



MWH-V24-P

240W Single Output IP67 Rated LED Drivers



Key Features:

- Constant Voltage & Constant Current mode output
- Metal housing with Class I design
- IP65/IP67 Design for indoor or outdoor installations
- Function options: output adjustable via potentiometre; 3 in 1 dimming
- Typical lifetime >62000 hours
- 7 years warranty

MWH-V24-P SPECIFICATION

Voltage	90~305VAC 127 ~ 431VDC (Please refer to 'Static Characteristic')								
Frequency	47~63 Hz								
Power Factor	PF>0.98/115VAC, PF>0.95/230VAC at full load (please refer to "Power Factor Characteristic" curve)								
Total Harmonic Distortion	THD< 20% (@ load>50% / 115VAC,230VAC; @ load>75% / 277VAC)								
AC Current	4A/115VAC 2A/230VAC 1.2A/277VAC								
Inrush Current (Typ.)	Cold start 75A (twidth=570µs measured at 50% Ipeak) at 230VAC; Per NEMA 410								
Max. No. of PSUs on 16A Circuit Breaker	2 units (circuit breaker of type B) / 4 units (circuit breaker of type C) at 230 VAC								
Leakage Current	<0.75mA/277VAC								
Part Code	MWH-V24C-P	MWH-V12D-P	MWH-V24F-P	MWH-V24G-P	MWH-V24J-P	MWH-V24K-P	MWH-V24L-P	MWH-V24M-P	MWH-V24N-P
DC Voltage	12V	15V	20V	24V	30V	36V	42V	48V	54V
Constant Current	6~ 2V	7.5~ 5V	10~20V	12~24V	15~30V	18~36V	21~42V	24~48V	27~54V
Rated Current	16A	15A	12A	10A	8A	6.7A	5.72A	5A	4.45A
Rated Power	192W	225W	240W	240W	240W	241.2W	240.24W	240W	240.3W
R&N	150mVp-p Adjustable for A/AB/C-Type only (via built-in potentiometer)	150mVp-p Adjustable for A/AB/C-Type only (via built-in potentiometer)	150mVp-p Adjustable for A/AB/C-Type only (via built-in potentiometer)	150mVp-p Adjustable for A/AB/C-Type only (via built-in potentiometer)	200mVp-p	250mVp-p	250mVp-p	250mVp-p	350mVp-p
Voltage Adjustment Range	11.2~12.8V Adjustable for A/AB/C-Type only (via built-in potentiometer)	14~16V Adjustable for A/AB/C-Type only (via built-in potentiometer)	18.6~21.4V Adjustable for A/AB/C-Type only (via built-in potentiometer)	22.4~25.6V Adjustable for A/AB/C-Type only (via built-in potentiometer)	28~32V	33.5~38.5V	39~45V	44.8~51.2V	50~57V
Current Adjustment Range	8~16A	7.5~15A	6~12A	5~10A	4~8A	3.3~6.7A	2.86~5.72A	2.5~5A	2.23~4.45A
Efficiency	90%	90%	91.5%	92.5%	92.5%	92.5%	92.5%	93%	93.5%
Voltage Tolerance	±2.5%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
Line Regulation	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
Load Regulation	±2.0%	±1.5%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
Setup Rise Time	1000ms, 80ms/115VAC 500ms, 80ms/230VAC								
Hold Up Time	15ms / 115VAC, 230VAC								
Over Current	95~108% Constant current limiting, recovers automatically after fault condition is removed								
Short Circuit	Hiccup mode, recovers automatically after fault condition is removed								
Over Voltage	13.5~18V	17.5~21.5V	23.5~27.5V	27~34V	33~39V	43~49V	48~54V	55~63V	60~67V
	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								
Working Temperature	-40~+90 °C (Please refer to 'Output Load vs Temperature' section)								
Working Humidity	20~ 95% RH non-condensing								
Storage Temperature	-40~+80 °C, 10~95%RH								
Temp Coefficient	±0.03%/°C (0~50°C)								
Vibration	10 ~ 500Hz, 5G 12 min./1 cycle, period for 72 min. each along X, Y, Z axes								
Safety Standards	UL1012, CAN/CSA-C22.2 No. 107.1-01, UL8750(type "HL"), CSA C22.2 No. 250.0-08; EN/AS/NZS 61347-1,EN/AS/NZS 61347-2-13, independent except for HLG-240H C type); UL60950-1 (except for AB type),UL8750,TUV EN60950-1;GB19510.1GB19510.14 (except for C,D-type); IP65 or IP67;J61347-1, J61347-2-13(except for AB,C,D-type),BIS IS15885(for 48V only),EAC TP TC 004, KC KN61347-1,KN61347-2-13(except for AB,C,D-type) approved								
Withstand Voltage	I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC								
Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC/25°C/70% RH								
EMC Emission	Compliance to EN55015, EN55032 (CISPR32) Class B, EN61000-3-2 Class C (@ load≥50%); EN61000-3-3, GB/T17743 and GB17625 (except for C, D-type).I, EAC TP TC 020;KC KN15(except for AB,C,D-type), J55015(except for AB, C, D-type)								
EMC Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, light industry level (surge immunity Line-Earth 4KV, Line-Line 2KV) EAC TP TC 020; KC KN61547(except for AB,C,D-type)								
M.T.B.F.	207.9Khrs min. MIL-HDBK-217F (25°C)								
Packing	1.3Kg;12pcs/16.6Kg/0.84CUFT								
Dimensions	244.2 x 68 x 38.8 mm								



