Specification for Approval

Product Name: 160W High Bay Driver

Product Model: G6C-160M260A12 (II)

Rev. A.1

Address: Xi Li Song bai Road 1061, Nanshan District, Shenzhen City, Guangdong Province, P.R. China

Post Code: 518108

TEL: 0755-27657000

FAX: 0755-27657908

E-mail: info@mosopower.com

Web site: http://www.mosopower.com

Prepared By	Checked By	Approved By

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CUSTOMER AUTHORIZED SIGNATURE		
Tested By	**Checked By**	**Approved By**
(Company seal) Return one copy to MOSO with approved signature and company seal		

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ECN History

A.1	First edition	2024-08-22

Description

G6C-(II) series is specially designed for industrial lighting applications. It is constant current LED driver that operates from 108-380Vac with 0-10V and PWM dimming function. Internal potentiometer and dip switch can adjust power and color temperature. Such round integrated structure enables the driver to have a better heat dissipation, significantly improving reliability and extending product lifetime. To ensure trouble-free operations, protection is provided against input surge, output over voltage, short circuit, and over temperature.

c UL us LISTED E332689 FC Class P

Product Features

- Universal input voltage: 108~380Vac;
- Non-isolated constant current design, Efficiency up to 94%;
- Dip switch adjustable power and color temperature;
- 12V/0.2A auxiliary power supply;
- 3 in 1 dimmable: 0-10Vdc/PWM/Resistor;
- Surge protection: DM: 6KV,CM: 6KV;
- Protection: SCP/OVP/OTP;
- Ingress protection rating: IP65;
- Warranty: 5 years.

Application

Suitable for industrial lighting.

Models

Model	Input Voltage (Vac)	MAX Output Power (W)	Output Voltage (Vdc)	Output Current Adjustable Range (A)	Default Current (A)	Eff. (Typ.)	PF(Typ.)	THD(Typ.)
G6C-160M260A12 (II)	108~380	160	180~260	0.40~0.74	0.66	94%	0.97	10%

Notes:
[1].A12 means with 12V/0.2A auxiliary power supply;
[2].All specifications are measured at 25℃ ambient temperature, input voltage 230Vac, and the typical value tested at full load, if no specific note.

Optional Model Features

Model	Dim to off 0-10V/PWM /Resistor	1-10V/PWM /Resistor	Adjustable power (single DIP)	Adjustable power/ color temperature (double DIP)	Notes
G6C-160M260A12（II）	√	-	optional	optional	Standard: afterglow, Without afterglow (optional)

Input Specifications

Parameter	Min.	Typ.	Max.	Notes
Input Voltage Range	108Vac	-	380Vac	
Rated Input Voltage	120Vac	-	347Vac	Refer to Output Power vs. Input Voltage Curve
Input Frequency AC	47Hz	50/60Hz	63Hz	
Max Input Current	-	-	2A	120Vac＆100% load
Max Input Power	-	-	185W	120Vac＆100% load
Leakage	-	-	0.75MIU	UL 8750;347Vac/60Hz
Inrush Current	-	-	45A	120Vac, 100% load
Inrush Current			75A	220Vac, 100% load
Inrush Current			120A	347Vac, 100% load
Power Factor	0.95	0.97	-	240Vac, 50/60Hz, 100% load
	0.90	-	-	120-347Vac, 50/60Hz, 70%-100% load
THD	-	8%	10%	240Vac, 50/60Hz, 100% load
	-	-	20%	120-347Vac, 50/60Hz, 80%-100% load
MCB(B16)	-	14	-	220Vac; 100% load

Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Voltage Range	180Vdc	-	260Vdc	
Open Circuit Voltage	-	-	310Vdc	
Output Current Adjustable Range	0.40A	-	0.74A	
Full Power Current Range	0.61A	-	0.74A	216-260Vdc
Dip Switch Adjustable Power		0.66A		Max, 240Vdc, 100% load
		0.53A		Middle, 240Vdc, 80% load
		0.40A		Min, 240Vdc, 60% load
Current Accuracy	-8%	-	+8%	
Total Output Current Ripple (pk-pk)	-	10%	15%	20MHz BW full load＆LED load the LED load ripple is slightly different for different LEDs
Startup Overshoot Current	-	-	10%	120-347Vac full load condition, LED load
Auxiliary Source output voltage	10.8V	12V	13.8V	For A12 version
Auxiliary Source output current	-	-	200mA	
Line Regulation	-5%	-	+5%	25℃±10℃ ambient temperature, input voltage changes from 120Vac to 347Vac
Load Regulation	-5%	-	+5%	25℃±10℃ambient temperature, 230Vacinput, load changes from 80% to 100%
Turn-on Delay Time	-	-	1.0s	120-347Vac, 100% load

