MU060HxxxAQ_0-10V Series General - Outdoor

DWG NO. : MSSD-4921 A0

■ Features

- Input voltage: 90-305VAC
- Built-in active PFC function: 0.99 Typ.
- Low THD: 10% Typ.
- High efficiency: 91% Typ.
- IP67 design for indoor or outdoor installations
- High surge immunity
- Support 0-10V / 10V PWM / VR dimming function
- Compliance to worldwide safety regulations for lighting
- Suitable for dry/damp locations

Class 2 Note.4

■ Specification

Model (MU060H**XXX**AQ_0-10V)		035	045	053	070	075	105	140	175	180	210	245	280	315	350	420	500
Input	Efficiency(110Vac)(Typ.)Note.1	90%	90%	90%	89%	89%	89%	88%	88%	87%	87%	86%	85%	84%	83%	82%	81%
	Efficiency(220Vac)(Typ.)Note.1	91%	91%	91%	90%	90%	90%	89%	89%	88%	88%	87%	86%	85%	84%	83%	82%
	Voltage Range (V)Note.2	90～305Vac, OR 127~ 430Vdc (Derating may be need under low inputs, Refer to 'Derating Curve')															
	Voltage Rate (V)Note.2	100Vac-277Vac															
	Frequency Range (Hz)	47~63															
	Power Factor(Typ.)	0.99 (Typ.) with 70%~100% load,at 110Vac															
		0.97 (Typ.) with 70%~100% load,at 220Vac															
		>0.9 with 75%~100% load,at 277Vac															
	THD(Typ.)	10% Typical, at 220Vac input, with 70%~100% load conditions															
		15% Typical, at 110/277Vac input, with 70%~100% load conditions															
	AC Current(Typ.)	0.8A at 110VAC input, 0.4A at 220VAC															
	Inrush Current(Max.)	50A at 230Vac input 25℃ 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															
Output	Voltage range (V)	85~170	67~134	56~113	43~86	40~80	29~58	21~43	17~35	17-33	14~29	12~25	10~21	9~19	8~17	7~14	6~12
	Rated Current(mA)	350	450	530	700	750	1050	1400	1750	1800	2100	2450	2800	3150	3500	4200	5000
	Rated Power (W)	59.50	60.30	59.89	60.20	60.00	60.90	60.20	61.25	59.40	60.90	61.25	58.80	59.85	59.50	58.80	60.00
	Ripple&Noise Current(Typ.)	≤30%((PK-AV) /AV) with LED default mode and full load)															
	Current ToleranceNote.5	±5%															
	Line Regulation	±1%															
	Load Regulation	±3%															
	Current ADJ. Range	10% to 100%, continuously adjustable															
	Turn on delay Time	<1.5s, at 110Vac; <0.75s, at 220Vac															
Protection	Over Voltage(V)	180	142	120	92	86	63	48	40	38	33	29	25	23	21	17	15
		Protection type : Limit the output voltage , recovers automatically after fault condition is removed															
	Over Current	Protection type : constant current limiting, recovers automatically after fault condition is removed															
	Short Circuit	Hiccup mode, recovers automatically after fault condition is removed.															
	Over temperature	When the Tc of PSU rise to 110℃(Typ.), the PSU will shutdown The power supply should resume its normal operation when the inside temperature of PSU drop to normal temperature															
Environment	Operating Temp.	-40~+70℃(Refer to 'Derating Curve')															
	Tc	90℃ max															
	Operating Humidity	20~95%RH															
	Storage Temp., Humidity	-40~+80℃ , 10-95%RH															
	Temp. Coefficient	0.03%/℃ (0~50℃)															
	Vibration	10~500Hz, 5G 12min/cycle, period for 72min each along X、Y、Z axes															
Safety & EMC	Safety Standard	UL8750, UL1012,UL1310, CSA-C22.2 NO. 107.1,CSA-C22.2 NO. 223-M91, EN61347-1, EN61347-2-13															
	Withstand Voltage	I/P-O/P:3.75KVac, 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℃/70%RH															
	EMC Emission	EN55015/FCC Part 15 Class B, EN61000-3-2 Class C, EN61000-3-3															
	EMC Immunity	EN61000-4-2,3,4,5,6,8,11, EN61547 (Surge: L-N 4KV, L/N-Earth 6KV)															
UL Level	UL,CUL class 2							V	V	V	V	V	V	V	V	V	V
	NON-UL,NON-CUL class 2	V	V	V	V	V	V										
Others	MTBF	300,000 Hours,measured at full load,25℃ ambient temperature															
	Lifetime	50,000 Hours at Tc 75℃(Refer to"Life Time VS. Tcase (Ref.)")															
	Dimension	173 x 67.5 x 40 (mm) (LxWxH)															
	Weight	0.80kg															

