. The constant current level remains till 8:00am, which is 14:00 after the power supply turns on.

Ex: ◎ D02-Type: the profile recommended for street lighting



Set up for D02-Type in Smart timer dimming software program:

	T1	T2	T3	T4	T5
TIME**	01:00	03:00	8:00	11:00	---
LEVEL**	50%	80%	100%	60%	80%

**: TIME matches Operating Time in the diagram whereas LEVEL matches Dimming Level.

Example: If a street lighting application adopts D02-Type, when turning on the power supply at 5:00pm, for instance:

[1] The power supply will switch to the constant current level at 50% starting from 5:00pm.

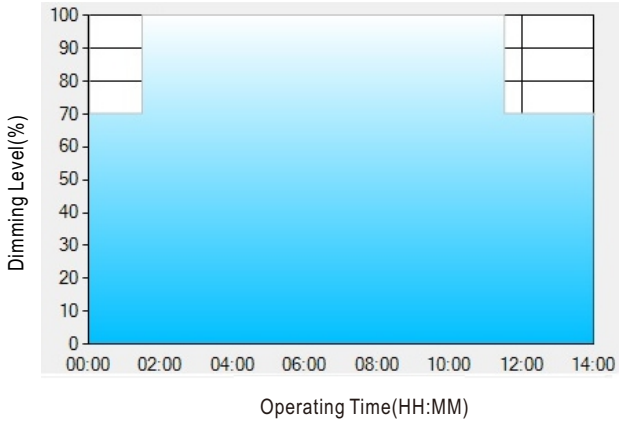
[2] The power supply will switch to the constant current level at 80% in turn, starting from 6:00pm, which is 01:00 after the power supply turns on.

[3] The power supply will switch to the constant current level at 100% in turn, starting from 8:00pm, which is 03:00 after the power supply turns on.

[4] The power supply will switch to the constant current level at 60% in turn, starting from 1:00am, which is 08:00 after the power supply turns on.

[5] The power supply will switch to the constant current level at 80% in turn, starting from 4:00am, which is 11:00 after the power supply turns on. The constant current level remains till 6:30am, which is 14:00 after the power supply turns on.

Ex: ◎ D03-Type: the profile recommended for tunnel lighting

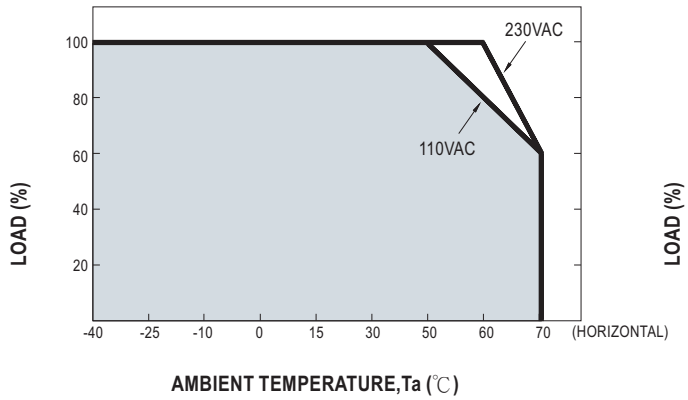


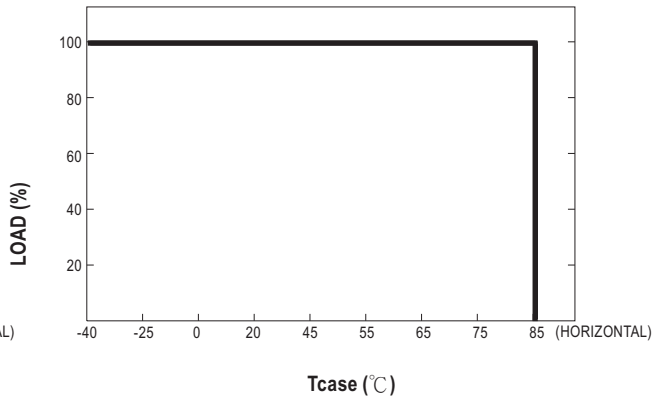
Set up for D03-Type in Smart timer dimming software program:

	T1	T2	T3
TIME**	01:30	11:00	---
LEVEL**	70%	100%	70%

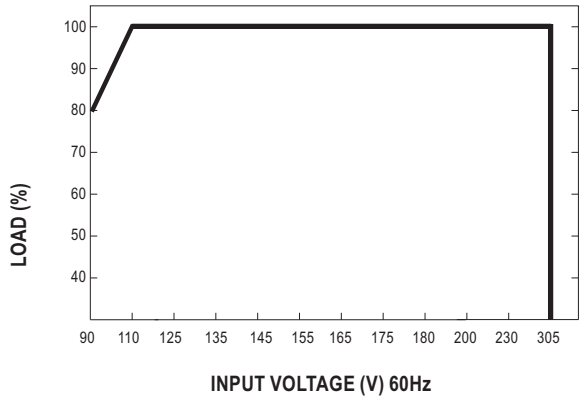
**: TIME matches Operating Time in the diagram whereas LEVEL matches Dimming Level.
Example: If a tunnel lighting application adopts D03-Type, when turning on the power supply at 4:30pm, for instance:
[1] The power supply will switch to the constant current level at 70% starting from 4:30pm.
[2] The power supply will switch to the constant current level at 100% in turn, starting from 6:00pm, which is 01:30 after the power supply turns on.
[3] The power supply will switch to the constant current level at 70% in turn, starting from 5:00am, which is 11:00 after the power supply turns on.
The constant current level remains till 6:30am, which is 14:00 after the power supply turns on.

■ OUTPUT LOAD vs TEMPERATURE(Note.8)



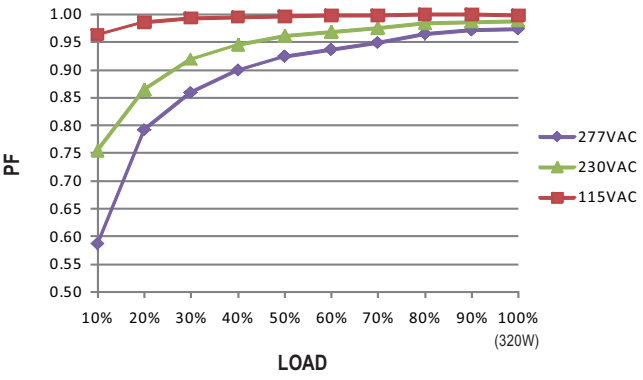


■ STATIC CHARACTERISTIC



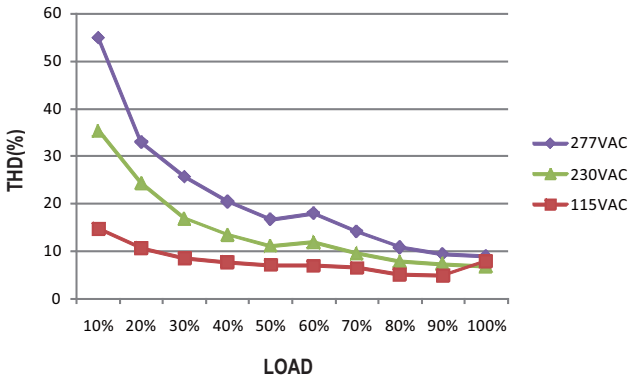
■ POWER FACTOR (PF) CHARACTERISTIC

※ Tcase at 75℃



■ TOTAL HARMONIC DISTORTION (THD)