General Specification

Parameter	Min.	Typ.	Max.	Notes
Efficiency @120Vac	91%	92%	-	0.66A, 240Vdc; 25℃ ambient temperature, no load of auxiliary source
Efficiency @277Vac	92%	93%	-	0.66A, 240Vdc; 25℃ ambient temperature, no load of auxiliary source
Efficiency @347Vac	92%	94%	-	0.66A, 240Vdc; 25℃ ambient temperature, no load of auxiliary source
MTBF	-	200Khours	-	25℃±10 ambient temperature, 230Vac, 80% load (MIL-HDBK-217/SR-332)
Lifetime	-	50Khours	-	230Vac&100% load, Tc 80℃, refer to lifetime vs. case temperature curve
Operating Temperature Ta	-40℃	-	+50℃	
Operating Case Temperature for Safety Tc_s	-40℃	-	+90℃	
Operating Case Temperature for Warranty Tc_w	-40℃	-	+80℃	5 years warranty shell temperature Humidity: 10%-90% RH
Storage Temperature Ta	-40℃	-	+85℃	Humidity: 5%-95% RH
Altitude	-60m	-	4000m	
Over Temperature Protection Tc	90℃	95℃	100℃	Decreases output current, returning to normal after over temperature is removed
Short Circuit Protection	-	-	15W	Constant current mode. The output shall return to normal when the fault condition is removed.
Output Over Voltage Protection	-	-	5W	When the output voltage of the product exceeds the limit range, it will enter the protection state. When the fault is removed, the product will automatically return to normal.
Dimensions (Φ*H)mm	Φ127*H59			
Net Weight	570±50g/PCS			
Package (L*W*H)	490*370*169 mm; 10PCS/Ctn., GW: 7Kg			

Dimming

Parameter	Min.	Typ.	Max.	Notes
Absolute Maximum Voltage	-	10V	15V	On the Vdim (+) Pin
Source Current on Vdim (+)Pin	-	100uA	200uA	
Dimming Range	10% $I_{o\ max}$	-	100% I_{set}	I_{set}=0.40-0.74A
Suggest Dimming Input 0-10V	0V	-	10V	
Turn-on voltage	0.8V	-	1.1V	For A12 version
Turn-off voltage	0.6V	-	0.9V	
PWM in High Level	9.7V	-	10.3V	
PWM in Low Level	0V	-	0.3V	
PWM in Frequency Range	1KHz	-	2KHz	
PWM in Duty Cycle	1%	-	99%	
Turn-on duty cycle	8%	-	11%	For A12 version
Turn-off duty cycle	6%	-	9%	
Resistor Range	0	-	100KΩ	

Safety Specifications

Parameter	UL	Note
Dielectric Strength (Input-Ground)	1700Vac	60s, Current not exceeding 5mA input L/N short-circuit
Dielectric Strength (Input-Dimming)	1700Vac	60s, Current not exceeding 5mA input L/N short-circuit
Grounding Resistance	≤0.1Ω	UL:25℃±10℃ Ambient Temperature, pass 30A Current, 120s.
Insulation Resistance	≥10MΩ	Input-PE, 500Vdc/60s/25℃

Notes: The voltage resistance requirement of aluminum substrate is greater than 2.5KVac.

Safety Compliance

Safety Category	Safety normative standards	Certification	Notes
CCC	GB19510.1, GB19510.14		
CE	EN61347-1, EN61347-2-13, EN62493		
ENEC	EN61347-1, EN61347-2-13, EN62384		
CB	IEC61347-1, IEC61347-2-13		
BIS	IS 15885(PART 2/SEC 13)		
UL	UL 8750	√	
CUL	CSA C22.2 No.250.13	√	
KC	K61347-1, K61347-2-13		
PSE	J61347-1, J61347-2-13		
SAA	AS/NZS IEC 61347.2.13		
SAA	AS/NZS 61347.1		

