Vision Intelligent
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V1.1.0.0

Constant Current LED Controllers Catalog

Product features

- Constant current control linear output brightness is stable
- Overvoltage/overload/overheating/short circuit and other hardware self-protection functions
- International universal full range communication input
- Carefully selected aerospace gold-plated connectors
- Provide diverse product choices (multi-CH/multi-wattage)
- Provides flash control dimming function

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Constant Current LED Controllers

Product features

- Constant current control linear output - automatically adjusts the voltage to ensure that the LED light source current is stable and does not flicker
- Self-protection function-solve hardware self-protection circuit measures such as overvoltage/ overload/overheating/short circuit
- International universal full range AC input - suitable for all brands of LED light sources (110-220V)
- Strictly selected aerospace gold-plated connectors - more stable to use and prevent light source from flickering due to pulling and oxidation
- Provide diverse product choices (multi-CH/multi-wattage)
- Provides flash control dimming function

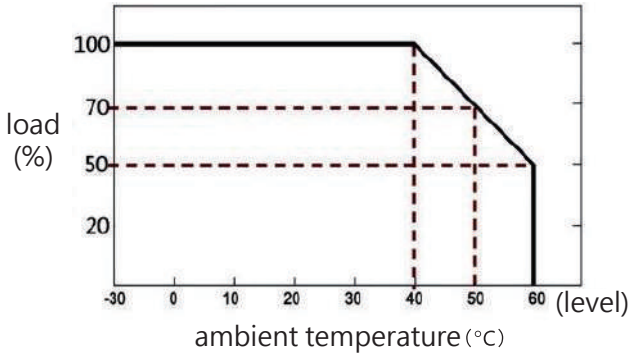
Product guarantee

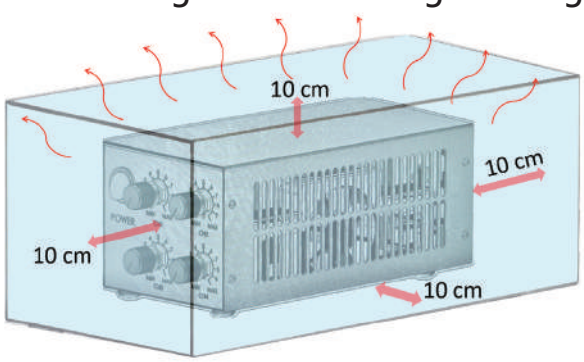
Automatically adjust the voltage to maintain a certain current supply to stably maintain LED brightness

protection circuit	overload	Rated output power 115 ~ 180%
		Protection mode：Isolation mode, which can automatically recover after the load abnormality is removed
	overvoltage	Protection mode：Turn off the output, and the normal output can be restored after the power is restarted.
Usage environment	working temperature	-30 ~ +60 °C （Please refer to the derating curve）
	Working humidity	20 ~ 90%RH No condensation
	Storage temperature and humidity	-40 ~ +85 °C，10 ~ 95%RH
	Vibration resistant	10 ~ 500Hz, 2G 10 minutes/cycle，X, Y, Z each 60 minutes
Safety regulations and electromagnetic compatibility	safety regulations	UL62368-1, TUV BS EN/EN62368-1, EAC TPTC 004 Certification passed
	Pressure resistant	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC
	Insulation resistance	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC/25°C/ 70% RH
	Electromagnetic compatibility emissions	conform to EN/EN55032（CISPR32）Class B, BS EN/EN61000-3-2,-3
	Electromagnetic compatibility immunity	conform to EN/EN61000-4-2,3,4,5,6,8,11,BS EN/EN55035,A Class heavy industry standard
other	MTBF	≥60,000 hours. MIL-HDBK-217F（25°C）

Derating curve

When installing the dimmer, please place it in an environment with good ventilation and heat dissipation. Please leave a distance of 10 cm from the front, rear, left, right and top (do not block the heat dissipation holes!). If the ambient temperature rises in a closed space, the maximum output of the dimmer will decrease according to the following derating curve.