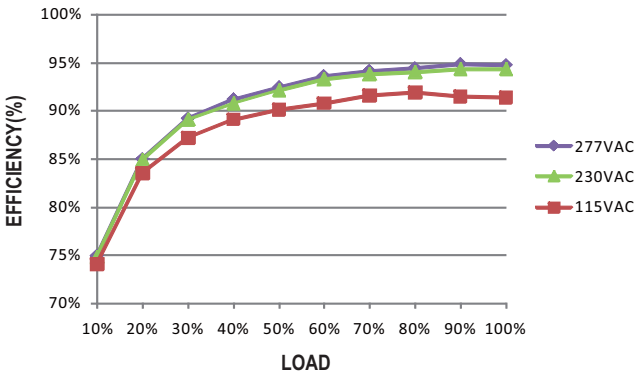
※ 1050mA Model, Tcase at 75℃



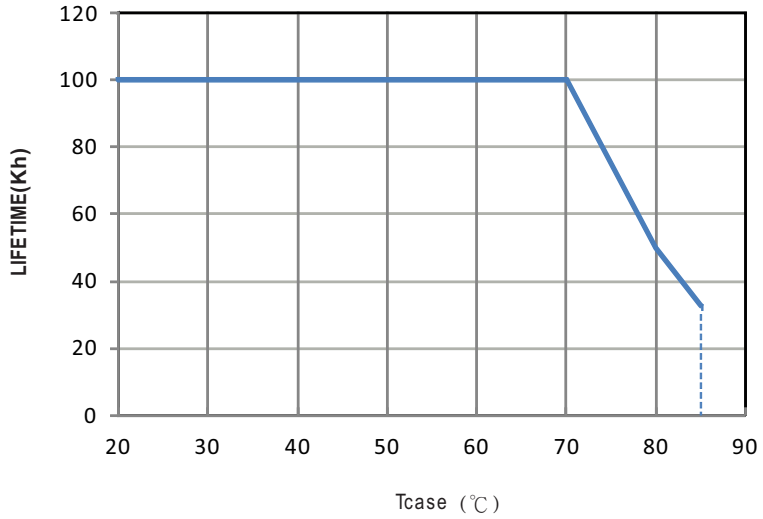
■ EFFICIENCY vs LOAD

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

※ 1050mA Model, Tcase at 75℃



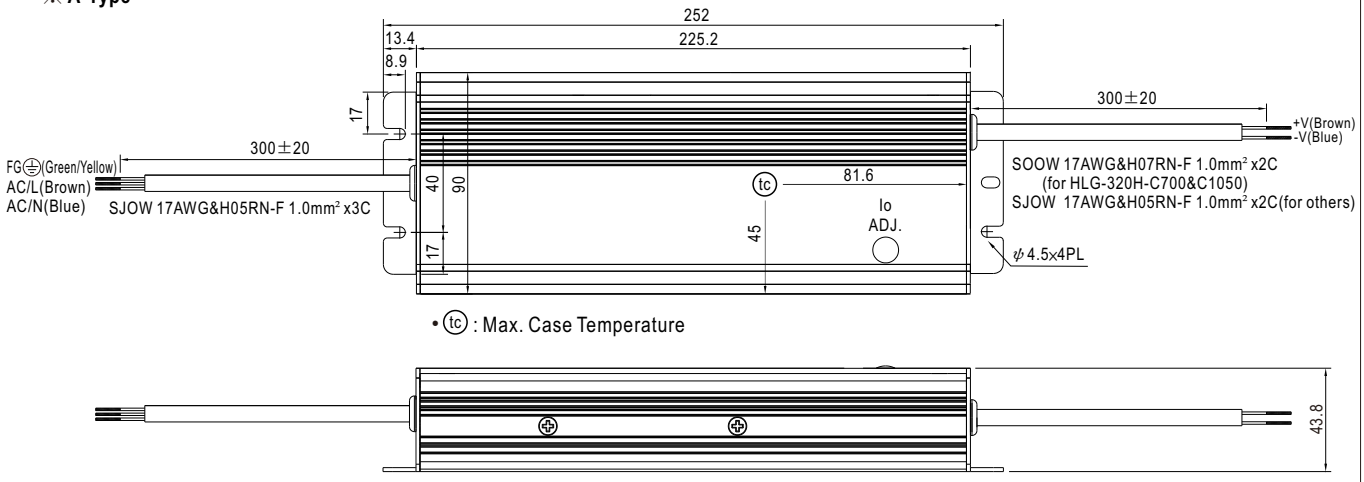
■ LIFE TIME



■ MECHANICAL SPECIFICATION

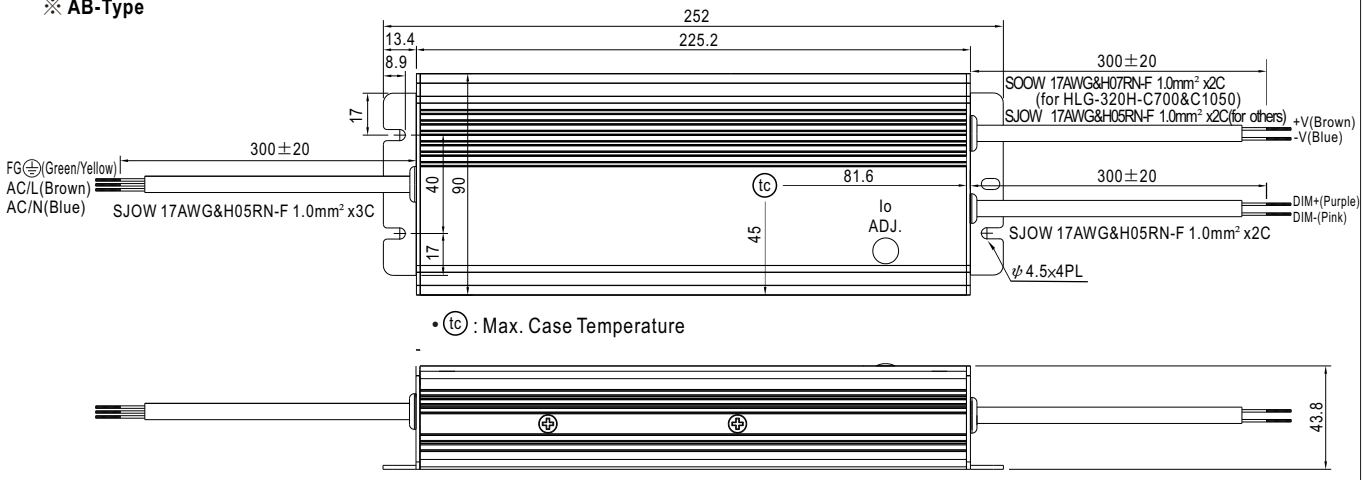
Case No.228 Unit:mm Tolerance:±1

※ A-Type



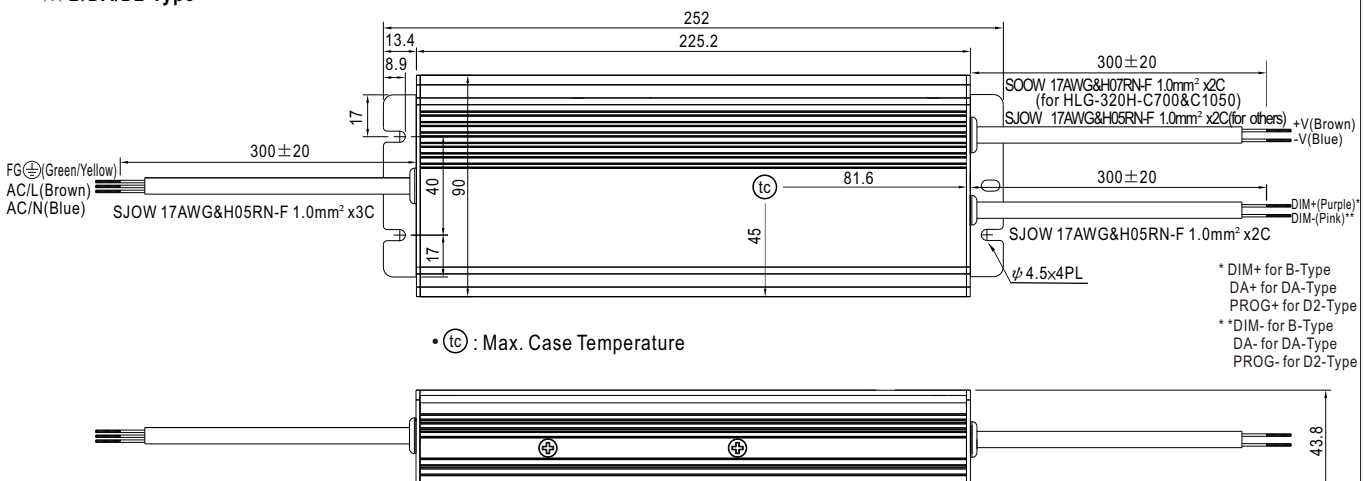
• tc : Max. Case Temperature

※ AB-Type



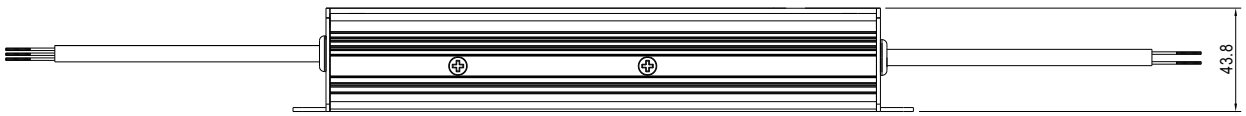
• tc : Max. Case Temperature

※ B/DA/D2-Type



* DIM+ for B-Type
DA+ for DA-Type
PROG+ for D2-Type
* *DIM- for B-Type
DA- for DA-Type
PROG- for D2-Type

• tc : Max. Case Temperature



■ INSTALLATION MANUAL

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

480W Constant Current Mode LED Driver

HLG-480H-C series

User's Manual

IP65 IP67 Type HL

Features

- Constant Current mode output
- Metal housing with Class I design
- Built-in active PFC function
- Environment-adaptive driving capability
- IP67 / IP65 design for indoor or outdoor installations
- Function options: output adjustable via potentiometer; 3 in 1 dimming (dim-to-off,isolated design); Smart timer dimming; Low temperature light-on; Junction box
- Typical lifetime>62000 hours (Note.7)
- 7 years warranty

Applications

- LED Harbour
- LED greenhouse lighting
- LED statium lighting
- LED mining lighting
