

# Instruction Manual for Adjustable Pulse Power Supply for LED Lights OPPW-100-4 (100W Power supply)

is V : Knob is turned by hand. H: adjust using a screwdriver.

## 1 . Product outline

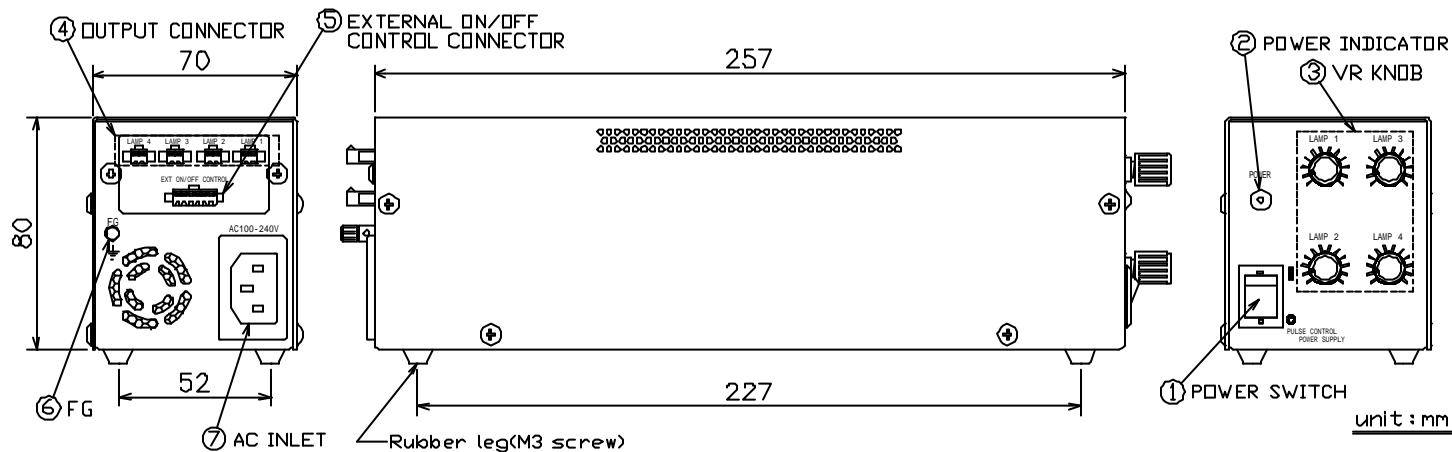
- This product is an adjustable power supply only for LED Lights. Please do not use it in addition to our company's LED Lights.
- The LED Light brightness can be adjusted by PWM. (Pulse oscillation: approx. 60KHz)
- This product operates under AC100V - 240V.
- LED Light can be turn on/off with an external control connector. (6 pin connector, EXT CONT ).
- Using the volume of a front panel, from LAMP 1 to LAMP 4, the brightness can be adjusted from 0 to 100%.

## 2 . Accessories and appearance

Accessories : External control connector set (6 pin connector) 1set  
: Power Cable(only AC100V) 1 piece  
: Instruction Manual (this sheet) 1 piece

**Note : If you operate this product for input voltage exceeding AC100V, please prepare a suitable power cable by yourself**

Appearance: OPPW -100-4V



## 3 . Safety

### ⚠ Warning

( 1 )	Do not open the cover of a unit. There is a portion of high voltage inside of a power supply, and there is a possibility of receiving an electric shock in it.	
( 2 )	Connect directly the plug of a power supply to a wall socket. There is a cause of fire when you use an extension cable.	
( 3 )	Do not touch a power supply plug by the wet hand. There is a possibility of receiving an electric shock.	
( 4 )	Use a power supply, grounding it. When not grounded, there is a possibility of receiving an electric shock.	
( 5 )	When abnormalities to which a main part gets hot, a strange smell and/or smoke comes out arise, stop use immediately, shut off a power supply and pull out a power supply plug from a wall socket.	
( 6 )	Do not look at LED Light directly, it may have bad influence on your eyes.	