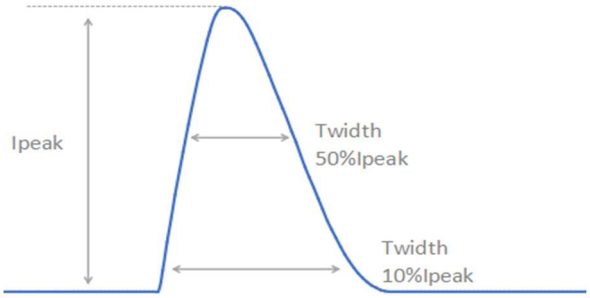
EMC Compliance

EMC Category	Standards	Approved	Notes
CCC	GB/T 17743, GB 17625.1		
CE	EN 55015		
CE	EN 61000-3-2, EN 61000-3-3		
CE	EN61000-4-2,3,4,5,6,11		
CE	EN 61547		
KC	K61547		
KC	K00015		
PSE	J55015		
FCC	FCC part 15	√	Class A
Surge Shock Immunity	ANSI/C82.77-5-2017		
	IEC/EN 61000-4-5		
Ringing Wave	IEC/EN 61000-4-12		
	ANSI/IEEE C62.41.2		

RoHS

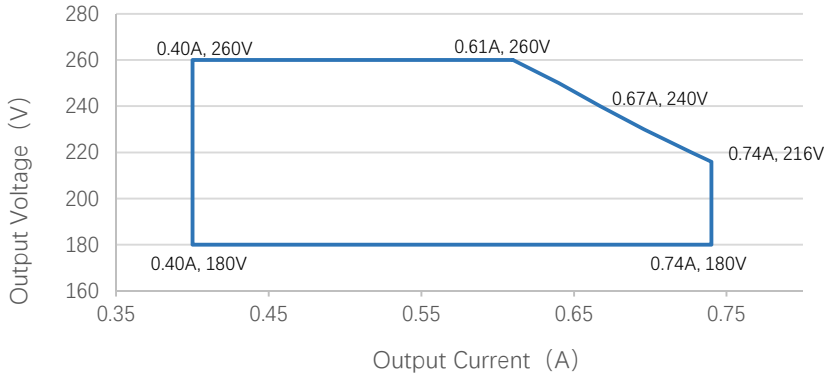
Our products comply with reference to RoHS Directive (EU) 2015/863 amending 2011/65/EU.