- Type "HL" for use in Class I ,Division 2 hazardous(Classified) location

GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

Description

HLG-480H-C series is a 480W LED AC/DC driver featuring the constant current mode and high voltage output. HLG-480H-C operates from 90~305VAC and offers models with different rated current ranging between 1400mA and 3500mA. Thanks to the high efficiency up to 95%, with the fanless design, the entire series is able to operate for -40℃ ~ +90℃ 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. 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. HLG-480H-C is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for LED lighting system.

Model Encoding

HLG - 480H - C1400 A

- A — Function options
- C1400 — Rated output current(1400/1750/2100/2800/3500mA)
- H — High input voltage up to 305VAC
- 480 — Rated wattage
- HLG — Series name

Type	IP Level	Function	Note
A	IP65	Io adjustable through built-in potentiometer. And environment adaptiveness.	In Stock
B	IP67	3 in 1 dimming function (0~10Vdc, 10V PWM signal and resistance) and environment adaptiveness.	In Stock
AB	IP65	Io adjustable through built-in potentiometer & 3 in 1 dimming function (0~10Vdc, 10V PWM signal and resistance)	In Stock
Dx	IP67	Built-in Smart timer dimming function by user request. And environment adaptiveness.	By request
D2	IP67	Built-in Smart timer dimming and programmable function. And environment adaptiveness.	In Stock