Note.1: Measured at full load and steady-state temperature in 25℃ ambient(Efficiency will be about 2% lower if measured immediately after startup); Note. 2: Derating may be needed under low input voltages , Please Refer to 'Derating Curve' ; Note. 3: All parameters NOT specially mentioned are measured at 220VAC input , rated load and 25℃ of ambient temperature ; Note.4: see UL Level; Note.5: Includes set up tolerance, line regulation and load regulation.

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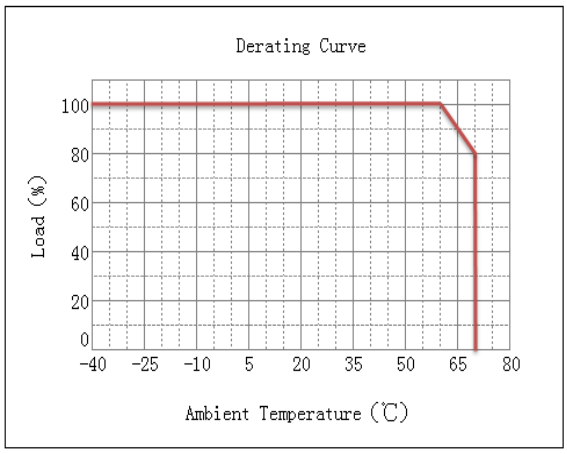
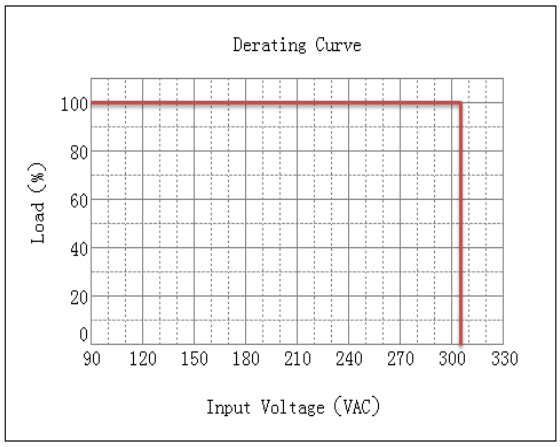
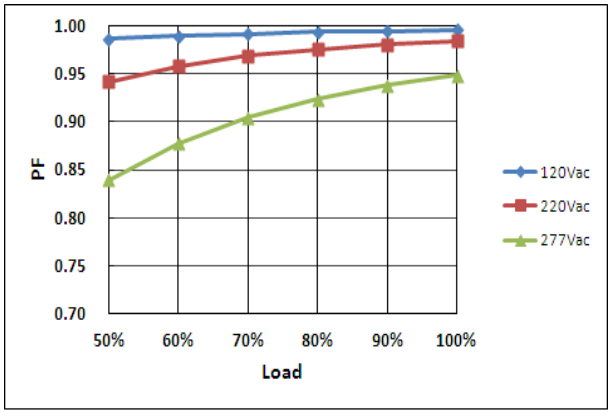
Derating Curve