Inrush Current Waveform

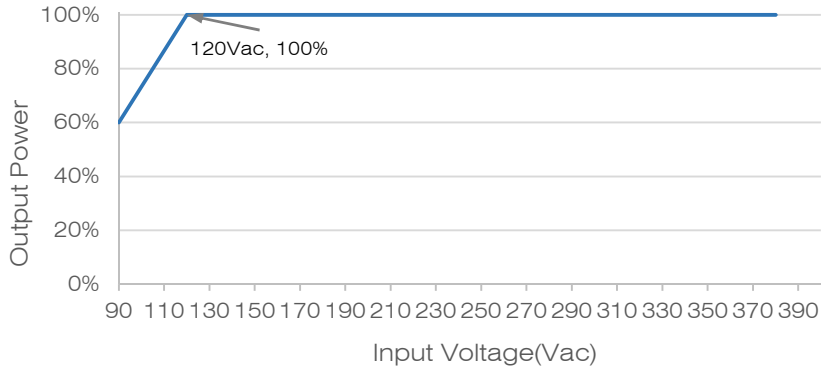


Vin	Ipeak	T(@10% of Ipeak)	T(@50% of Ipeak)
220Vac	70A	352μs	130μs

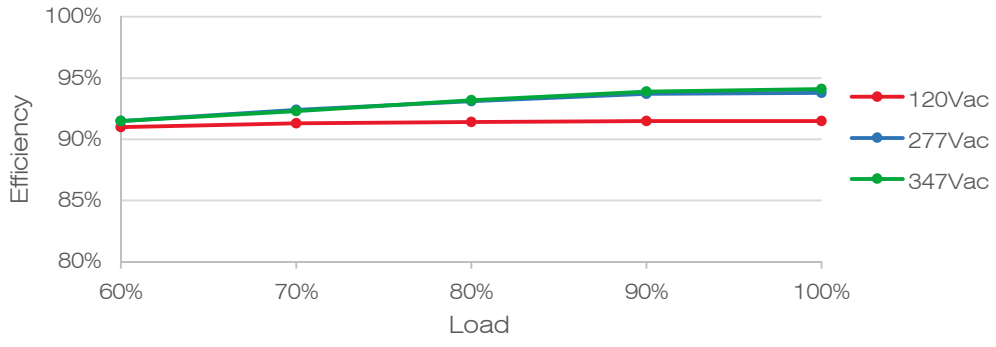
Output Voltage vs. Output Current



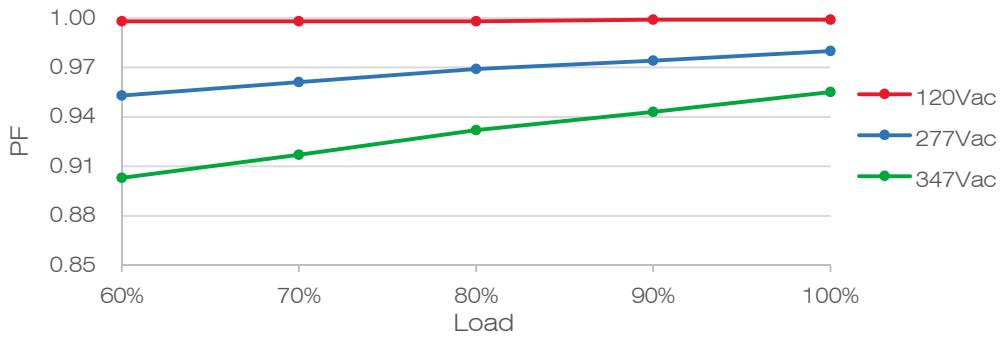
Output Power vs. Input Voltage



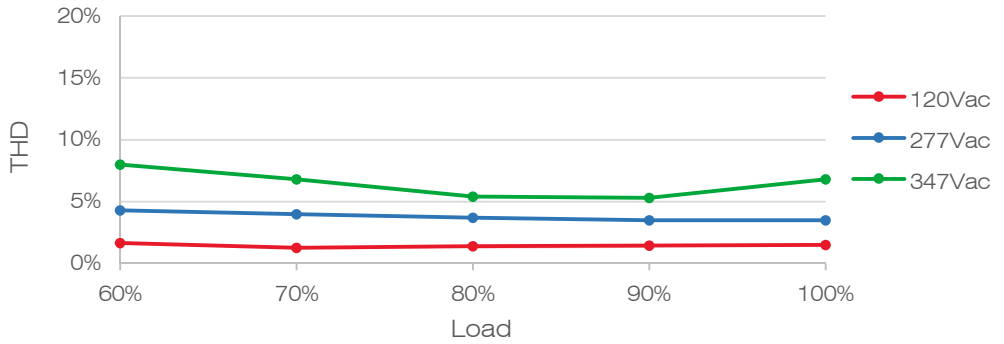
Efficiency vs. Load