480W Constant Current Mode LED Driver **HLG-480H-C series**

SPECIFICATION

MODEL		HLG-480H-C1400□	HLG-480H-C1750□	HLG-480H-C2100□	HLG-480H-C2800□	HLG-480H-C3500□
OUTPUT	RATED CURRENT	1400mA	1750mA	2100mA	2800mA	3500mA
	RATED POWER	480W	480W	481W	479W	480W
	CONSTANT CURRENT REGION Note.2	171 ~ 343V	137~274V	114 ~ 229V	85 ~ 171V	68 ~ 137V
	OPEN CIRCUIT VOLTAGE (max.)	420V	340V	280V	210V	170V
	CURRENT ADJ. RANGE	Adjustable for A/AB-Type only (via built-in potentiometer)				
		700~1400mA	875~1750mA	1050~2100mA	1400~2800mA	1750~3500mA
	CURRENT RIPPLE	5.0% max. @rated current				
	CURRENT TOLERANCE	±5%				
	SET UP TIME Note.4	500ms/115VAC,230VAC				
INPUT	VOLTAGE RANGE Note.3	90 ~ 305VAC 127 ~ 431VDC (Please refer to "STATIC CHARACTERISTIC" section)				
	FREQUENCY RANGE	47 ~ 63Hz				
	POWER FACTOR (Typ.)	PF≧0.98/115VAC, PF≧0.97/230VAC, PF≧0.95/277VAC @full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)				
	TOTAL HARMONIC DISTORTION	THD< 20% (@ load≧40% /115VAC, 230VAC, 277VAC) (Please refer to "TOTAL HARMONIC DISTORTION (THD)" section)				
	EFFICIENCY (Typ.)	95%	95%	95%	95%	95%
	AC CURRENT (Typ.)	5A / 115VAC 2.45A / 230VAC 2A / 277VAC				
	INRUSH CURRENT(Typ.)	COLD START 35A(t_{width}=1800μs measured at 50% I_{peak}) at 230VAC; Per NEMA 410				
	MAX. NO. of PSUs on 16A CIRCUIT BREAKER	2 unit(circuit breaker of type B) / 3 units(circuit breaker of type C) at 230VAC				
	LEAKAGE CURRENT	<0.75mA / 277VAC				
PROTECTION	SHORT CIRCUIT	Constant current, recovers automatically after fault condition is removed				
	OVER VOLTAGE	432 ~ 473V	345 ~ 382V	289 ~ 322V	215 ~ 246V	173 ~ 197V
		Shut down output voltage, re-power on to recovery				
	OVER TEMPERATURE	Shut down output voltage, re-power on to recovery				
ENVIRONMENT	WORKING TEMP.	Tcase=-40 ~ +90℃ (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)				
	MAX. CASE TEMP.	Tcase=+90℃				
	WORKING HUMIDITY	20 ~ 95% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-40 ~ +80℃, 10 ~ 95% RH non-condensing				
	TEMP. COEFFICIENT	±0.02%/℃ (0 ~ 60℃)				
	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; GB19510.14,GB19510.1; IP65 or IP67, EAC TP TC 004,AS/NZS IEC 61347.2.13:2013, AS/NZS 61347.1:2016 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℃/ 70% RH				
	EMC EMISSION	Compliance to BS EN/EN55015, BS EN/EN61000-3-2 Class C (@load≧50%); BS EN/EN61000-3-3; GB/T 17743, GB17625.1, 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 4KV, Line-Line 2KV), EAC TP TC 020				
OTHERS	MTBF	1350.9K hrs min. Telcordia SR-332(Bellcore) ; 110.5K hrs min. MIL-HDBK-217F (25℃)				
	DIMENSION	262*125*43.8mm (L*W*H)				
	PACKING	2.8Kg;4pcs/12.2Kg/0.55CUFT				

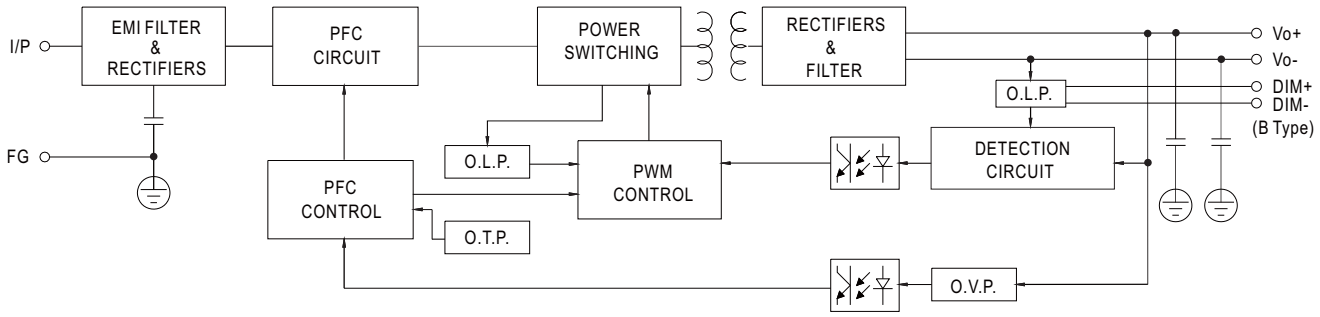
NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25℃ of ambient temperature.
2. Please refer to "DRIVING METHODS OF LED MODULE".
3. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.
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. 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. (as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf)
6. 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.
7. This series meets the typical life expectancy of >62,000 hours of operation when Tcase, particularly (tc) point (or TMP, per DLC), is about 75℃ or less.
8. Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.com
9. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).
10. 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
11. For A/AB type need to consider build in using to comply with Type HL application.

※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

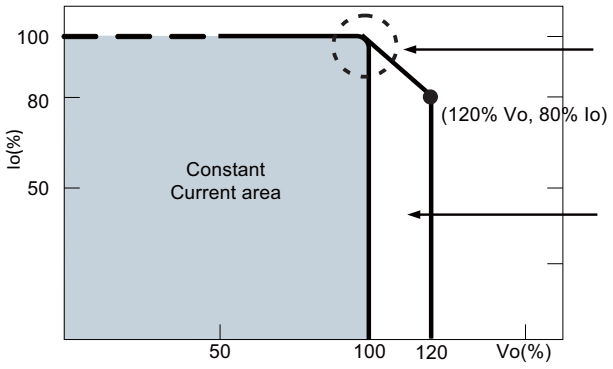
■ BLOCK DIAGRAM

PFC fosc : 45KHz
PWM fosc : 55KHz



■ DRIVING METHODS OF LED MODULE

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

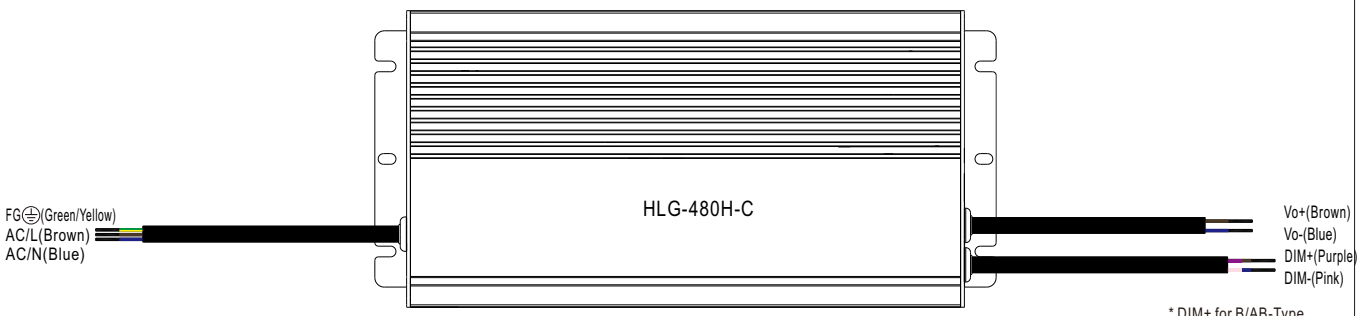


Typical LED driver I-V curve

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.

MEAN WELL Environment Adaptive Function allows the driver to detect and automatically adjust the output up to 120% Vo with 80% Io and turns into the desired Constant Current area after the luminaire reaches steady state operation.
Should there be any questions, please contact MEAN WELL.