Schematic diagram of heat dissipation space

Model description

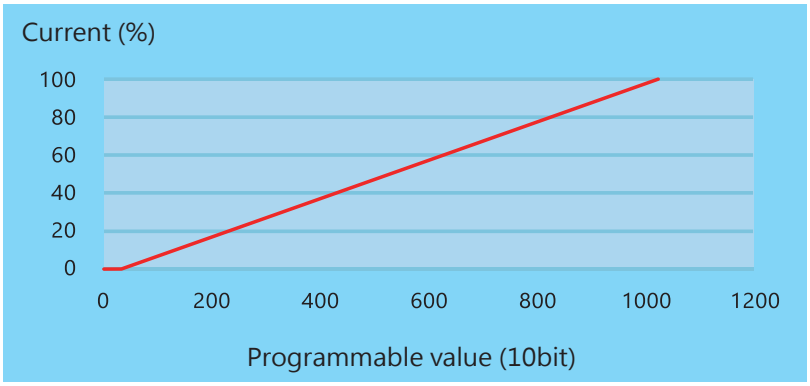
PC□□□C-□W M Flash (K)

- (K) — Customization
- Flash — **Flash control method** LDS - Line Driver Strobe / OCS - Open Collector Strobe
- M — Metal connector
- □W — **Total output wattage**
- □ — **Frequency**（1/2/4/6/8）
- □ — **Control method**（M = **Manual control** /R = RS232 **Program control**）
- PC□ — **Voltage value**（6V/24V）

Product specification sheet

Dimension	A			B		A			B	
Model	PC6 ☐ 1C	PC6 ☐ 2C	PC6 ☐ 4C	PC6 ☐ 6C	PC6 ☐ 8C	PC24 ☐ 1C	PC24 ☐ 2C	PC24 ☐ 4C	PC24 ☐ 6C	PC24 ☐ 8C
Channel	1	2	4	6	8	1	2	4	6	8
Input Voltage	AC100~240 Input									
Output Voltage	DC 4V Max					DC 21V Max				
Total Output Power	9W	18W	36W	54W	65W (Total 11A)	36W	65W	150W	216W	300W
Output Current	1.5A/CH									
Pin Numbers	3P									
Humidity	20% ~ 80% RH									
Temperature	0°C ~ 50°C									
Control	**Manual** VR/RS-232 **Program control**									
Strobe Control	LDS（Line Driver Strobe）/ OCS（Open Collector Strobe）									

Linearity diagram



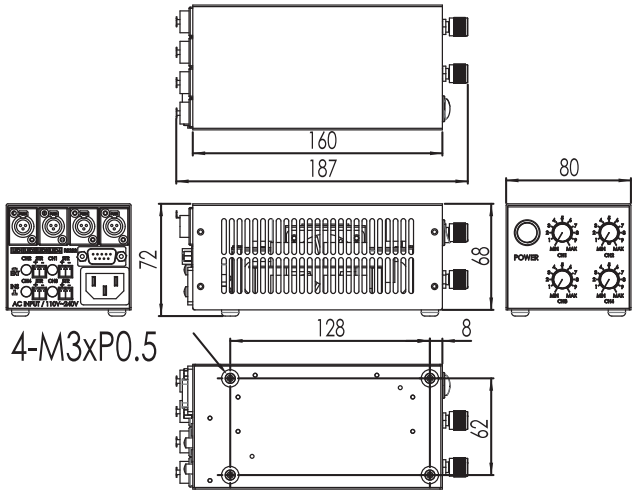
Note：The test product is PC24R4C-150WM

Dimmer mechanism description and dimensional drawing

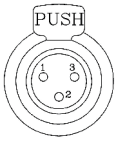
A Constant current manual (RS232) dimmer 1~4CH specifications

ahead

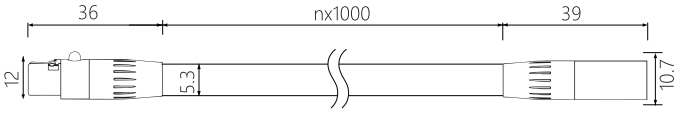
rear



Terminal pin description (dimmer side)