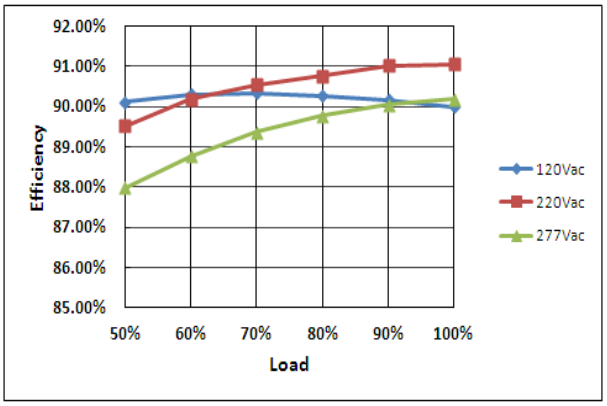




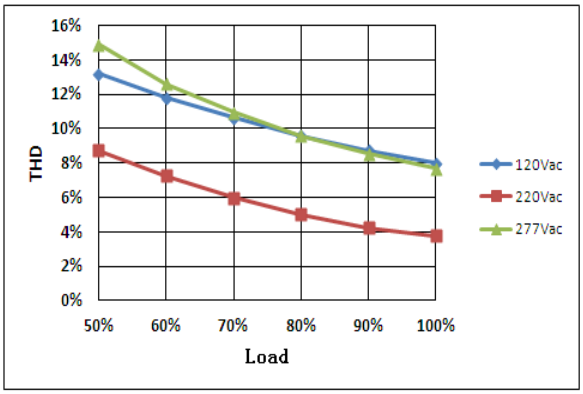
Power Factor VS. Load Curve



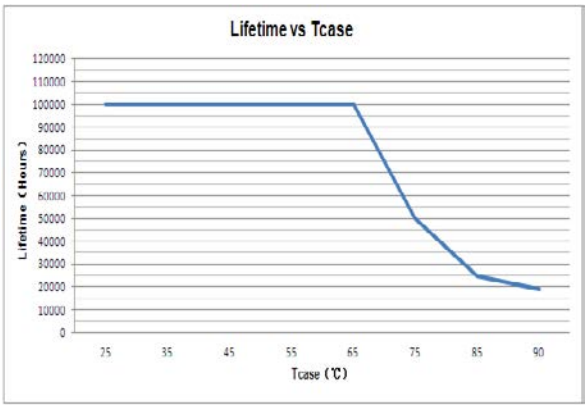
Efficiency VS. Load Curve



THD Curve



Life Time VS. Tcase (Ref.)



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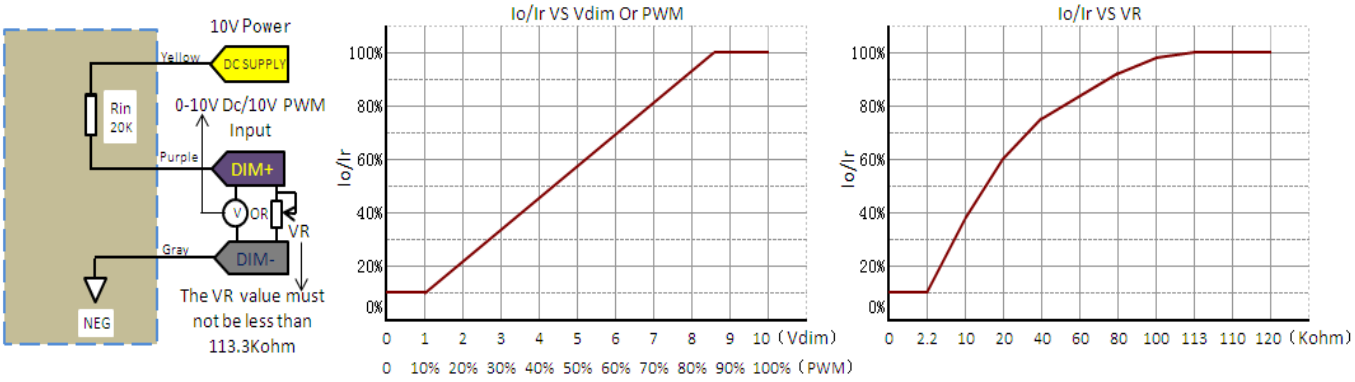
Dimming function description:

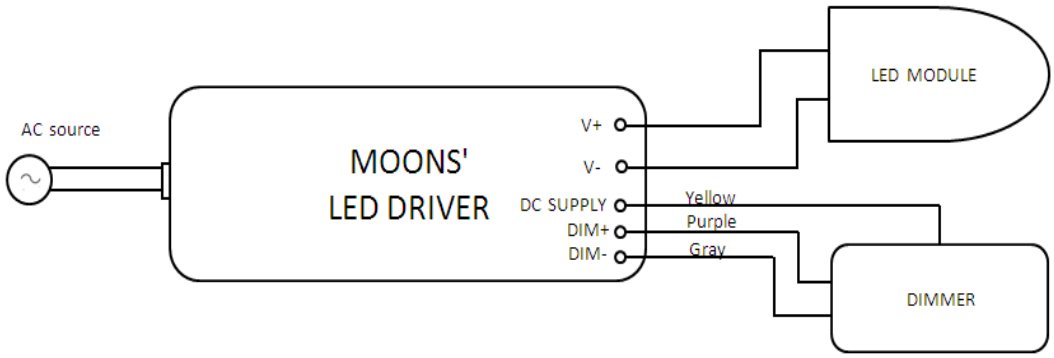
1.The dimmer control may be operated from an input signal of 0 - 10 Vdc / 10V PWM（Frequency range:500Hz to 5KHz,Duty:0-100%）.

2.With one external variable resistor,the VR value must not be less than 113.3Kohm.