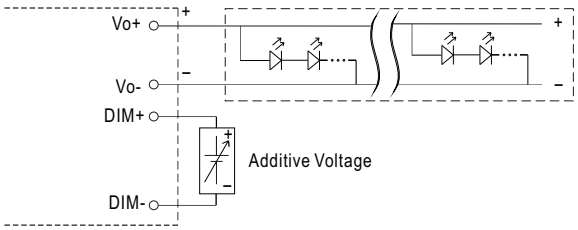
■ DIMMING OPERATION



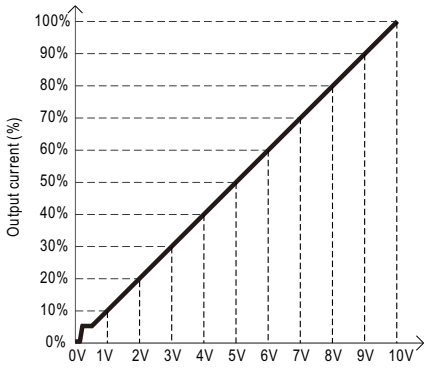
※ 3 in 1 dimming function (for B/AB-Type)

- 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: 100μA (typ.)

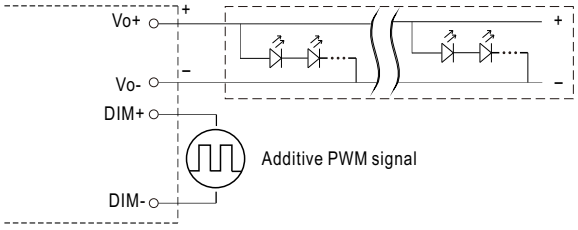
◎ Applying additive 0 ~ 10VDC



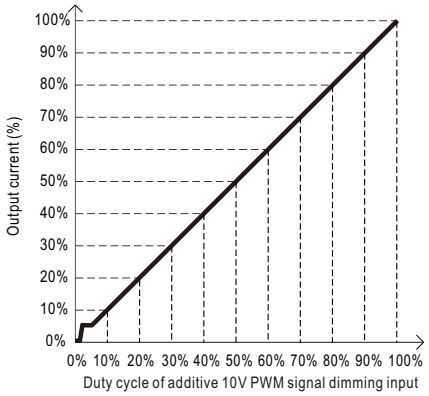
"DO NOT connect "DIM- to Vo-"



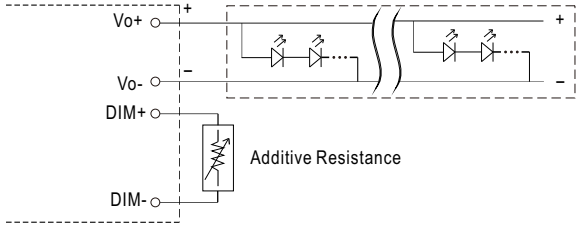
◎ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):



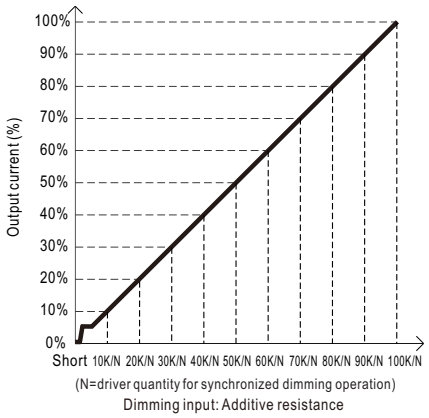
"DO NOT connect "DIM- to Vo-"



◎ Applying additive resistance:



"DO NOT connect "DIM- to Vo-"

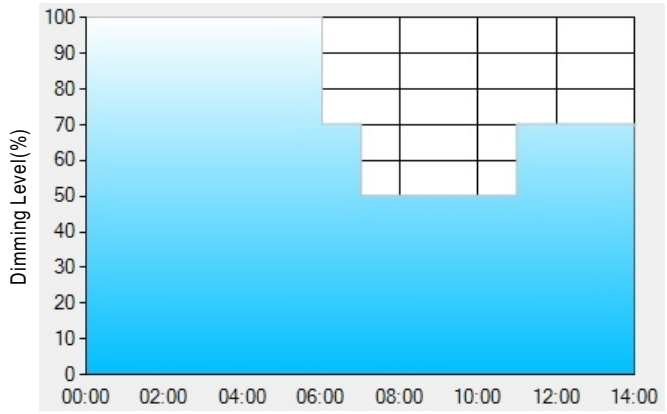


Note : 1. Min. dimming level is about 6% and the output current is not defined when 0%< Iout<6%.
2. The output current could drop down to 0% when dimming input is about 0kΩ or 0Vdc, or 10V PWM signal with 0% duty cycle.

※ **Smart timer dimming function (for Dxx-Type by User definition)**

MEAN WELL Smart timer dimming primarily provides the adaptive proportion dimming profile for the output constant current level to perform up to 14 consecutive hours. 3 dimming profiles hereunder are defined accounting for the most frequently seen applications. If other options may be needed, please contact MEAN WELL for details.

Ex : ◎ D01-Type: the profile recommended for residential lighting



Set up for D01-Type in Smart timer dimming software program:

	T1	T2	T3	T4
TIME**	06:00	07:00	11:00	---
LEVEL**	100%	70%	50%	70%

**: TIME matches Operating Time in the diagram whereas LEVEL matches Dimming Level.

Example: If a residential lighting application adopts D01-Type, when turning on the power supply at 6:00pm, for instance:

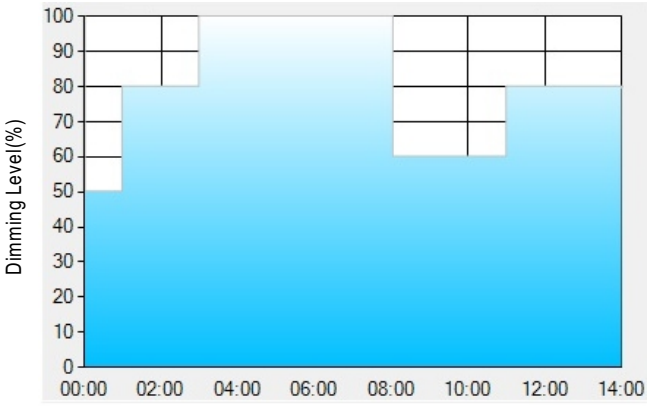
[1] The power supply will switch to the constant current level at 100% starting from 6:00pm.

[2] The power supply will switch to the constant current level at 70% in turn, starting from 0:00am, which is 06:00 after the power supply turns on.

[3] The power supply will switch to the constant current level at 50% in turn, starting from 1:00am, which is 07:00 after the power supply turns on.

[4] The power supply will switch to the constant current level at 70% in turn, starting from 5:00am, which is 11:00 after the power supply turns on. The constant current level remains till 8:00am, which is 14:00 after the power supply turns on.

