



■ Features

- Input voltage range: 90~305Vac
- Built-in active PFC function: 0.99 Typ.
- High efficiency: 89% Typ.
- IP67 design for indoor or outdoor installations
- Surge protection: DM 4KV, CM 6KV
- Support 0(1)-10V and 10V PWM dimming function
- Compliance to worldwide safety regulations for lighting
- Suitable for dry/damp locations



Note.3

■ Specification

Model (MU050HXXXAQ_0-10V)		035	045	053	070	105	120	140	175	210	245	280	315
Input	Efficiency(120Vac)(Typ.) _{Note.1}	90%	90%	90%	89%	89%	88%	88%	88%	87%	87%	86%	84.0%
	Efficiency(230Vac)(Typ.) _{Note.1}	91%	91%	91%	90%	90%	89%	89%	89%	88%	88%	87%	86%
	Voltage Range (V) _{Note.2}	90~305Vac, OR 127~ 430Vdc											
	Rated Voltage (V) _{Note.2}	100~277Vac											
	Frequency Range (Hz)	47~63											
	Power Factor	0.99(Typ) with 80%-100% load at 120Vac											
		0.97(Typ) with 80%-100% load at 230Vac											
		0.9(Min) with 80%-100% load at 277Vac											
	THD(Typ.)	10% (Typ.), at 220Vac input, with 80%-100% load conditions											
		15% (Typ.), at 110/277Vac input, with 80%-100% load conditions											
Output	AC Current(Max.)	0.7A at 100Vac input; 0.35A at 220Vac input											
	Inrush Current(Max.)	50A at 230Vac input 25°C Cold Start (time wide=500uS, measured at 50% Ipeak, Not applicable for the inrush current to Noise Filter for less than 0.2ms)											
	Leakage Current(Max.)	0.75mA at 277Vac/60Hz input											
	Voltage Range (V)	71-142	55-111	47-94	36-72	24-48	21-42	18-36	14-29	12-24	10-20	9-18	8-16
	Rated Current(mA)	350	450	530	700	1050	1200	1400	1750	2100	2450	2800	3150
	Rated Power (W)	50	50	50	50	50	50	50	50	50	50	50	50
	Ripple Current((PK-AV)/AV)	≤30%, With LED mode full load.											
	Current Tolerance	5%											
	Line Regulation	3%											
	Load Regulation	3%											
Protection	Over Voltage(V)	<170	<133	<122	<95	<60	<55	<50	<40	<34	<28	<26	<25
	Short Circuit	Protection type : Limit the output voltage , recovers automatically after fault condition is removed											
	Over Temperature	Hiccup mode, recovers automatically after fault condition is removed.											
	Over Temperature	When the Tc of PSU rise to 110°C(Typ.), the output current will decrease to less than 30% of rated current or shutdown. The power supply should resume its normal operation when the inside temperature of PSU drop to normal temperature											
Environment	Operating Temp.	-40~+70°C											
	Tc	88.9°C max											
	Operating Humidity	20~95%RH											
	Storage Temp., Humidity	-40~+85°C , 10~95%RH											
	Temp. Coefficient	0.03%/°C (0~50°C)											
Safety & EMC	Vibration	10-500Hz, 5G 12min/cycle , period for 72min each along X、Y、Z axes											
	Safety Standard	"UL8750, UL1310 Class 2, CSA-C22.2 No.223-M91, EN61347-1, EN61347-2-13, GB19510.1, GB19510.14" for Class 2 model, "UL8750, UL1012, CSA-C22.2 NO. 107.1, EN61347-1, EN61347-2-13, GB19510.1, GB19510.14" for non-Class 2 model.											
	Withstand Voltage	I/P-O/P: 3.75KVdc, I/P-FG: 1.875KV, O/P-FG: 1.5KV											
	Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG: 100M Ohms/500Vdc/25°C/70%RH											
	EMC Emission	EN55015/FCC Part 15 Class B, EN61000-3-2 Class C, EN61000-3-3											
Others	EMC Immunity	EN61000-4-2, 3, 4, 5, 6, 8, 11, EN61547 (Surge: L-N 4KV, L/N-Earth 6KV)											
	MTBF	300,000 hours, measured at full load, 25°C ambient temperature MIL-HDBK-217F(25°C)											
	Life Time	50,000 Hours at Tc 75°C(Refer to "Life Time VS. Tcase (Ref.)")											
	Dimension	193 x 42.5 x 34.5 mm (LxWxH)											
	Weight(Typ.)	0.55kg											

Note.1: Measured at full load and steady-state temperature in 25°C ambient;

Note.2: Derating may be needed under low input voltage, Please Refer to 'Derating Curve'; Note.3: UL Class2 in compliant model "035", "045", "070";

Note: All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C ambient temperature.

