

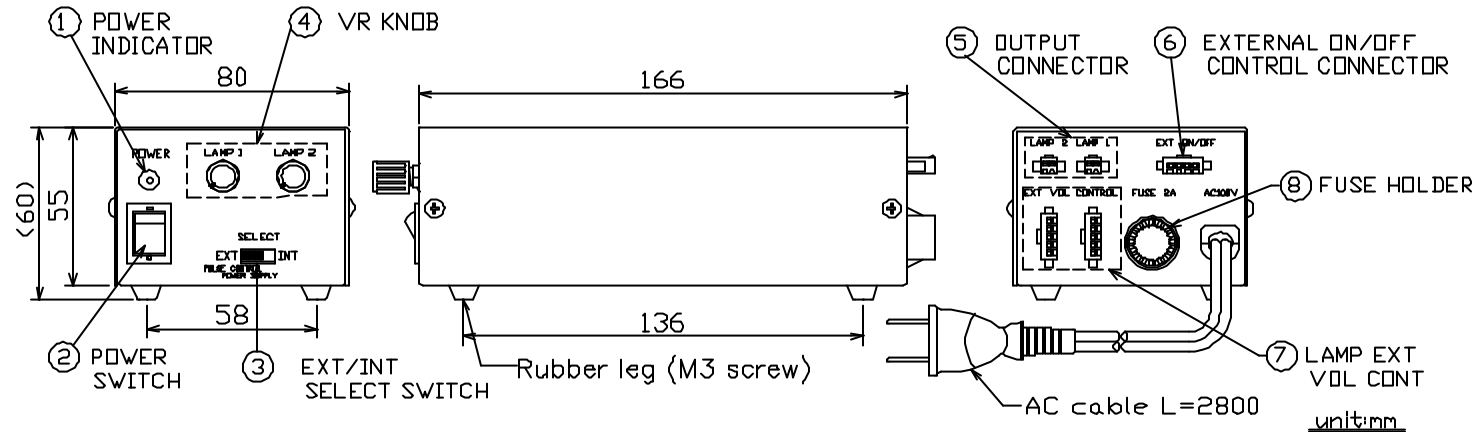
# Instruction Manual for Adjustable Pulse Power Supply for LED Lights OPPT-10 (10W Power supply)

## 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. 50KHz)
- This product operates under AC100V - 115V.
- LED Light can be turn on/off with an external control connector. (EXT CONT, 4 pin connector )
- With an external voltage control connector (from 0 to 5V), the brightness can be adjusted from 0 to 100%. (EXT VOL CONT )

## 2 . Appearance and accessories

### Appearance



- Accessories :
- External on/off control connector set (4 pin connector) 1 set
  - External voltage control connector set (5 pin connector) 2 set
  - Instruction Manual (this sheet) 1 piece

## 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 - 115V 0.3A (MAX)
  - Frequency of operation : 50/60Hz
  - Rated output : DC12V 0.83A
- 4 - 2 Control of brightness
- Method of control : Approx. 50KHz PWM Control
  - System of control : Control the brightness by the VR knob (LAMP 1,LAMP 2 ) or by the External voltage. (0 ~ 5V,EXT VOL CONTROL )
  - 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 can control ON/OFF with the open collector or the relay contact.

### 4 - 3 Environment of operation

- Circumference temperature : -10 ~ +40
- Circumference humidity : 20 ~ 70%RH (Don't dew)

### 4 - 4 Connectors

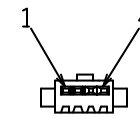
- Output connector ( LAMP 1,LAMP 2 ) : SM connector SMP-02V-BC (Made by JST)

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



- External on/off control connector ( EXT ON/OFF ) :SM connector SMP-04V-BC (Made by JST)

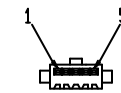
| Pin No. | Signal                  | Color of option cable |
|---------|-------------------------|-----------------------|
| 1       | LAMP 1 ON/OFF           | White                 |
| 2       | LAMP 2 ON/OFF           | Green                 |
| 3       | External control change | Red           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



"OP-ECB2- " ( is length[m]) should be used for an option cable.

- External voltage control connector ( EXT VOL CONTROL ) :SM connector SMP-05V-BC (Made by JST)

| Pin No. | Signal          | Color of option cable |
|---------|-----------------|-----------------------|
| 1       | +5V out         | White                 |
| 2       | EXT. VOLTAGE in | Red                   |
| 3       | 0V              | Black                 |
| 4       | NC              | N/A                   |
| 5       | NC              | N/A                   |

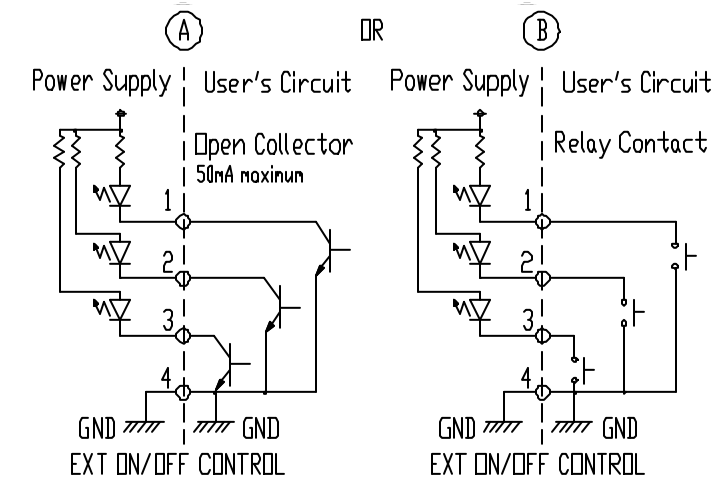


"OP-ECBT- " ( is length[m]) should be used for an option cable.

### 4 - 5 The method of external on/off control (EXT ON/OFF )

In order to work the external control function, short pin #3 and pin #4 circuit. (LED putting out lights)  
Under the above condition, when short the pin #1 and pin #4 circuit, LED Light (connected to ch1) will light on. Furthermore, when short pin #2 and pin #4 circuit, the LED Light (connected to ch2) will light on. (The INT/EXT control perform 2ch simultaneously).

#### Recommendation circuit



There are approx. 10mA current form pin #1,2,... to pin #4. Please see a margin and use the open collector circuit with the current capacity of about 50mA.