Ex: ◎ D02-Type: the profile recommended for street lighting



Set up for D02-Type in Smart timer dimming software program:

	T1	T2	T3	T4	T5
TIME**	01:00	03:00	8:00	11:00	---
LEVEL**	50%	80%	100%	60%	80%

**: TIME matches Operating Time in the diagram whereas LEVEL matches Dimming Level.

Example: If a street lighting application adopts D02-Type, when turning on the power supply at 5:00pm, for instance:

[1] The power supply will switch to the constant current level at 50% starting from 5:00pm.

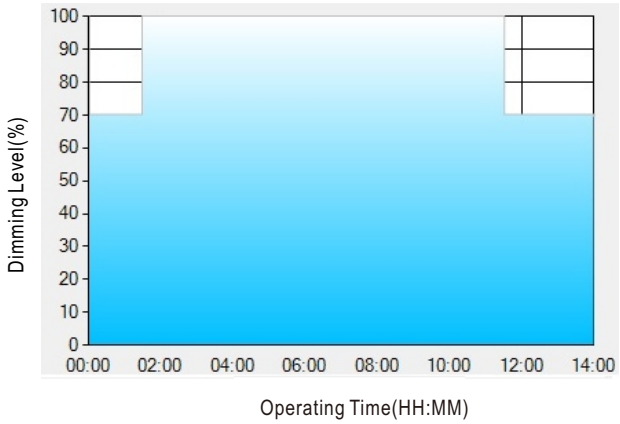
[2] The power supply will switch to the constant current level at 80% in turn, starting from 6:00pm, which is 01:00 after the power supply turns on.

[3] The power supply will switch to the constant current level at 100% in turn, starting from 8:00pm, which is 03:00 after the power supply turns on.

[4] The power supply will switch to the constant current level at 60% in turn, starting from 1:00am, which is 08:00 after the power supply turns on.

[5] The power supply will switch to the constant current level at 80% in turn, starting from 4:00am, which is 11:00 after the power supply turns on. The constant current level remains till 6:30am, which is 14:00 after the power supply turns on.

Ex: ◎ D03-Type: the profile recommended for tunnel lighting

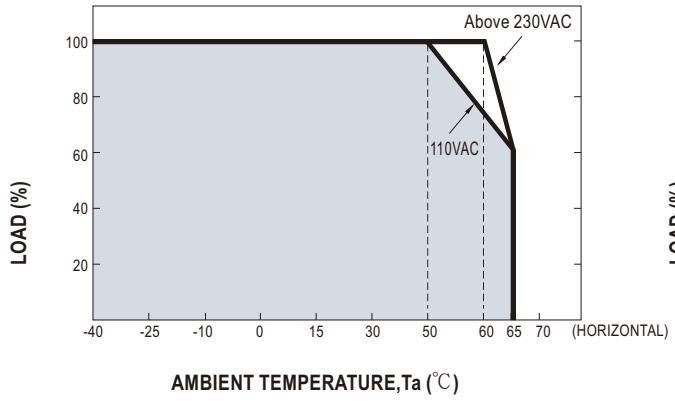


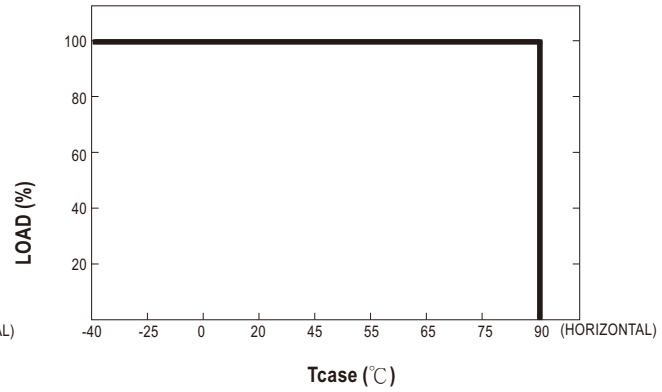
Set up for D03-Type in Smart timer dimming software program:

	T1	T2	T3
TIME**	01:30	11:00	---
LEVEL**	70%	100%	70%

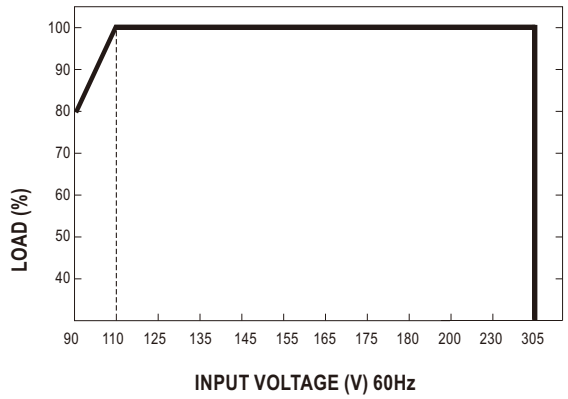
**: TIME matches Operating Time in the diagram whereas LEVEL matches Dimming Level.
Example: If a tunnel lighting application adopts D03-Type, when turning on the power supply at 4:30pm, for instance:
[1] The power supply will switch to the constant current level at 70% starting from 4:30pm.
[2] The power supply will switch to the constant current level at 100% in turn, starting from 6:00pm, which is 01:30 after the power supply turns on.
[3] The power supply will switch to the constant current level at 70% in turn, starting from 5:00am, which is 11:00 after the power supply turns on.
The constant current level remains till 6:30am, which is 14:00 after the power supply turns on.

■ OUTPUT LOAD vs TEMPERATURE(Note.8)



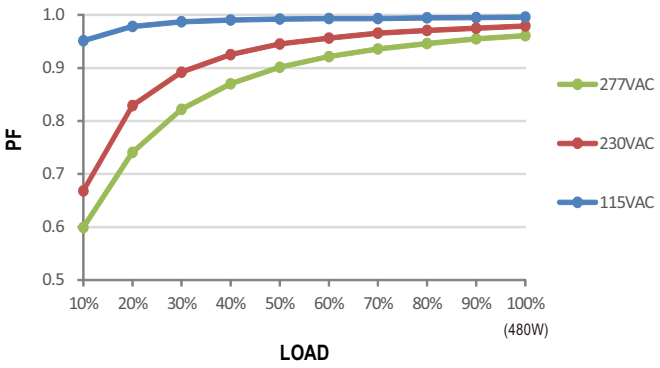


■ STATIC CHARACTERISTICS



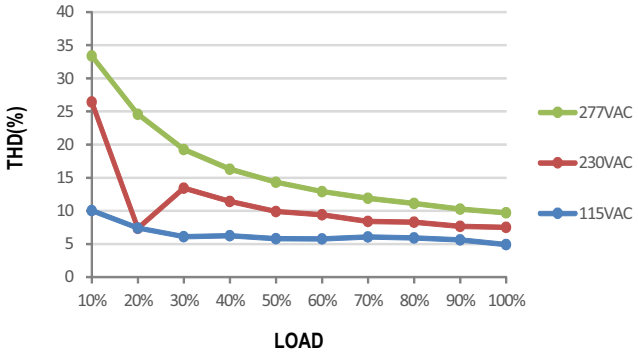
■ POWER FACTOR(PF) CHARACTERISTIC

※Tcase at 75℃



■ TOTAL HARMONIC DISTORTION (THD)