Dimming module diagram and dimming cruve:



Dimming connection diagram:



Notes:

1.Io is actual output current with dimming control signal and Ir is rated output current.

2The 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	10V	12V	14V	
DC supply output source current	0 mA	-	10 mA	
Absolute maximum voltage on the DIM+	-2V	-	12V	
Source current on the DIM+	0 mA	-	0.01 mA	
Value of Rin (the resistor inside the LED driver which locate between the DIM+ and the DC	19.8k	20k	20.2k	

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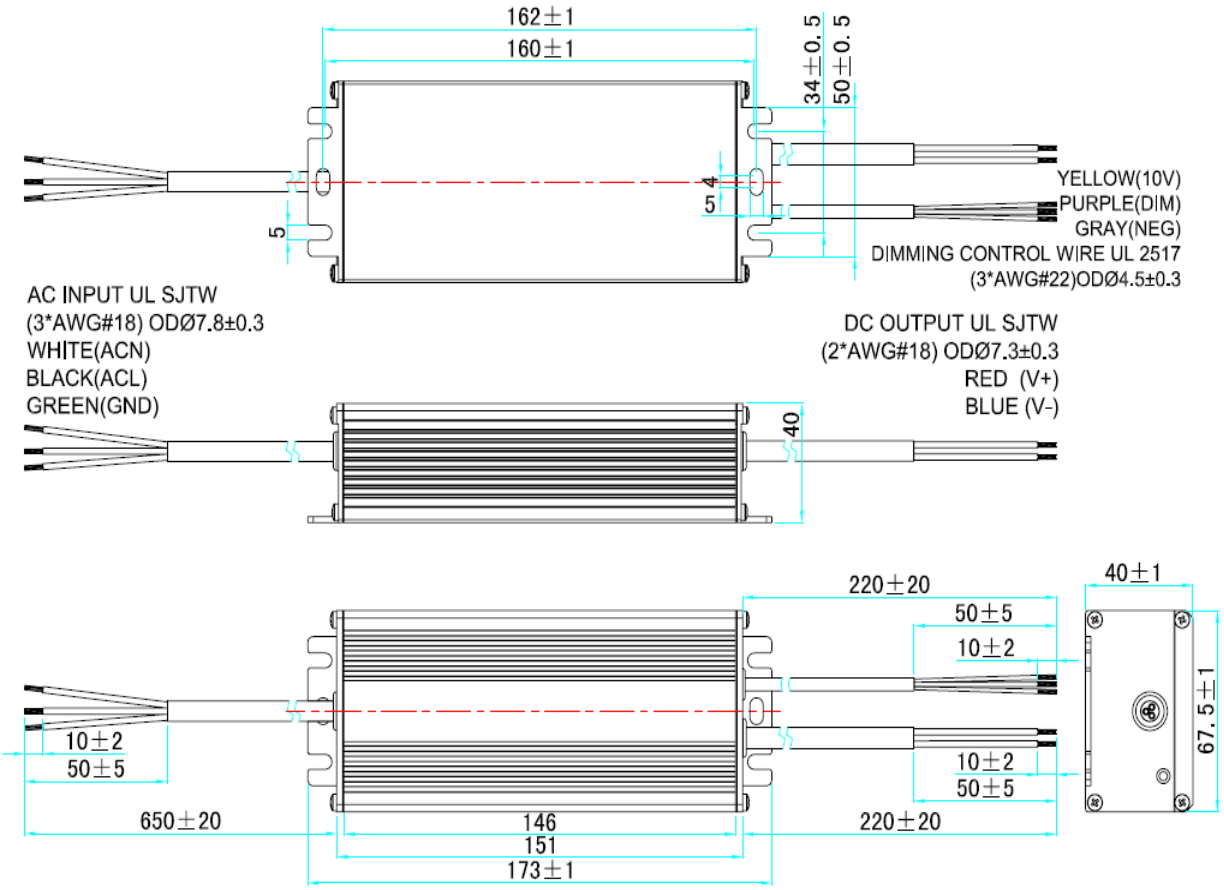
■ Mechanical Specification

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	Assignmen	Description	Wire Type	Assignmen	Description	Wire Type	Assignmen	Description
UL apporval	UL SJTW PVC	BLACK/L	3*AWG#18	UL SJTW PVC	RED/+	2*AWG#18	UL2517 PV CODΦ 4.5±0.3mm	YE/10V	3*AWG#22
		WHITE/N			BLUE/-			PU/DIM+	
		GREEN/GN						GR/NEG	

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