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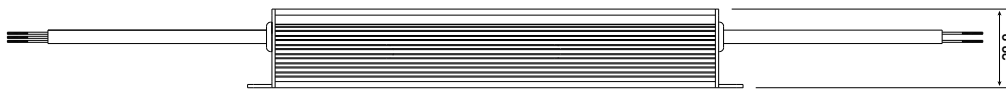
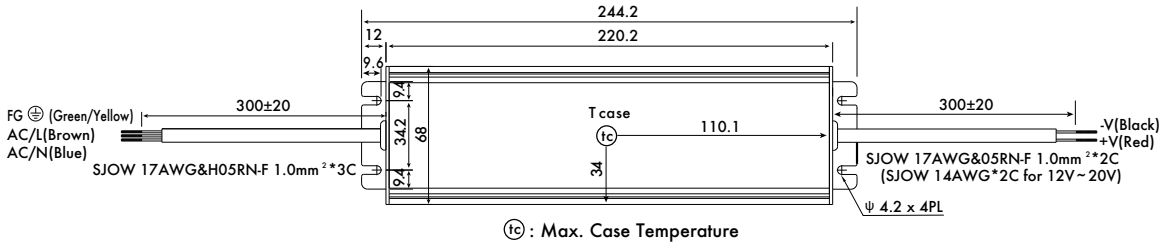
240W Single Output IP67 Rated LED Drivers

Mechanical Specification

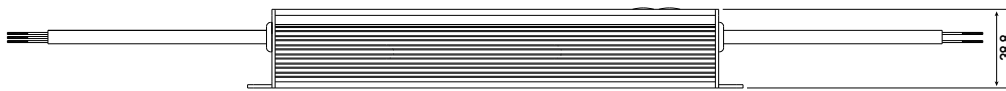
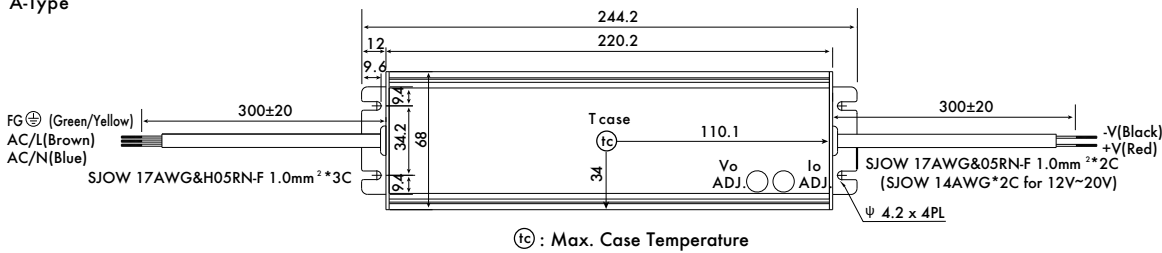
Blank/D-Type