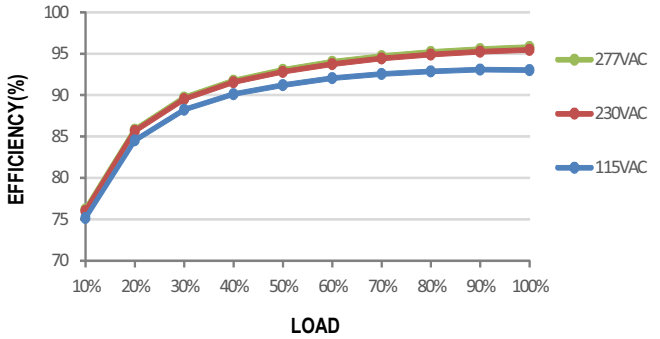
※ 1400mA Model, Tcase at 75℃



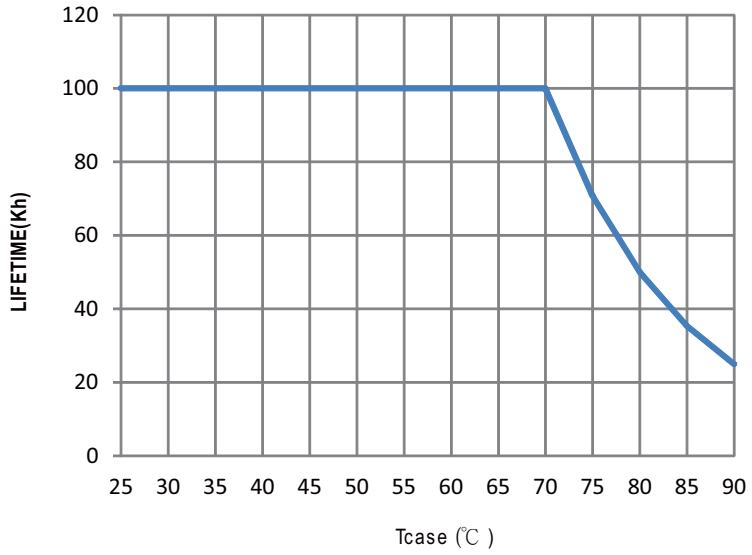
■ EFFICIENCY vs LOAD

HLG-480H-C series possess superior working efficiency that up to 95% can be reached in field applications.

※ 1400mA Model, Tcase at 75℃



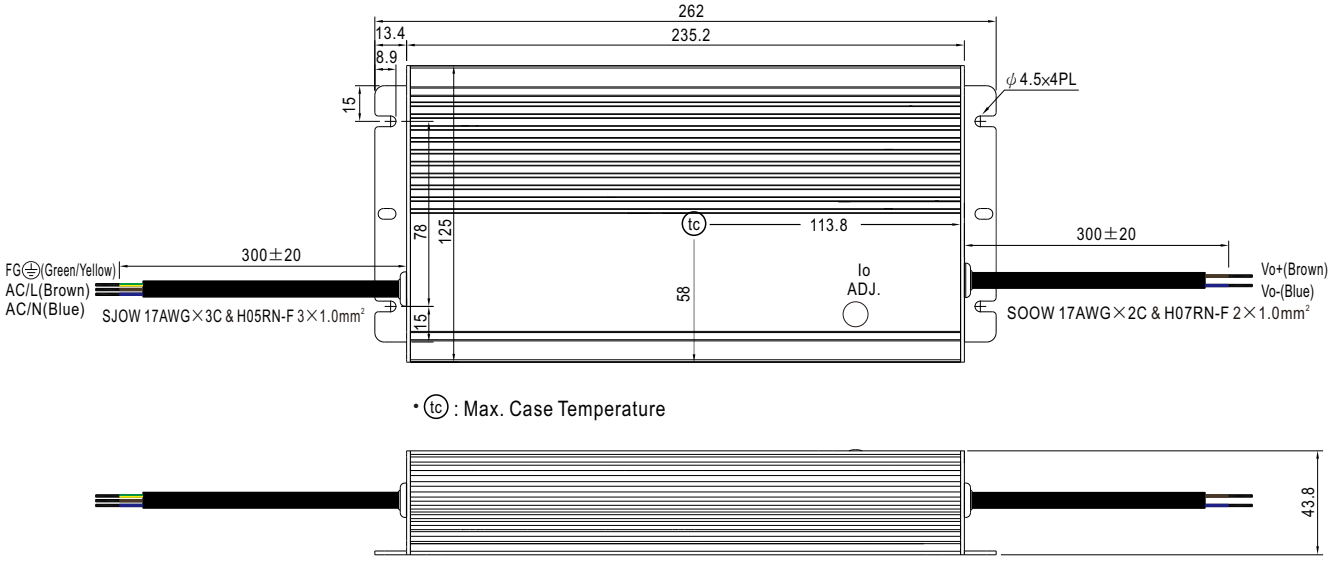
■ LIFE TIME


120
100
80
60
40
20
0
LIFETIME(Kh)
25 30 35 40 45 50 55 60 65 70 75 80 85 90
Tcase (℃)