3 Pin metal tip extension cable provided (n = 3、5、10)

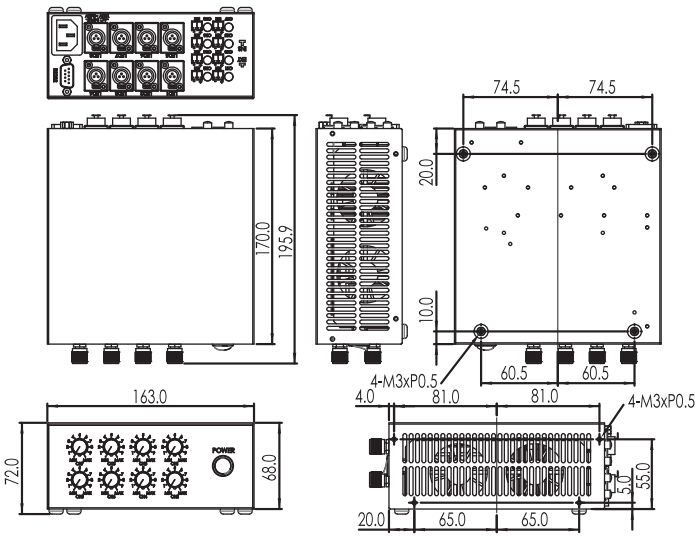


foot position	1	2	3
Pin definition	LED+	Current identification	LED-

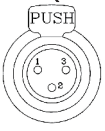
B Constant current manual (RS232) dimmer 6~8CH specifications

ahead

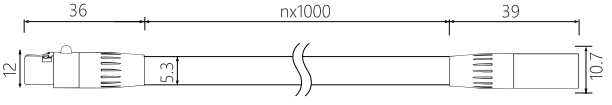
rear



Terminal pin description (dimmer side)



3 Pin metal tip extension cable provided (n = 3、5、10)



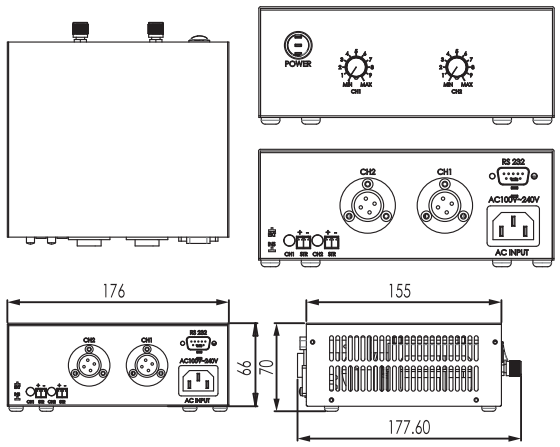
foot position	1	2	3
Pin definition	LED+	Current identification	LED-

High Power RS-232 Constant Current Dimmer Product Specification Sheet

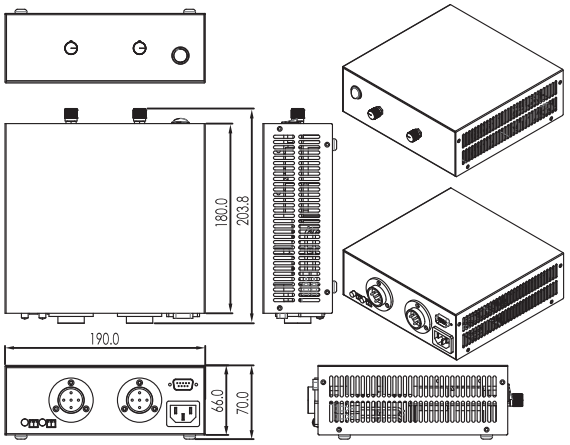
Dimension	A	A	B	B	C
Model	PC24 ☐ 1C-300W	PC24 ☐ 2C-300W	PC24 ☐ 1C-400W	PC24 ☐ 2C-400W	PC24 ☐ 1C-1200W
Channel	1	2	1	2	1~4
Input Voltage	AC100~240 Input				
Output Voltage	DC 21V Max				
Total Output Power	300W	300W	400W	400W	400W
Output Current	7A/CH	5A/CH	14A/CH	7A/CH	Total Max 38A
Pin Numbers	4P	4P	5P	5P	5P
Humidity	20%~80% RH				
Temperature	0°C~50°C				
Control	**Manual** VR/RS-232 **Program control**				