Case No.994C

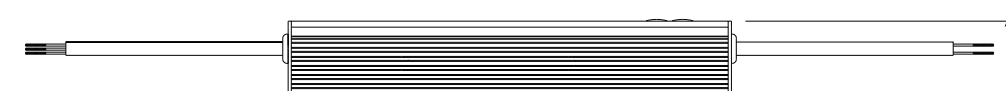
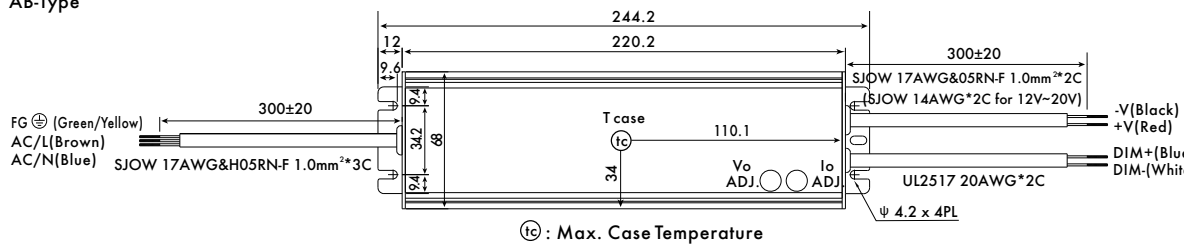
Unit:mm



A-Type



AB-Type

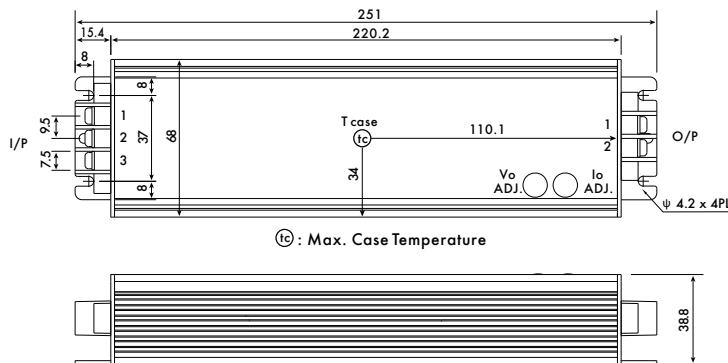




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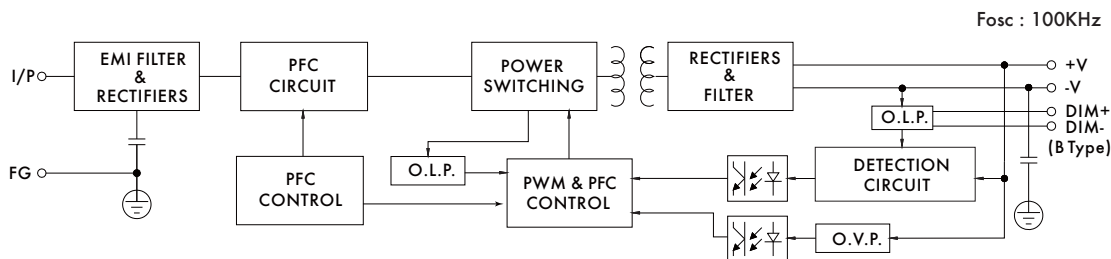
C-Type



⊗ : Max. Case Temperature

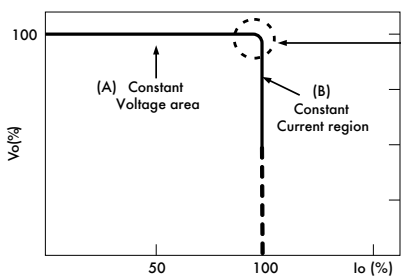
AC Input Terminal Pin No. Assignment		DC Output Terminal Pin No. Assignment	
Pin No.	Assignment	Pin No.	Assignment
1	FG ⊕	1	-V
2	AC/L	2	+V
3	AC/N		

Block Diagram



Driving Methods of LED Module

This series is able to work in either Constant Current mode (a direct drive way) or Constant Voltage mode (usually through additional DC/DC driver) to drive the LEDs.



