

DARFON MBC-100 Series 100W single output power supply

Features

- Universal AC full range input (to 305Vac)
- Protection: Short circuit/Over current
- Over voltage/Over temperature auto recovery
- Constant current design (C.C.mode)
- Built-in 4KV Lightning Surge protection
- With active PFC function
- Multiple dimming functions
- IP65/IP67 Design for indoor and outdoor use
- Suitable for LED and street lighting applications
- UL/CB/CCC/CE approvals
- 5 years Warranty



MBC-100-XXXX □ A type: IP65 grade · Adjust current by variable resistor internal
 B type: IP67 grade · Dimming by 1~10V/PWM signal/Resistor

Model	Rated Current	Current adjust range(1)	Output Voltage	OVP level	Output Power	Efficiency (2)
MBC-100-1600	1600mA	960~1600mA	36~63V	73~82V	100W	91%
MBC-100-1750	1750mA	1050~1750mA	36~56V	65~73 V	100W	91%
MBC-100-2100	2100mA	1260~2100mA	29~49V	56~64V	100W	91%
MBC-100-2450	2450mA	1470~2450mA	29~42V	48~55V	100W	91%
MBC-100-2800	2800mA	1680~2800mA	22~35V	40~45V	100W	91%

1. Only A Type Adjust current by variable resistor internal
2. Efficiency test condition please reference " Efficiency Vs Load "

◆ Input Specification

Input voltage range (1)	90~305VAC
Input Frequency	47~63Hz
Power Factor (2) (Typ.)	PF>0.98/115VAC, PF>0.95/230VAC, PF>0.93/264VAC, @ full Load
Total Harmonic Distortion	THD<20% @230VAC/50Hz, @ full Load
Output Current (Typ.)	1.1A/115VAC, 0.56A/230VAC, 0.5A/264VAC
Inrush current (Typ.)	60A peak @230VAC, Cold Start
Leakage current	< 0.75mA @ 277VAC

1. Please reference " Input Voltage-De-rating curve "

2. Please reference " PFC Vs Load Curve

◆ Output Specification

Output Current Tolerance	±5%
Ripple & Noise (1)	300mV p-p
Output Ripple Current	±5%
Line Regulation	±1%
Turn-on Delay Time	<1.0s @115VAC , 0.5S@230VAC, @ full Load
Hold up Time	>12ms @115VAC, @ 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	220Khrs min. MIL-HDBK-217F(25°C)
Life Time	>40,000hrs , 230VAC , 100% Load , @ T-Case 70°C
Dimension	Φ 136 * 71 mm (*H)
Weight	900g

◆ Protections

OVP,OPP	Auto recovery
Short circuit	Auto recovery
Over Temperature Re-rated(1)	Ambient Temperature Over 70°C , Fixed 75% load output
OTP(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
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

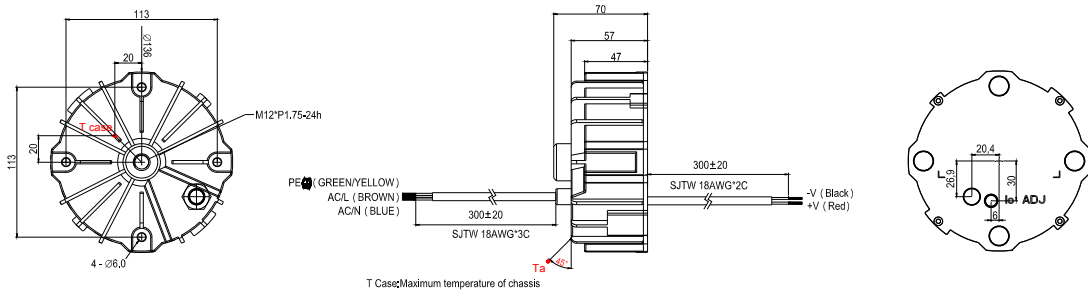
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Surge	4KV(L/N-PE) & 2KV(L-N) /1.2*50μ sec
Hi-Pot	I/P-O/P: 3.75KVAC, I/P-PE: 2KVAC, O/P-PE: 0.5KVAC
Insulation Resistance	I/P-O/P, I/P-PE, O/P-PE: >100MΩ/500VDC/25°C/70%RH

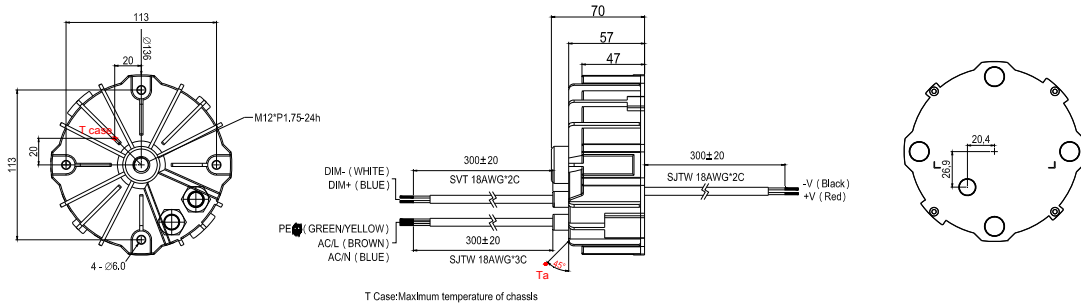
1. Please reference " Temperature-De-rating curve "