Subject to change without notice

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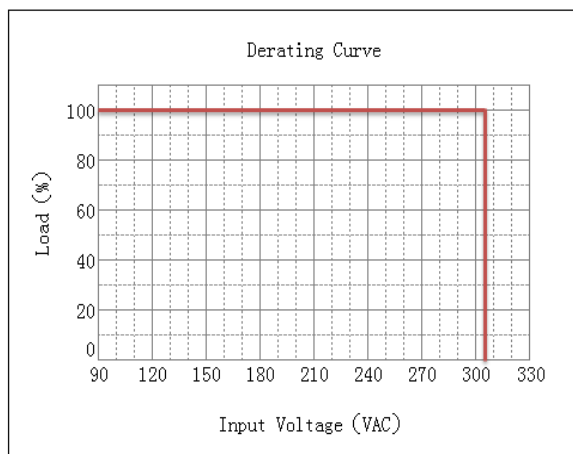
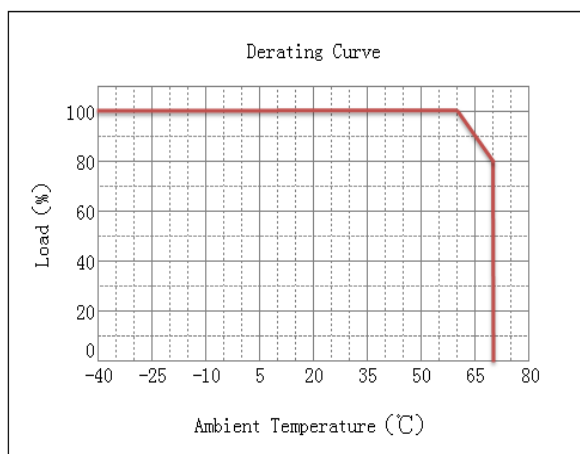
SHANGHAI MOONS' AUTOMATION CONTROL CO., LTD.

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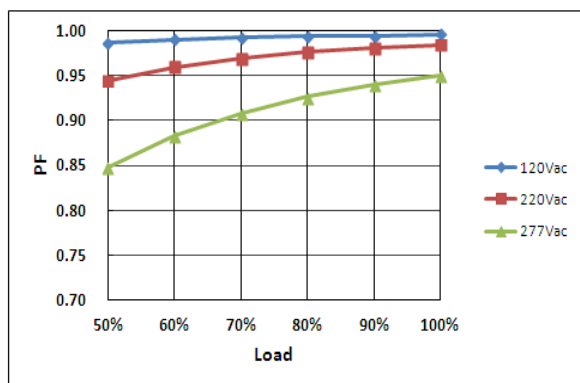
Tel: +86 (0)21 52634688 Website: www.moons.com.cn

■ Test Curve

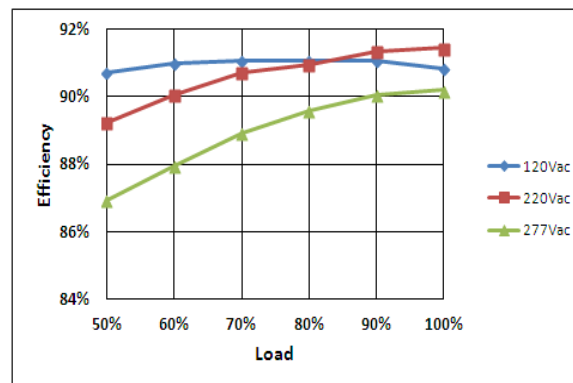
Derating Curve



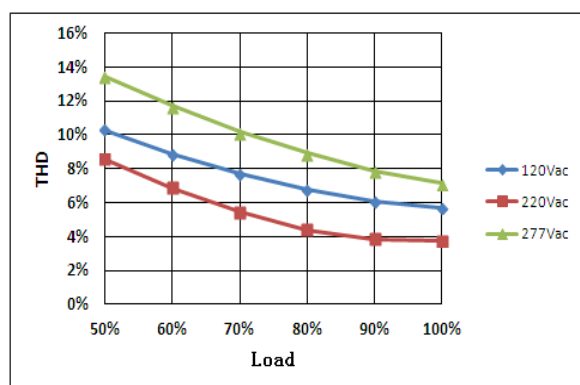
Power Factor Curve



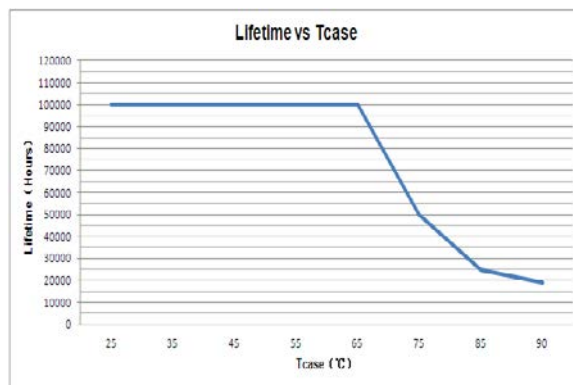
Efficiency VS. Load Curve(Model:350mA)