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 Sunpower.

Typical output current normalized by rated current (%)

Notes

- All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25 °C of ambient temperature.
- Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
- Tolerance includes setup tolerance, line regulation and load regulation.
- Derating may be needed under low input voltages. Please check the static characteristics for more details.
- Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.
- The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.
- To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED power supply can only be used behind a switch without permanent connection to the mains.
- This series meets the typical life expectancy of >62,000 hours of operation when Tease, particularly point (or TMP, per DLC) is about 75 °C or less.
- The ambient temperature derating of 3.5 °C/1000m with fanless models and of 5 °C/1000m with fan models is needed for operating altitude greater than 2000m (6500ft).

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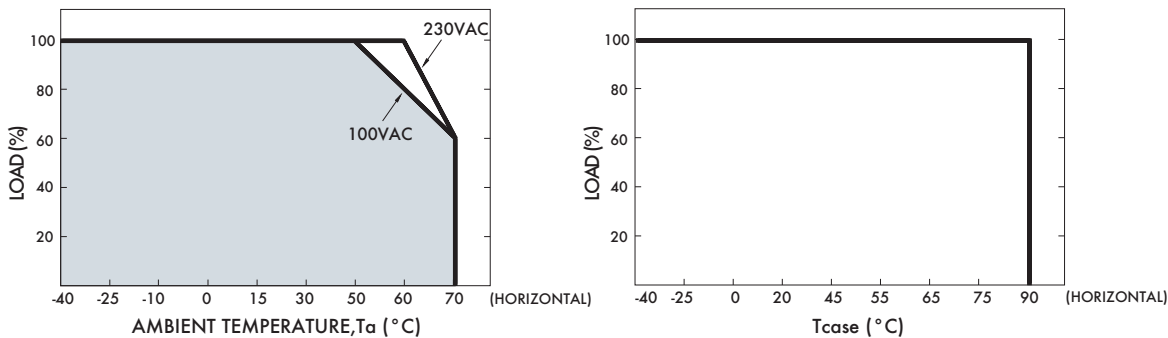




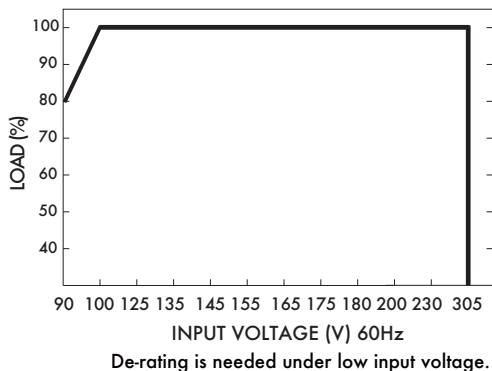
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Output Load vs Temperature

