

# DARFON DBL-070Series 70W single output power supply

## Features

- DC wide range input (12 to 24Vdc)
- Protections: Short circuit/Over current auto recovery
- Over voltage/Over temperature power reset
- Constant current design (C.C.mode)
- Multiple dimming functions
- IP65/IP67 Design for indoor and outdoor use
- Suitable for LED and street lighting applications
- Comply with UL, TUV, CE, FCC, CQC safety regulation
- 5 years Warranty



SELV CE IP65 IP67 RoHS

DBL-070-XXXX □ Type A: IP65 grade · Adjust current by variable resistor internal & by 1~10V/PWM signal/Resistor external  
 Type B: IP67grade · Dimming by 1~10V/PWM signal/Resistor

| Model        | Rated Current | Current adjust range(1) | Output Voltage (Max Vo * Iout) | OVP level | Input DC Voltage |      | Output Power | Efficiency (2) |
|--------------|---------------|-------------------------|--------------------------------|-----------|------------------|------|--------------|----------------|
|              |               |                         |                                |           | 12V              | 24V  |              |                |
| DBL-070-0500 | 500mA         | 200~500mA               | 115~165V(300mA)                | 181~198V  |                  | V    | 50W          | 88%            |
| DBL-070-0700 | 700mA         | 280~700mA               | 70~120V(500mA)                 | 132~144V  | V                | V    | 60W          | 89%            |
| DBL-070-1400 | 1400mA        | 560~1400mA              | 42~75V(900mA)                  | 90~97.5V  | V                | V    | 70W          | 90%            |
| DBL-070-2450 | 2450mA        | 980~2450mA              | 18~45V(1550mA)                 | 54~58.5V  | V                | V(3) | 70W          | 91%            |

1. Only Type A Adjust current by variable resistor internal
2. Efficiency test condition please reference "Efficiency Vs Load "
3. Output voltage must be 3 volts higher than the input voltage

## ◆ Input Specification

|                       |                             |
|-----------------------|-----------------------------|
| Input voltage range   | 11.4~25.2Vdc                |
| Inrush current (Typ.) | 70A peak @24Vdc, Cold Start |

## ◆ Output Specification

|                          |                                 |
|--------------------------|---------------------------------|
| Output Current Tolerance | ±5%                             |
| Ripple & Noise (1)       | 1V p-p                          |
| Output Ripple Current    | ±5%                             |
| Line Regulation          | ±1%                             |
| Turn-on Time             | <0.5s @12Vdc/24Vdc, @ full load |

1. Ripple current is measured at 20MHz of bandwidth. The measured terminal is paralleled with a 22uF E-cap and a 0.1uF

Ceramic cap.

### ◆ General Specification

|           |   |
|-----------|---|
| MTBF      | 350Khrs min. MIL-HDBK-217F(25°C)              |
| Life Time | >50,000hrs , 24VDC , 100% Load, @ T-Case 70°C |
| Dimension | 138 * 67 * 30mm (L*W*H)                       |
| Weight    | 400g  |

### ◆ Protections

|                               |  |
|-------------------------------|--|
| Short Circuit                 | Auto recovery or Power reset                               |
| Over Voltage                  | Power reset  |
| Over Temperature De-rated (1) | Over 50°C , automatic de-rate to 75% of rated load current |
| Over Temperature (1)          | 85°C±10°C , Auto recovery                                  |

1. Please reference "Temperature-De-rating curve "

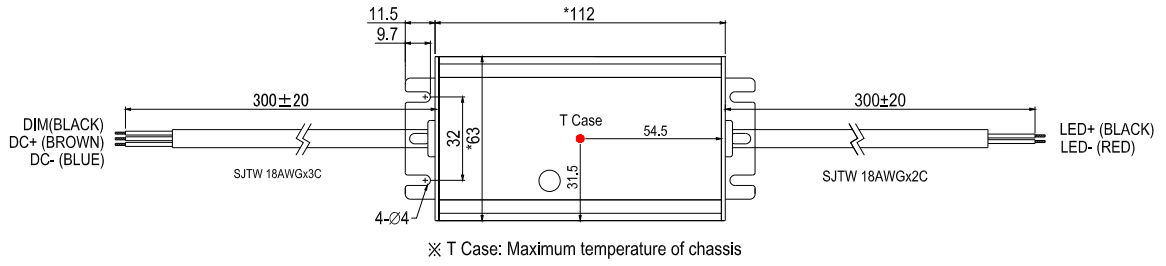
### ◆ Environment, Safety and EMC

|                                      |  |
|--------------------------------------|--|
| Operating Temperature & Humidity (1) | -40°C~70°C ; 10%~95% RH , Non-condensing   |
| Storage Temperature & Humidity       | -40°C~85°C ; 10%~95% RH  |
| Vibration                            | IEC 68-2-2-1995/CNS-3629-C6016/GB/T 2423.10-2008 ; 5-500Hz , 1.0G , 1 Oct/min , 2cycle X , Y , Z, 75 minutes                 |
| Safety standards                     | Meet UL 8750, EN 61347-1, EN 61347-2-13 , GB 19510.1, GB 19510.14  |
| EMI                                  | Meet EN 55015, EN 61000-3-2, EN 61000-3-3, FCC Part18, CNS 14115, GB 17743   |
| EMS                                  | Meet EN 61547, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-8, EN 61000-4-11, GB 17625.1 |