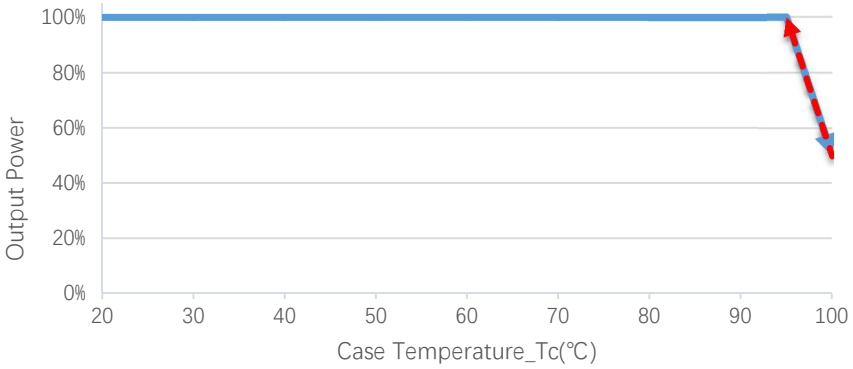
PF vs. Load



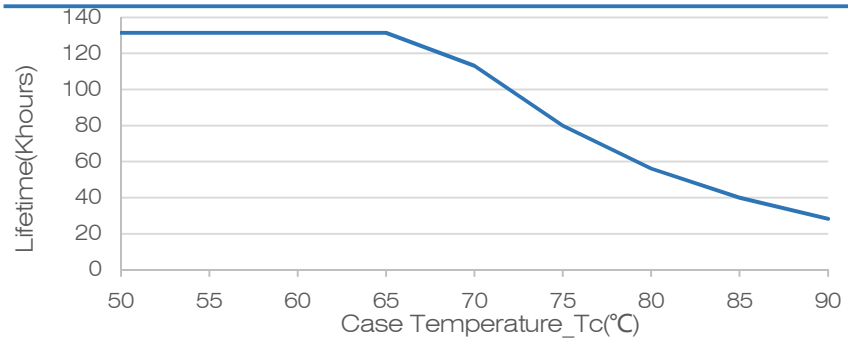
THD vs. Load



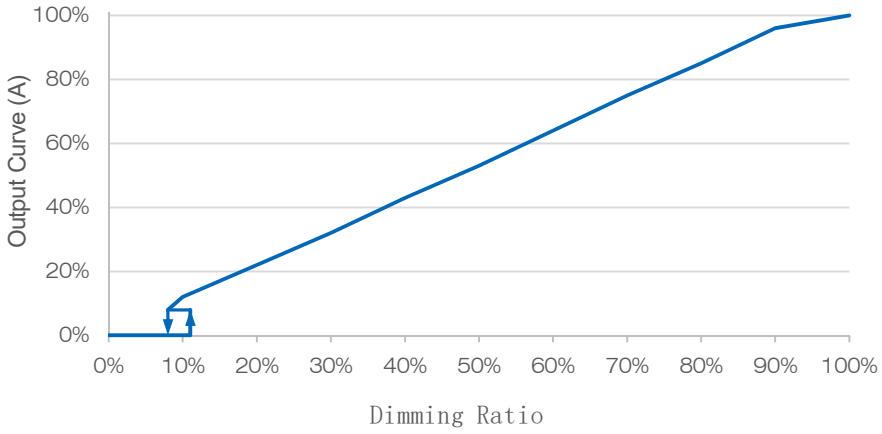
Output Power vs. Case Temperature



Lifetime vs. Case Temperature

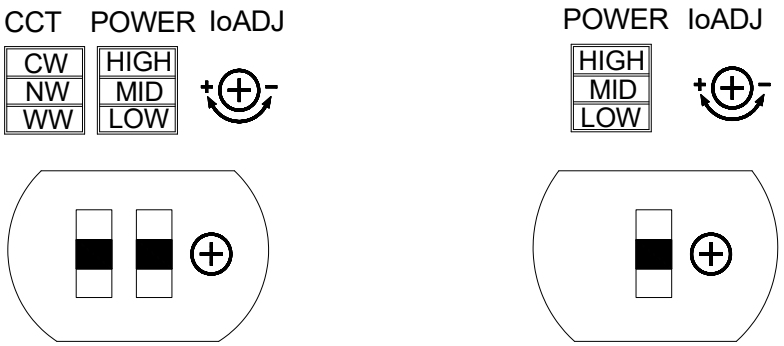


0-10V/PWM/ Resistor Dimming



Notes: A12 version default dim to off.