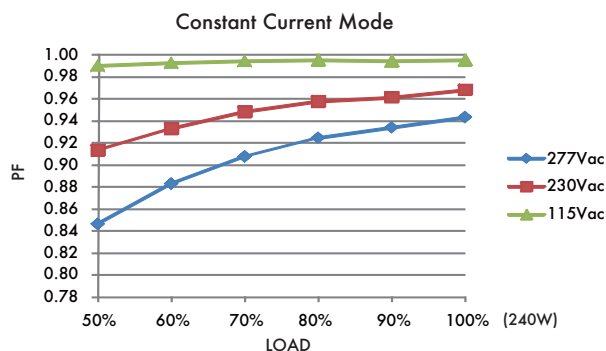


Static Characteristics



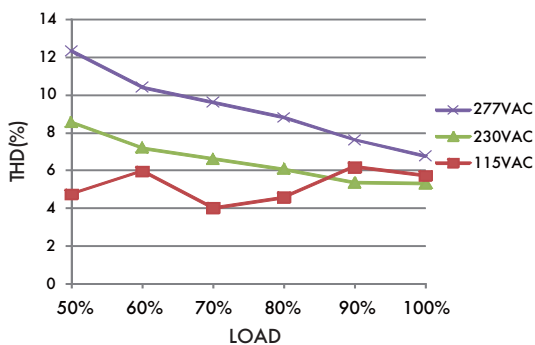
Power Factor (PF) Characteristic

Tcase at 80 °C



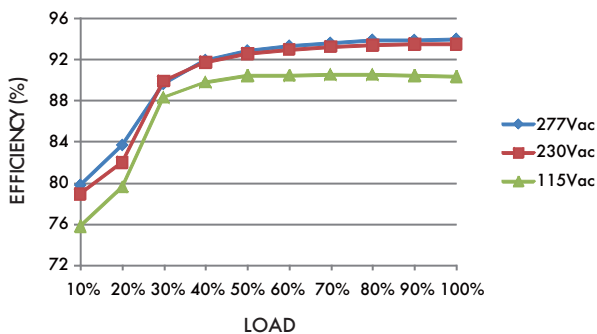
Total Harmonic Distortion

48V Model, Tcase at 80 °C



Efficiency vs Load

MWH-V24-BP series possess superior working efficiency that up to 93.5% can be reached in field applications. 48V Model, Tcase at 80 °C

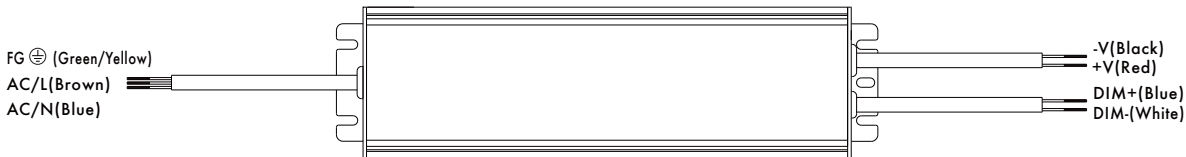




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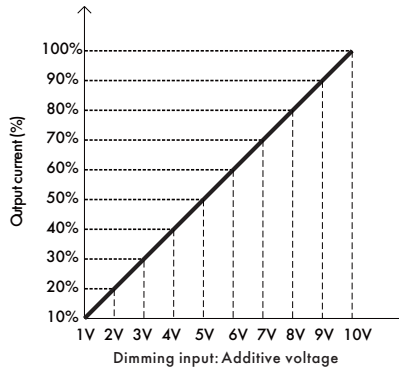
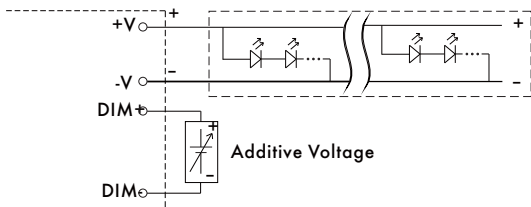
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Driving Methods of LED Module

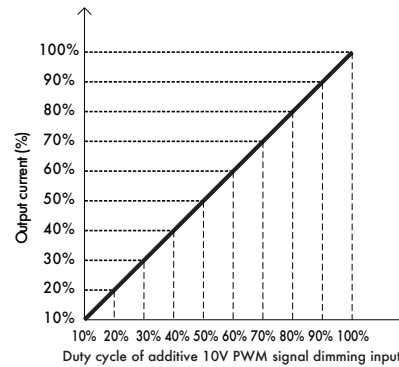
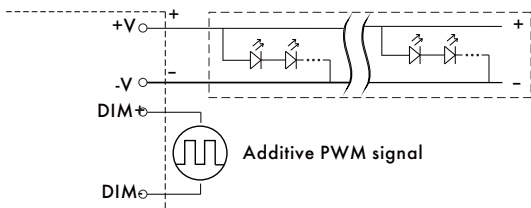