Dimensional drawing

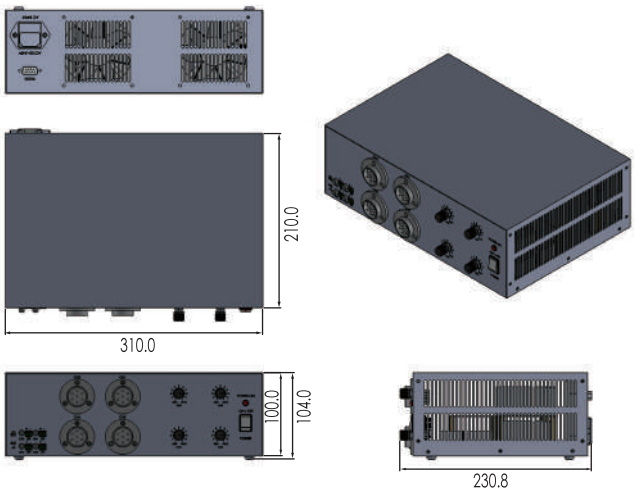
A



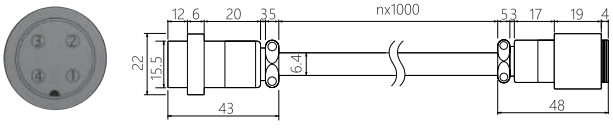
B



C



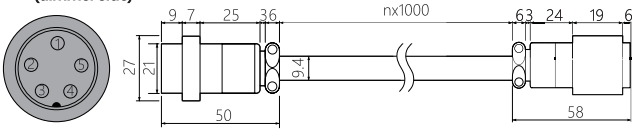
A **Terminal pin description (dimmer side)** **4 Pin metal tip extension cable provided** (n=3、5、10)



foot position	1	2	3	4
Pin definition	LED+	LED-	FAN+	N/A

B **Terminal pin description (dimmer side)** **5 Pin metal tip extension cable provided** (n = 3、5、10、15、20)

C



foot position	1	2	3	4	5
Pin definition	LED+	LED+	FAN+	LED-	LED-

Strobe Lighting Control (LDS/OCS)

Product features

Use short pulse time and regular frequency to control the LED light source to achieve rapid switching/over-driving of multiple light sources to increase brightness.

- Standard specifications of constant current dimmers can be equipped with flash control function.
- Provide LDS/OCS two flash frequency control methods

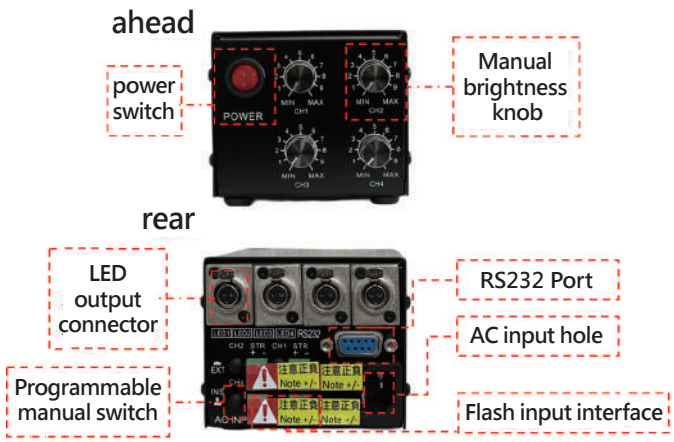
LDS-Line Driver Strobe voltage control (can input 3~40 volt DC voltage)

OCS-Open Collector Strobe short circuit control

* For higher speed flash strobe specifications and over-driving types, please call us separately.