■ MECHANICAL SPECIFICATION

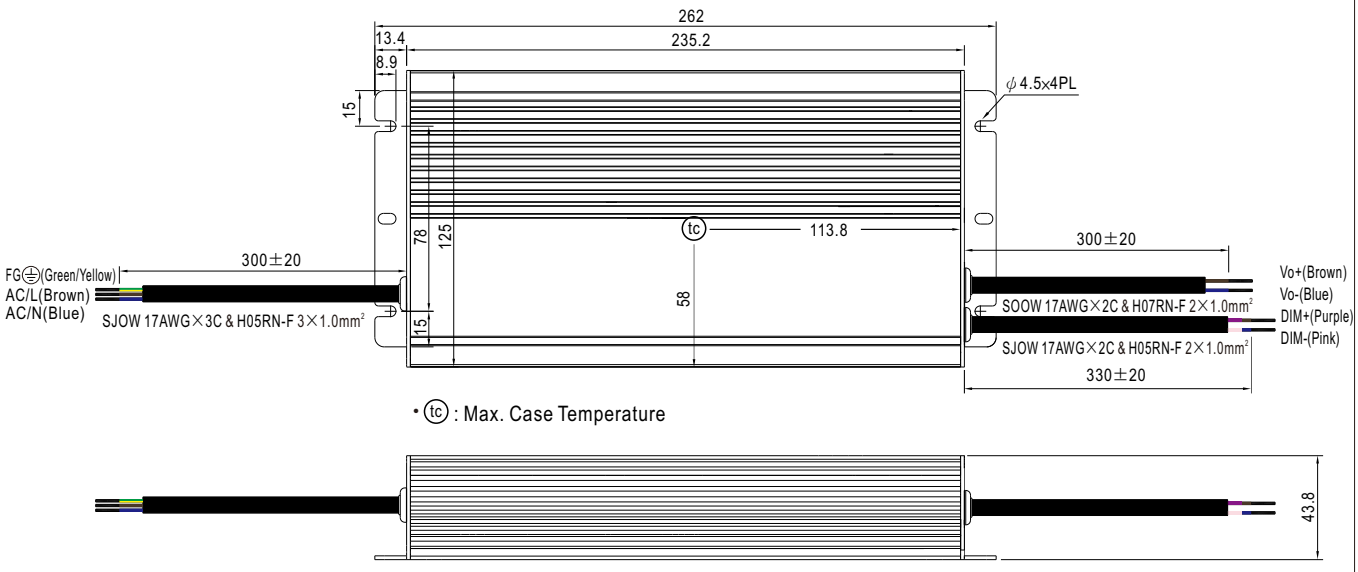
Case No. 251 Unit:mm Tolerance:±1

※A-Type



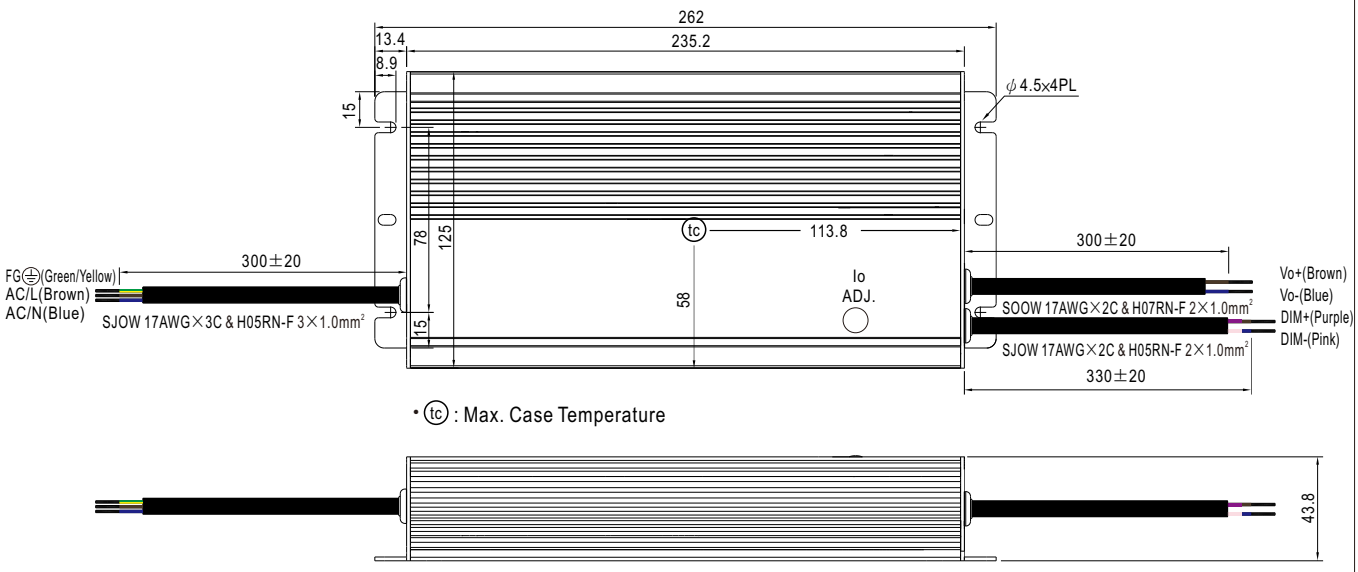
• tc : Max. Case Temperature

※B/D2-Type



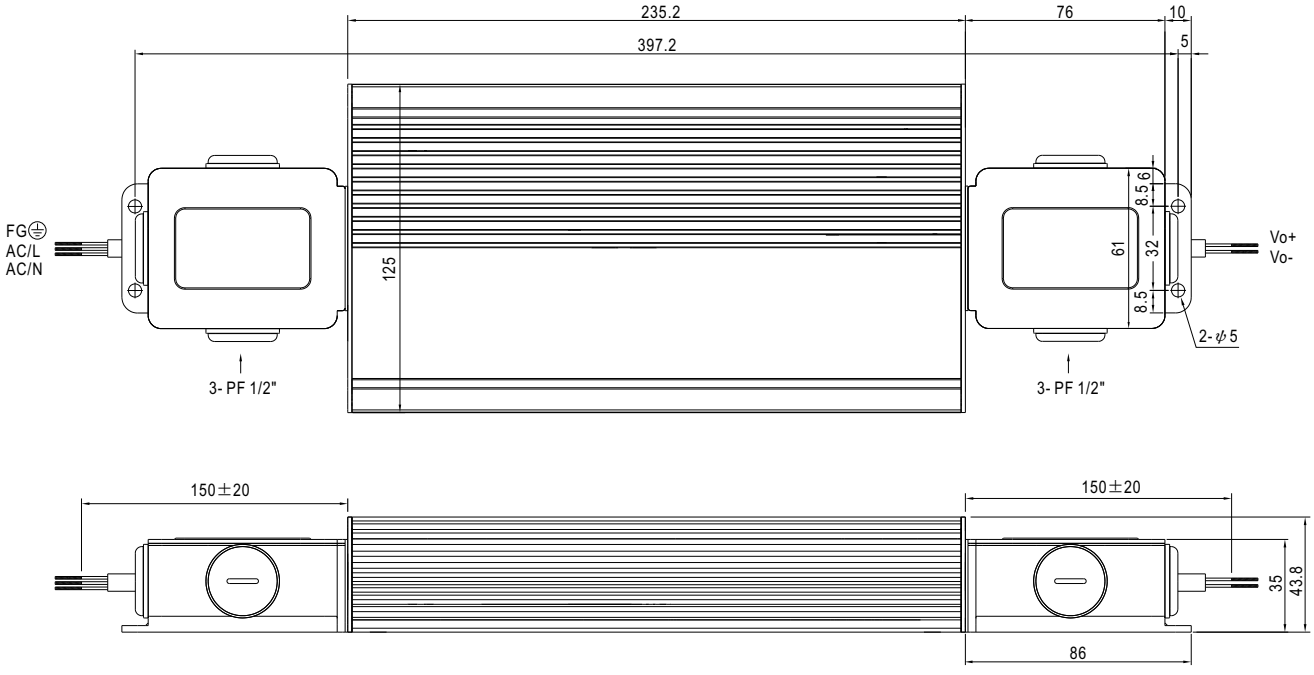
• tc : Max. Case Temperature

※AB-Type



• tc : Max. Case Temperature

※ Junction Box Option



◎ Junction box option is available for all types. Please contact MEAW WELL for details.

■ INSTALLATION MANUAL

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