3 in 1 dimming function (for B/AB-Type)

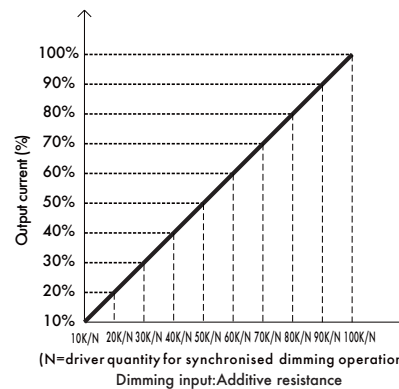
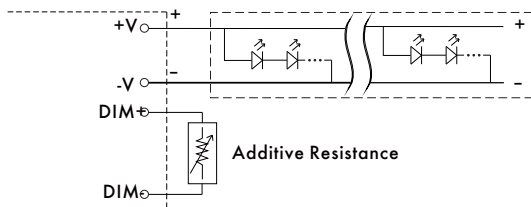
- Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-: 1~10VDC, or 10V PWM signal or resistance.
 - Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.
 - Dimming source current from power supply: 100µA(typ.)
- Applying additive 1~10VDC



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



Applying additive resistance:

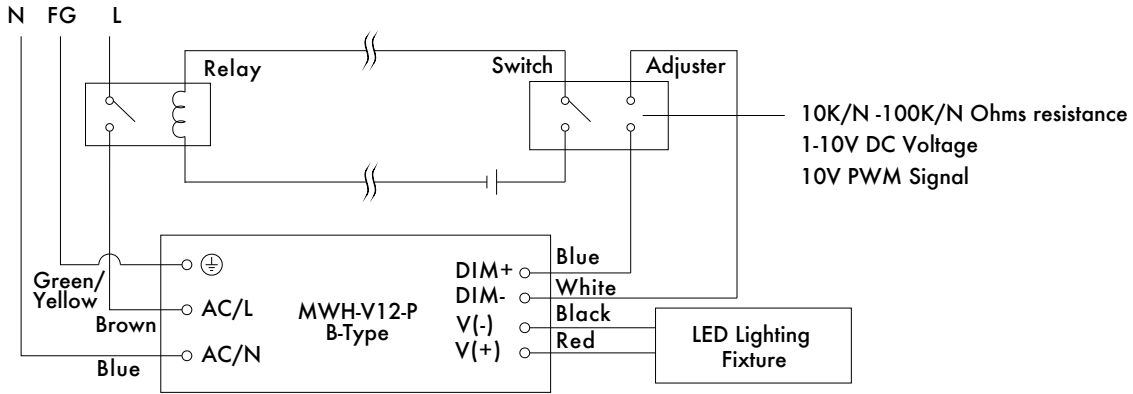




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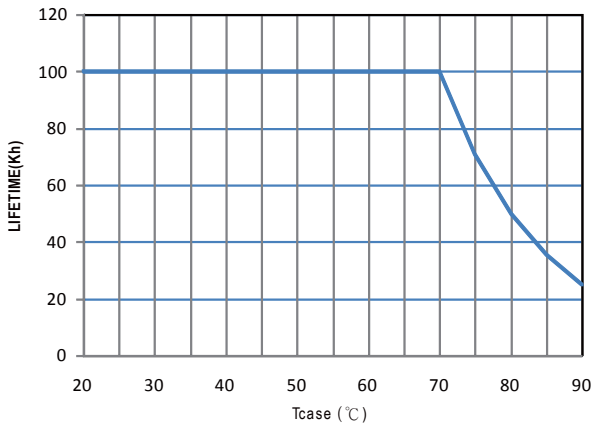
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Note: In the case of turning the lighting fixture down to 0% brightness, please refer to the configuration as follow, or please contact Sunpower for other options.