THD Curve(Ref)



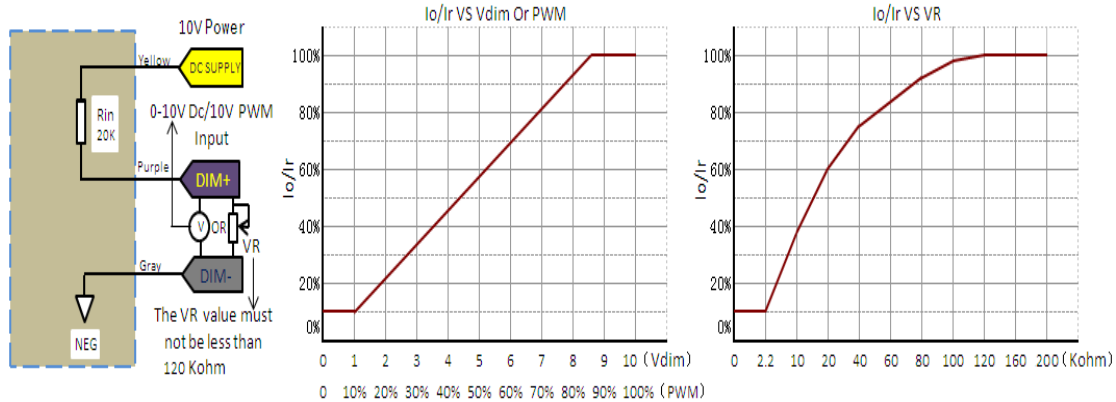
Lifetime vs. Case Temperature



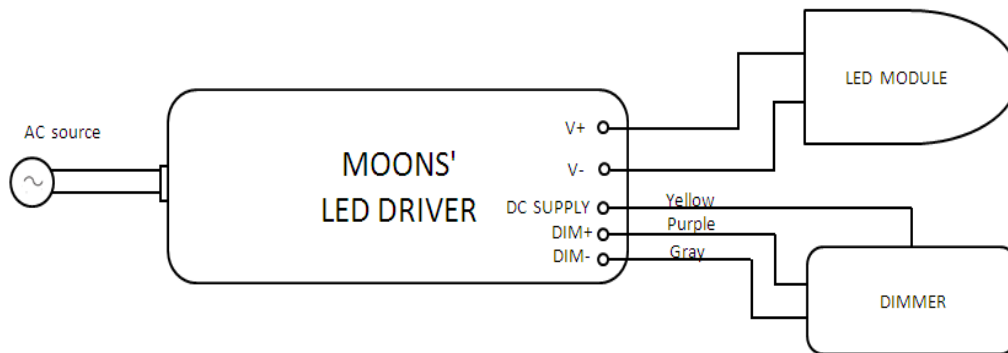
Dimming function description:

- 1.The dimming control may be operated from an input signal of 0(1)-10 Vdc / 10V PWM (Frequency range:500Hz to 5KHz,Duty:0-100%) .
- 2.With one external variable resistor,the VR value must not be less than 120Kohm.

Dimming module diagram and dimming curve:



Dimming connection diagram:



Notes:

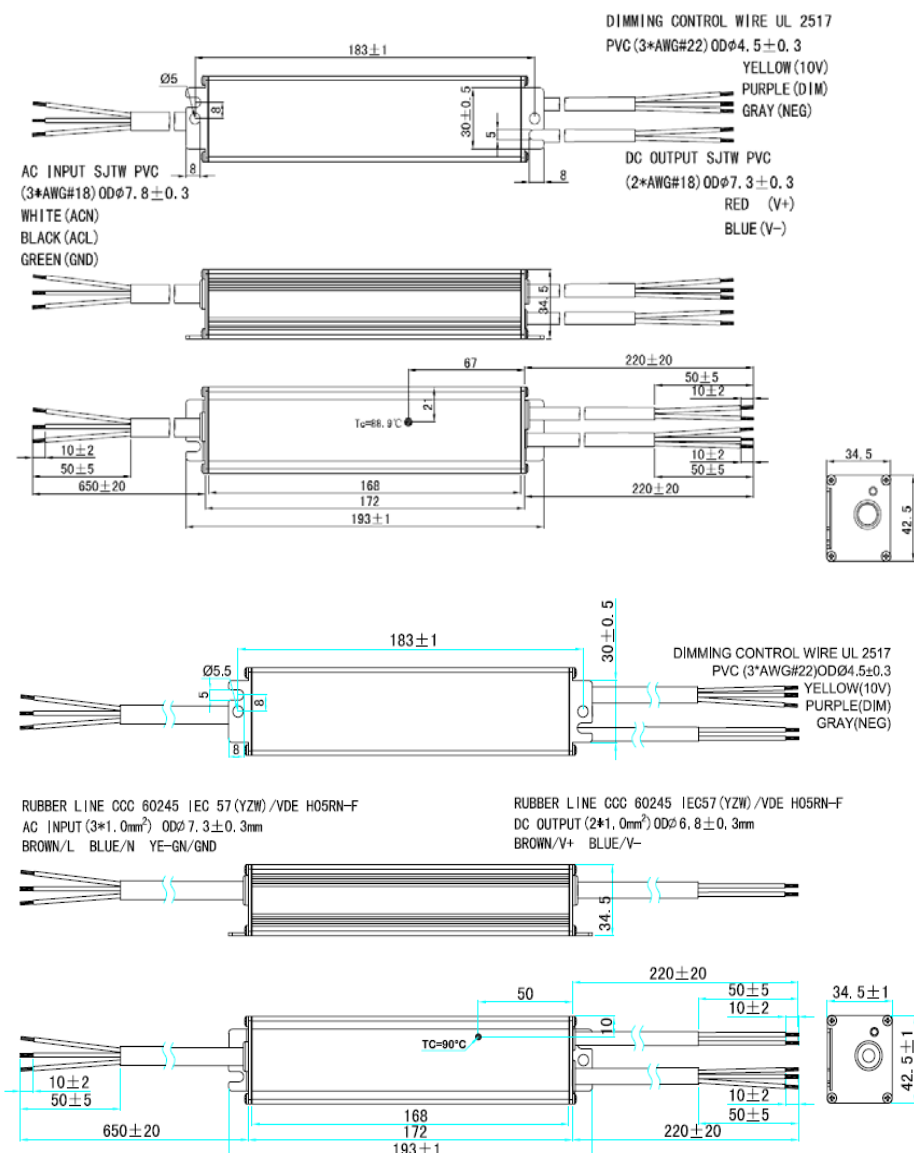
- 1.Io is actual output current with dimming control signal and Ir is rated output current.
- 2.The dimming control signal can be operated output current from 100% to 10% Ir,output voltage must be maintained above 50% of the rated output voltage.
- 3.Do not connect dimming wire to the output;otherwise,the LED driver can not work normally.
- 4.The dimming signal is allowed to be less than 1V/10% PWM ,the output current can be maintained 10% Ir. (about on/off function specification ,please contact MOONS for details).

Dimming Control Module Parameter(On secondary side)

Parameter	Min.	Typ.	Max.	Notes
DC supply output voltage	8V	10V	12V	
DC supply output source current	0 mA	-	10mA	
Absolute maximum voltage on the DIM+	-2V	-	10V	
Source current on the DIM+	0 mA	-	0.5mA	
Value of Rin (the resistor inside the LED driver which locate between the DIM+ and the DC Supply)	19.8k	20k	20.2k	

■ Mechanical Specification

1. Dimensions (Unit: mm)



RoHS Compliance:
Our products comply with the European Directive 2002/95/EC, calling for the elimination of lead and other hazardous substances from electronic products.

2. Terminal wire Type

Products	AC Input			DC output			Dimming control		
	Wire Type	Assignment	Description	Wire Type	Assignment	Description	Wire Type	Assignment	Description
UL approval	UL SJTW PVC	BLACK/L	3*AWG#18	UL SJTW PVC	RED/+	2*AWG#18	UL2517 PV COD ϕ 4.5 $\pm$ 0.3mm	YE/10V	3*AWG#22
		WHITE/N			BLUE/-			PU/DIM+	
		GREEN/GND						GR/NEG	
CCC approval	RUBBER CCC+VDE 60245 IEC57 YZW/H05RN-F	BROWN/L	3*1.0mm ² OD ϕ 7.3 $\pm$ 0.3mm	RUBBER CCC+VDE 60245 IEC57 YZW/H05RN-F	Brown/+	2*1.0mm ² OD ϕ 6.8 $\pm$ 0.3mm	H05HRN-FOD ϕ 6.3 $\pm$ 0.2mm or UL2517 PVCOD ϕ 4.5 $\pm$ 0.3mm	BK/WH or YE/10V	3*0.5mm ² or 3*AWG#22
		BLUE/N			Blue/-			PU/DIM+	
		YE-GN/GND						GR/DIM-	

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