Mechanical Drawing

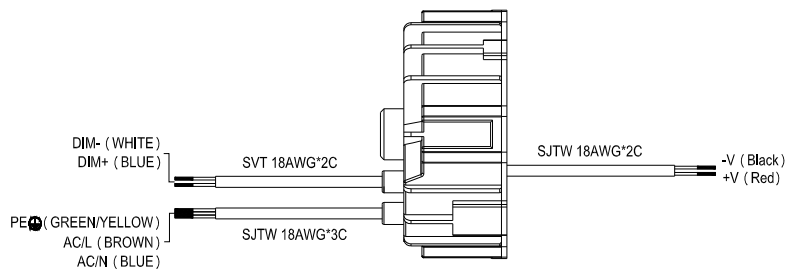
A TYPE:



B TYPE:



Dimming mode (B type only)



* Do not put "-V (BLACK)" & " - (WHITE)" in connection

* 10K~100KΩ adjust output current

Resistor value	10KΩ	20KΩ	30KΩ	40KΩ	50KΩ	60KΩ	70KΩ	80KΩ	90KΩ	100KΩ	OPEN
Rated Current rate	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95~105%

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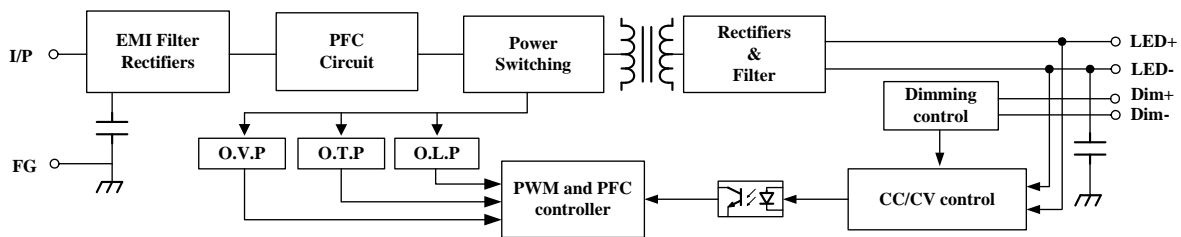
* 1~10Vdc adjust output current

Vdc	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
Rated Current rate	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95~105%

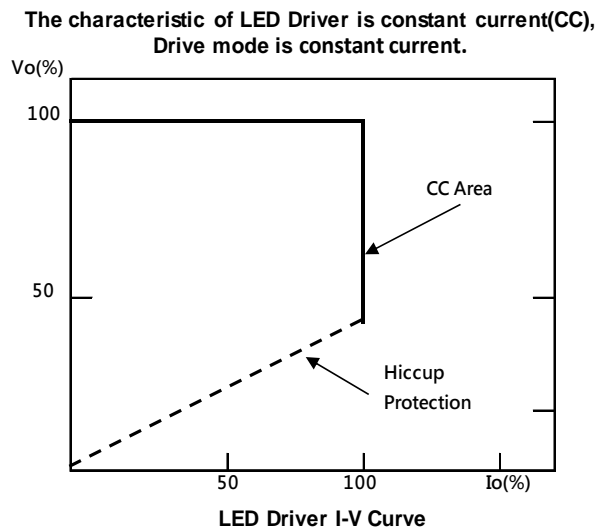
* 10V PWM adjust output current ; Frequency range 100Hz~3KHz

Duty	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
Rated Current rate	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95~105%

◆ Function block

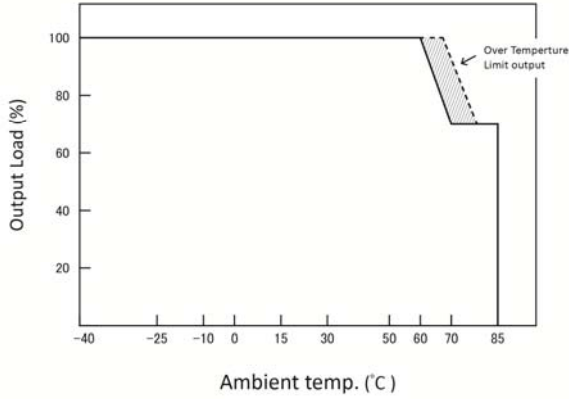


◆ LED Output curve (MBC-100-2100)

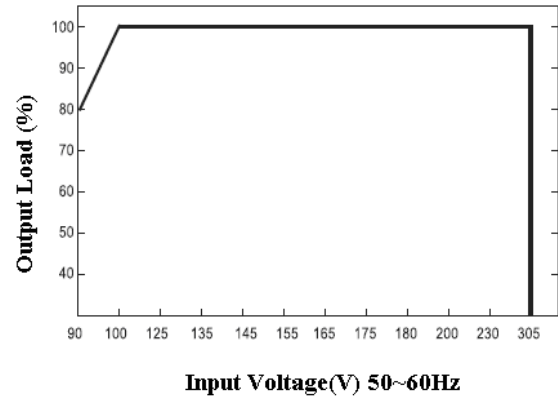


◆ Output Load De-rating Curve

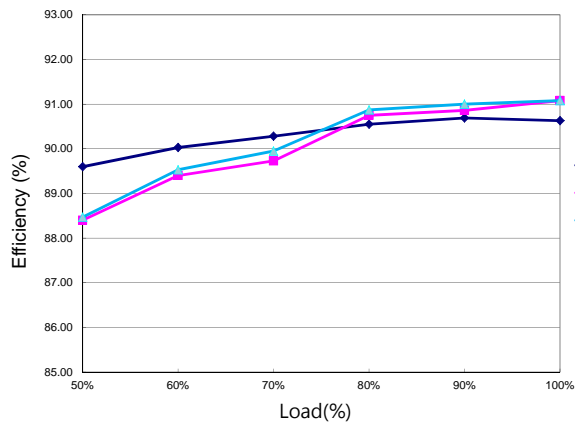
Temperature-De-rating curve



Input Voltage-De-rating curve



Efficiency Vs Load (MBC-100-2100)



Power Factor Vs Load (MBC-100-2100)