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

Life Time





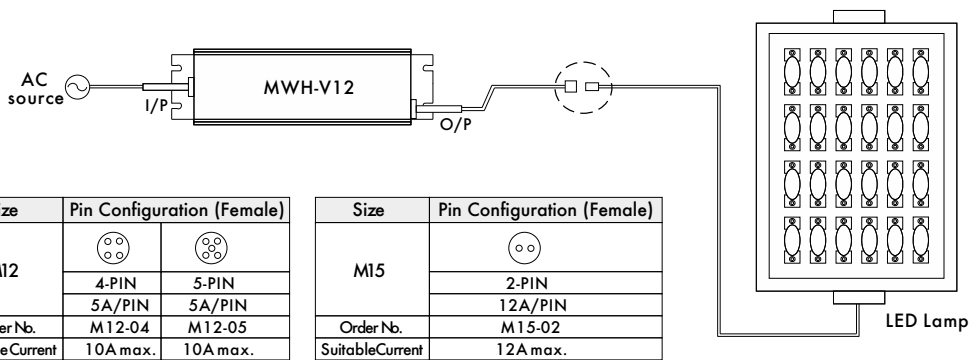
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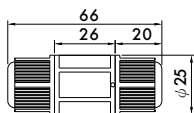
Waterproof Connection

Waterproof connector can be assembled on the output cable of MWH-V24-BP to operate in dry/wet/damp or outdoor environment.

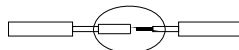
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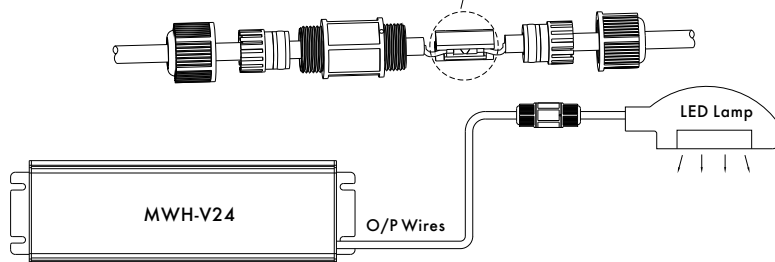
Cable Joiner



CJ04-1 suitable for 14AWG-16AWG
CJ04-2 suitable for 18AWG-22AWG

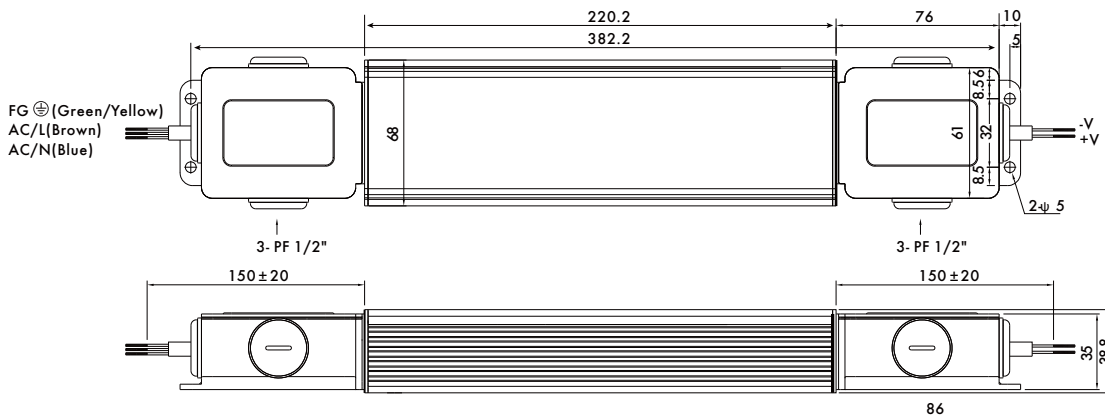


Up to four wires can be connected through this cable joiner by soldering or clamping by tools.



CJ04 cable joiner can be purchased independently for user's own assembly.

Junction Box Option



Junction box option is available for A/ Blank -Type. Please contact Sunpower for details.

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