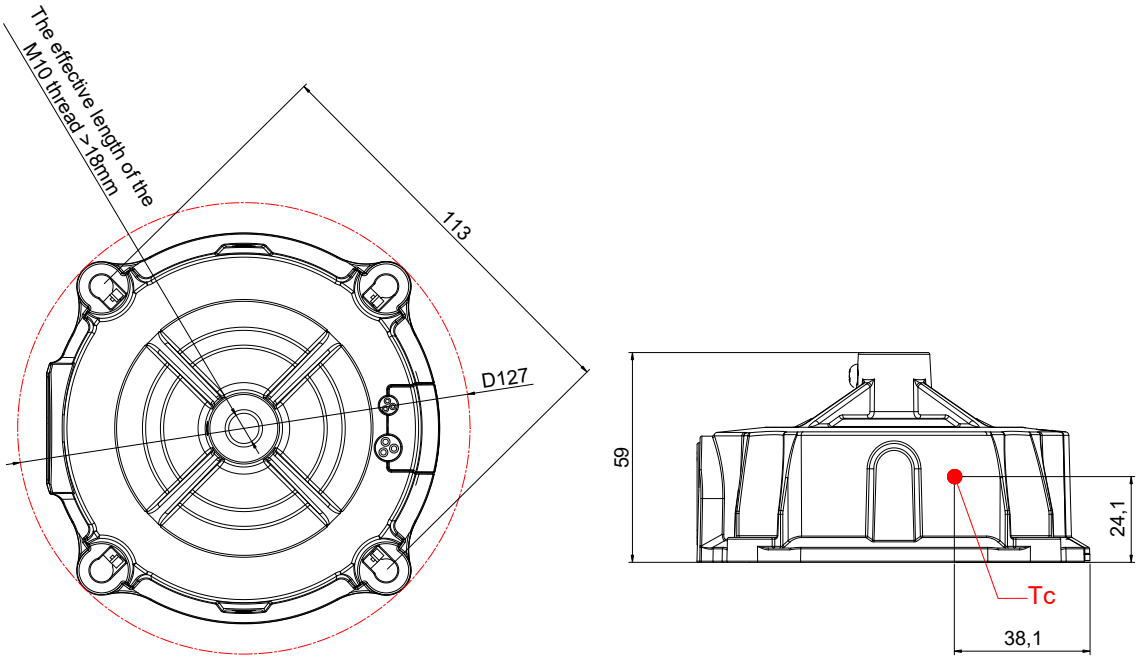
Dip Switch Diagram

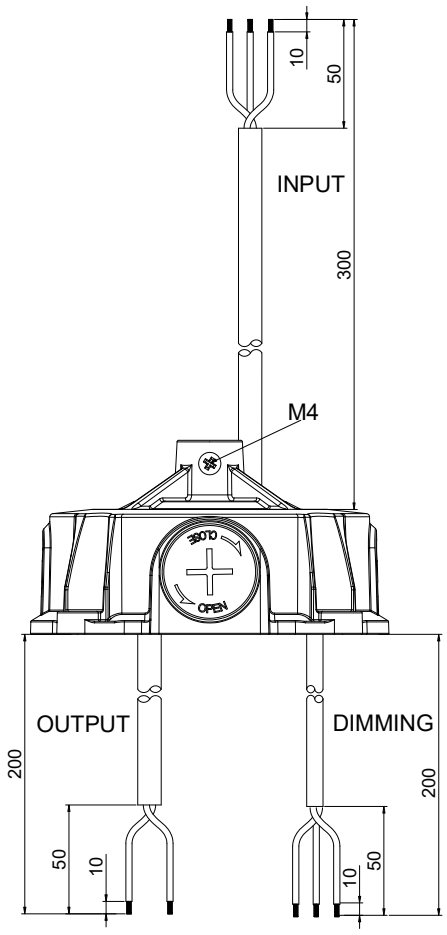


Function	Description		
Color Temperature	Cool colors(CW)	Mixed colors(NW)	Warm colors(WW)
Power	HIGH (100%) : 0.66A(160W)	MID (80%) : 0.53A(128W)	LOW (60%) : 0.40A(96W)

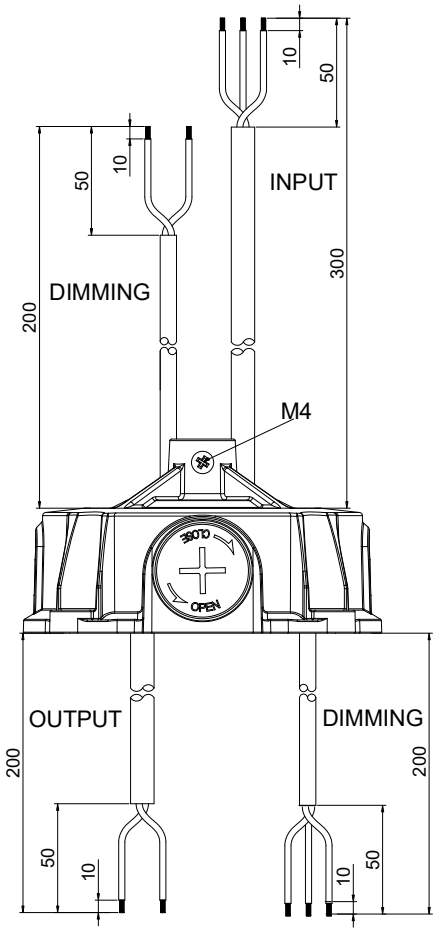
Notes: Using the dip switch when adjusting the color temperature or power, please operate it after the input is powered off.

Mechanical Outline





A12 version



A12 version

Specifications

Input	UL SJTW 18AWG*3C Outside Diameter: 9.3mm L=300±20mm, Strip 50±3mm Tinning 10±1mm; L: black, N: white, G: green	UL
Output	UL SJTW 18AWG*2C Outside Diameter: 7.2mm L=200±20mm, Strip 50±3mm, Tinning 10±1mm; LED+: red, LED-: black	UL
	UL SJTW 18AWG*3C Outside Diameter: 7.8mm L=200±20mm, Strip 50±3mm, Tinning 10±1mm; LED+: red, LED1-: black, LED2-: pink	UL(double DIP)
Dimming	UL 21996 22AWG*3C Outside Diameter: 5.0mm L=200±20mm, Strip 50±3mm, Tinning 10±1mm; DIM+: purple, DIM-: pink/12V-, black and white: 12V+	A12 version