### ⚠ Cautions

( 1 )	Make connection of AC input cable and a LED Light cable after turning off the switch of a power supply unit.
( 2 )	Do not place any objects on a power supply.
( 3 )	Do not expose a power supply unit to sunlight or humidity directly.
( 4 )	When not used for a long period of time, pull out a power supply plug from the unit.
( 5 )	LED Light should be used at the strength of light at least in a half, when you use the constant light always, since a life will become short if used in the environment of a high temperature.
( 6 )	When abnormalities happen at a power supply unit, stop use immediately and contact to our company. Do not repair by the customer. ( A product cannot be guaranteed, when a customer has an inside of a power supply changed or repaired. )

### Product warranties

- 1 .If it should break down within the term of a guarantee(delivery-of-goods day for 12 months) under a customer's normal use condition based on notes, such as this handling description, or when initial [poor] accepts, We will carry out repair and exchange of a failure part gratuitously.
- 2 . However, We cannot guarantee on condition that external factors [ , such as strong shock / natural disaster / water, steam oil, acid, radiation, etc. ], such as an error on use / use of the lighting equipment of those other than our company / unjust decomposition, and reconstruction / fall, etc.

## 4 . Specifications

4 - 1 Input-and-output voltage  
 Input voltage : AC100V - 240V 2.4A/100V 1.2A/200V(MAX)  
 Frequency of operation : 47 ~ 440Hz  
 Rated output : DC12V 4.17A (30W × 1ch, 30W × 2ch, 30W × 3ch, 25W × 4ch)

4 - 2 Control of brightness  
 Method of control : Approx. 60KHz PWM Control  
 System of control : Control the brightness by the VR knob (LAMP 1 ~ 4 )

Range of control : 0 ~ 100%  
 ( At the environmental within the limits of operational condition )  
 Since the scale position does not correspond to the adjusted bright level, please use a scale as a reference.

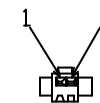
External on/off control : EXT ON/OFF CONTROL can control ON/OFF with the open collector or the relay contact .

4 - 3 Environment of operation  
 Circumferential temperature : -10 ~ +40  
 Circumferential humidity : 20 ~ 70%RH ( Don't dew )

### 4 - 4 Connectors

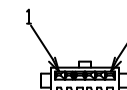
• Output connector ( LAMP 1 ~ 4 ) : SM connector SMP-02V-BC (Made by JST)

Pin No.	12V output type
1	Output + (+ 12V)
2	output -



• External on/off control connector ( EXT ON/OFF CONTROL ) : SM connector SMP-06V-BC (Made by JST)

Pin No.	Signal	Color of option cable
1	LAMP 1 ON/OFF	White
2	LAMP 2 ON/OFF	Yellow
3	LAMP 3 ON/OFF	Brown
4	LAMP 4 ON/OFF	Green
5	External control change	Red
6	GND	Black

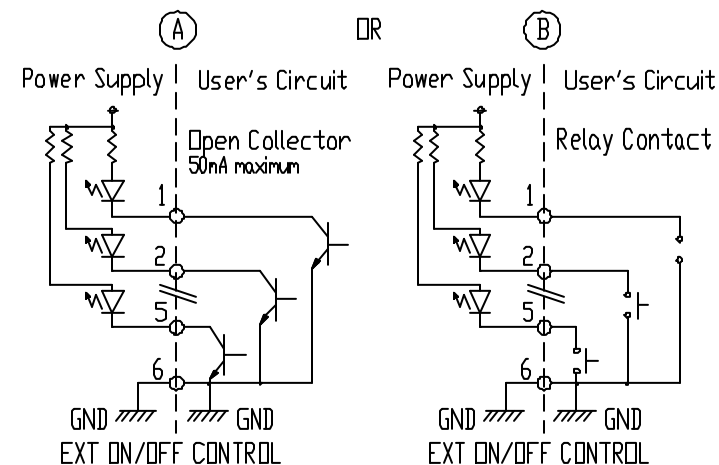


"OP-ECB4- " ( is length[m] ) should be used for an option cable.

### 4 - 5 The method of external on/off control

In order to work the external control function, short pin #5 and pin #6 circuit. ( LED putting out lights )  
 Under the above condition, when short the pin #1 and pin #6 circuit, LED Light (connected to ch1) will light on.  
 Furthermore, when short pin #2 and pin #6 circuit, the LED Light (connected to ch2) will light on.  
 (The INT/EXT control performs all channels simultaneously.)

#### Recommendation circuit



There are approx. 10mA current from pin#1,2... to pin #6 .  
 Please see a margin and use the open collector circuit with the current capacity of about 50mA.