Flash control dimmer mechanism description

Constant current manual (RS232) dimmer-LDS



Constant current manual (RS232) dimmer-OCS

Precautions for use

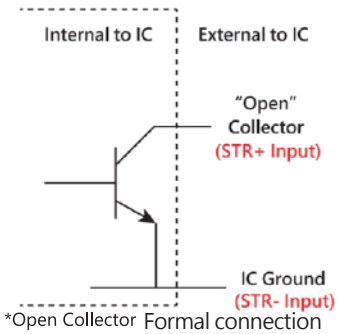
注意正負避免燒毀 Note +/- Avoid NG

* Please do not connect the positive and negative polarity of the flash input interface of the LDS flash control dimmer to avoid burning.

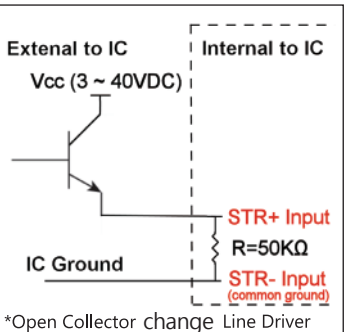
; OCS is not charged and has no positive or negative distinction.

* The flash input signal is turned off by default (OCS：default NO-Normal Open ; LDS：0VDC)

Flash control specifications (NPN form -Open Collector /Line Driver)		
Flash input control method	Open Collector	Line Driver
Flash on input voltage range	Open/GND	3 ~ 40VDC
Flash control current	1uA/CH	1mA/CH
Turn-On time delay	rise 1V < 1us	
Turn-Off time delay	< 5us	



*Open Collector Formal connection instructions



*Open Collector change Line Driver Connection instructions

Note：The above design and specifications are subject to change without further notice.

* For higher speed flash specifications and over-driving types, please call us separately.

Mini Constant Current LED Controllers

Product features

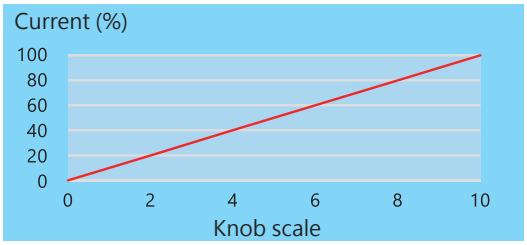
- The smallest size in the industry and easy installation
- Manual control method
- A track-type Mini dimmer is provided, which can be installed on the machine to facilitate electrical control personnel's power distribution and line running.
- The smallest dimmer in the industry, with 24W high power output capability

Model description

PC□M 1 C-□W□□G

- G — Generation
- W — Line rail type (T = Track)
- Total output wattage
- 1 — Frequency (1)
- C — Control method (M = Manual control)
- M — Control method (M = Manual control)
- PC — Voltage value (6V/24V)

Linearity diagram



Note：The test product is PC24M1C-24W2G

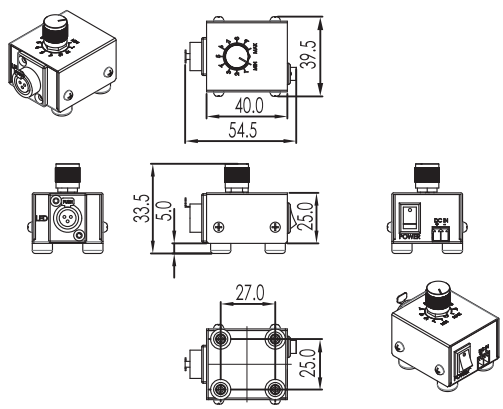
Product specification sheet

Mini manual constant current dimmer/mini track type constant current dimmer

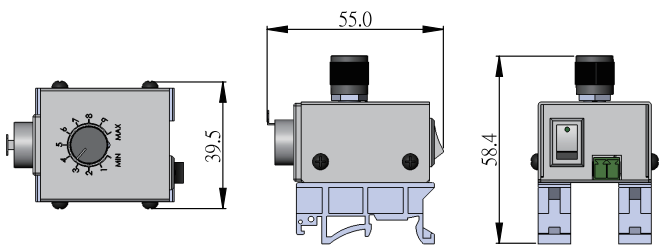
Product name	Mini manual constant current dimmer		Mini track type constant current dimmer	
Model	PC6M1C-6W2G	PC24M1C-24W2G	PC6M1C-6WT2G	PC24M1C-19WT2G
Dimension	A		B	
Input Voltage	DC 6V	DC 21V	DC 6V	DC 21V
Output Voltage	DC 4V Max	DC 19V Max	DC 4V Max	DC 19V Max
Output Power	6W	24W	6W	24W
Channel	1			
Output Current	1A/CH			
Humidity	20%~80% RH			
Temperature	0°C~50°C			
Control	Manual VR adjustments			