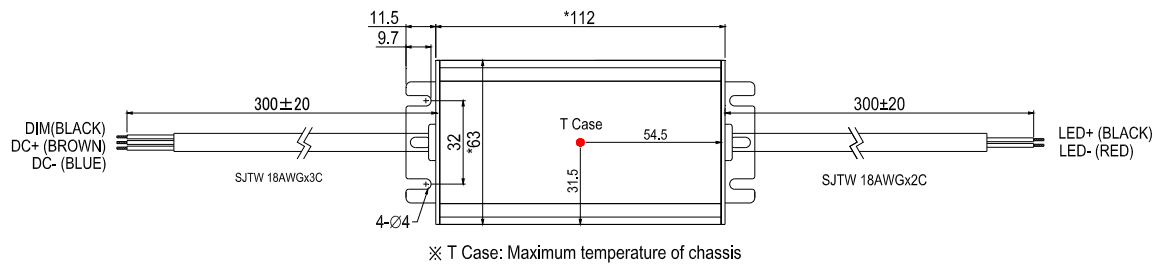
1. Please reference "Temperature-De-rating curve "

### ◆ Mechanical Drawing

#### Type A:IP65 DBL070



#### Type B:IP67 DBL070



### Dimming Control

Adjust output current by follows resistor (VR must set to max output current for A type)

|                                |       |       |     |       |       |      |      |      |      |      |
|--------------------------------|-------|-------|-----|-------|-------|------|------|------|------|------|
| Resistor<br>(DIM Green/Yellow) | 10.1K | 23.2K | 40K | 61.2K | 92.2K | 137K | 210K | 353K | 700K | OPEN |
| Current ratio                  | 10%   | 20%   | 30% | 40%   | 50%   | 60%  | 70%  | 80%  | 90%  | 100% |

Adjust output current by 1~10Vdc (VR must set to max output current for A type)

|                           |     |     |     |     |     |     |     |     |     |      |      |
|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| Vdc<br>(DIM Green/Yellow) | 1V  | 2V  | 3V  | 4V  | 5V  | 6V  | 7V  | 8V  | 9V  | 10V  | OPEN |
| Current ratio             | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | 100% |

Adjust output current by digital signal (VR must set to max output current for A type)

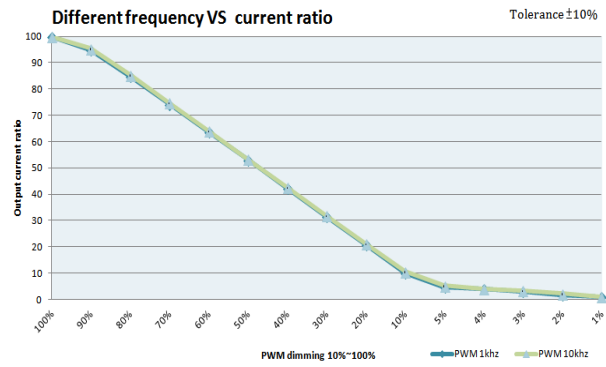
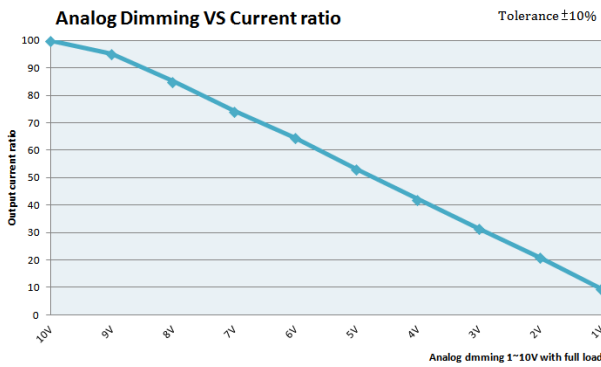
Amplitude: 10V

Frequency range: 1 ~10KHz

|                            |     |     |     |     |     |     |     |     |     |      |      |
|----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| Duty<br>(DIM Green/Yellow) | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | OPEN |
| Current ratio              | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | 100% |

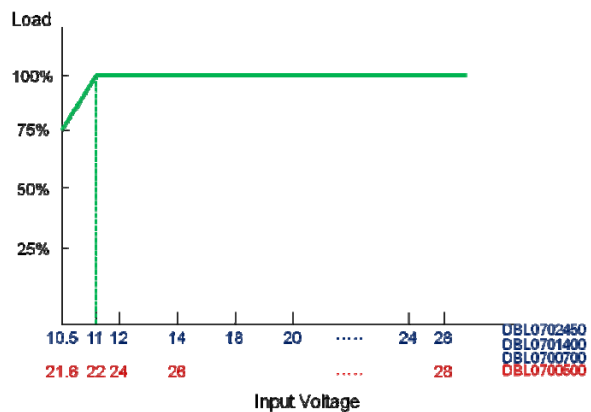
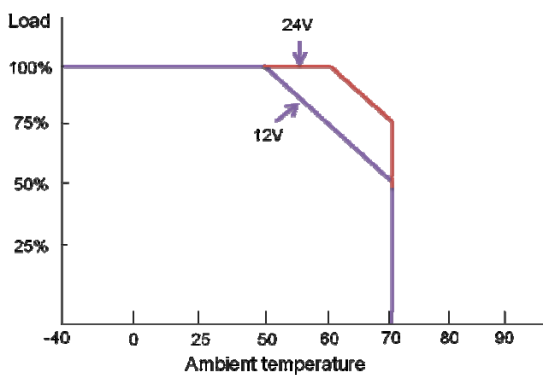
Note1: This function will pass through RC-filter to adjust driver brightness, may cause different tolerance by signal generator or power supply.

Note 2: If you don't adjust VR in max brightness may cause the output current different with above table.



### ◆ Output Load De-rating Curve

Temperature-De-rating curve



### Efficiency Vs Load