Dimensional drawing

A



B



RS232 constant current dimmer 10bit operating instructions

▶ Precautions before operation：

(1) Manual knob control (INS) or external RS232 program control (EXT) can be switched through the switch on the LED dimmer control panel

(2) In order to avoid "overlapping" in RS232 character data transmission, after transmitting a set of control codes, you should wait for the controller to reply with a handshake code before transmitting the next set of control codes.

Please note that RS232 does not support hot swapping.

Please cut off the power first before plugging or unplugging the program control line.

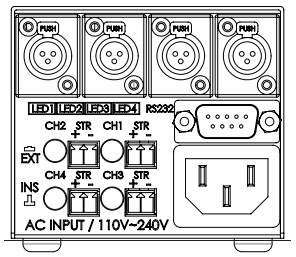
▶ RS232 terminal pin description：

(1) Connector type：

*LED controller：SUB 9pin connector (female)

*RS232 cable：SUB 9pin connector (male)

(2) Pin arrangement description：



foot position	controller side	PC
1	none	none
2	Data reception	Data reception
3	Data transfer	Data transfer
4	none	none
5	GND	GND
6~9	none	none

Please note that the RS232 signal transmission line between the controller and the computer does not require jumpers, please connect directly point-to-point.

▶ Programming instructions: The 10bit Baud Rate is set to 115200bps, and the device administrator and AccessPort must modify it.

(1) Communication settings：

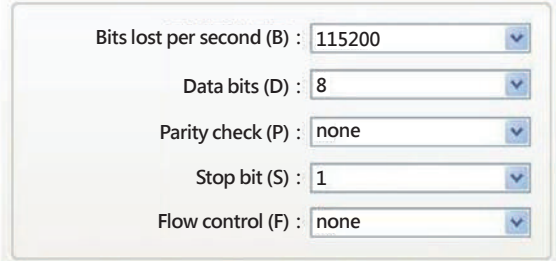
*Buad Rate：115200 bps

*Data bits：8

*Parity check：none

*Stop bit：1

*Flow control：none



(2) The format of data sent from the computer to the controller is as follows：

The controller controls the channel in string mode + "," + brightness value + newline symbol " \r\n "

PS：Please note that the brightness value range is 0~1023. If the input is greater than 1023, it will be regarded as 1023.

(a) After the controller receives the first character, the user must send the next character within 0.2 seconds, otherwise it will return E[0x0d][0x0a]

(b) When the controller receives the end character [0x0a] "\n", if the command is correct, the controller will return the string passed by the user. For example：

Turn the LED of CH1 to the brightest, the command in RS232 is

[Computer->Controller]：1,1023 [0x0d][0x0a]

[Controller->Computer]：1,1023 [0x0d][0x0a]

Turn the LED of CH1 to the darkest, in RS23 The command in 2 is

[Computer->Controller]：1,0 [0x0d][0x0a]

[Controller->Computer]：1,0 [0x0d][0x0a]

Set CH1 to 100, CH2 to 150, CH3 to 200, and CH4 to 255

[Computer->Controller]：1,100,2,150,3,200,4,255 [0x0d][0x0a]

[Controller->Computer]：1,100,2,150,3,200,4,255 [0x0d][0x0a]

Dim the LED of CH10 to the darkest, the command in RS232 is

[Computer->Controller]：10,0 [0x0d][0x0a]

[Controller->Computer]：CH not Available! [0x0d][0x0a]

Error or character loss during communication timeout

[Computer-> Controller]：10 [0x0d][0x0a]

[Controller->Computer]：E [0x0d][0x0a]

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Product attentiveness

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Attentive service