MU096AxxxAQD Series General - Outdoor

DWG NO.：MSSD-3926 A0

■ Features

- Input voltage: 90-305VAC
- Built-in active PFC function: 0.99 Typ.
- Low THD: 15% Typ.
- High efficiency: 89% Typ.
- IP67 design for indoor or outdoor installations
- High surge immunity
- Support 0-10V / 10V PWM
- Compliance to worldwide safety regulations for lighting
- Suitable for dry/damp locations

■ Specification

Model (MU096AXXXAQD)		175	210	245	280	315	357	420
Input	Efficiency(120Vac)(Typ.)Note.1	89%	88%	88%	88%	87%	87%	87%
	Efficiency(230Vac)(Typ.)Note.1	86%	85%	85%	85%	84%	84%	84%
	Voltage Range (V)Note.2	90～305Vac, OR 127~ 431Vdc (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 80%~100% load,at 120Vac						
		0.96 (Typ.) with 80%~100% load,at 230Vac						
		>0.9 with 80%~100% load,at 277Vac						
	THD(Typ.)	<15% with 80%～100% load, at 100Vac～277Vac						
		<20% with 50%~100% load, at 100Vac～277Vac						
	AC Current(Typ.)	1.2A at 100VAC input, 0.6A at 230VAC						
	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)	55	46	39	34	30.5	27	23
	Rated Current(mA)	1750	2100	2450	2800	3150	3570	4200
	Rated Power (W)	96	96	96	96	96	96	96
	Voltage ADJ. Range (V)	27~55	22~46	19~39	17~34	15~30.5	13~27	12~23
	Ripple&Noise Current(Typ.)	≤10%((PK-AV) /AV) with LED default mode and full load)						
	Current Tolerance	±5%						
	Line Regulation	±1%						
	Load Regulation	±3%						
	Current ADJ. Range	-						
	Turn on delay Time	<3s, at 120Vac; <1.5s, at 277Vac						
Protection	Over Voltage(V)	60	51	42.4	39	36	32	28
		Protection type: Voltage limiting.output will not excceed the upper limit voltage , recovers automatically after fault condition is removed.						
	Over Current	90%~110% Protection type : constant current limiting, recovers automatically after fault condition is removed.						
	Short Circuit	Constant current limiting, recovers automatically after fault condition is removed.						
	Over temperature	When the inside temperature 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.	-35~+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 Class 2,CSA-C22.2 No. 107.1, CSA C22.2 NO. 223-M91 Class 2,EN61347-1, EN61347-2-13						
	Withstand Voltage	I/P-O/P:3.75KVac 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 , EN61000-3-2 Class C, EN61000-3-3						
	EMC Immunity	EN61000-4-2,3,4,5,6,8,11（Surge L,N-FG 6KV，L-N 4KV），EN61547						
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	201 x 67.5 x 37 mm（LxWxH）						
	Weight	0.86kg						

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 230VAC input , rated load and 25℃ of ambient temperature ;

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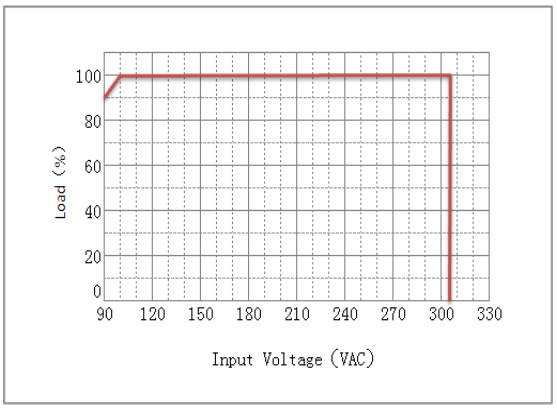
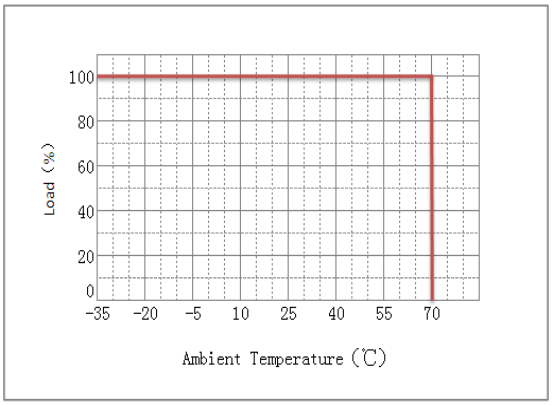
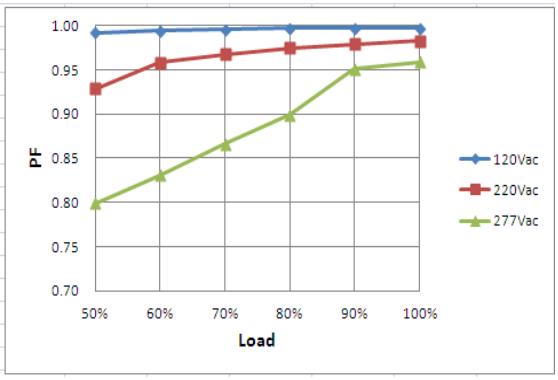
Derating Curve

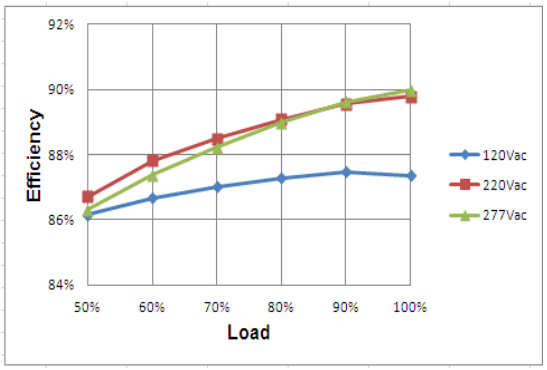




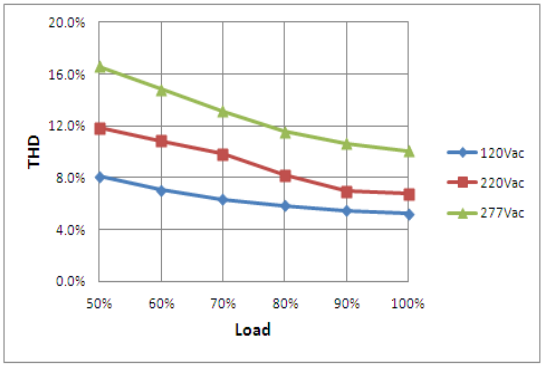
Power Factor VS. Load Curve



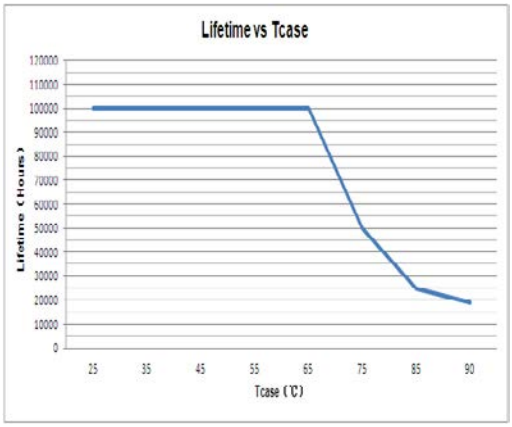
Efficiency VS. Load Curve



THD Curve



Life Time VS. Tcase (Ref.)



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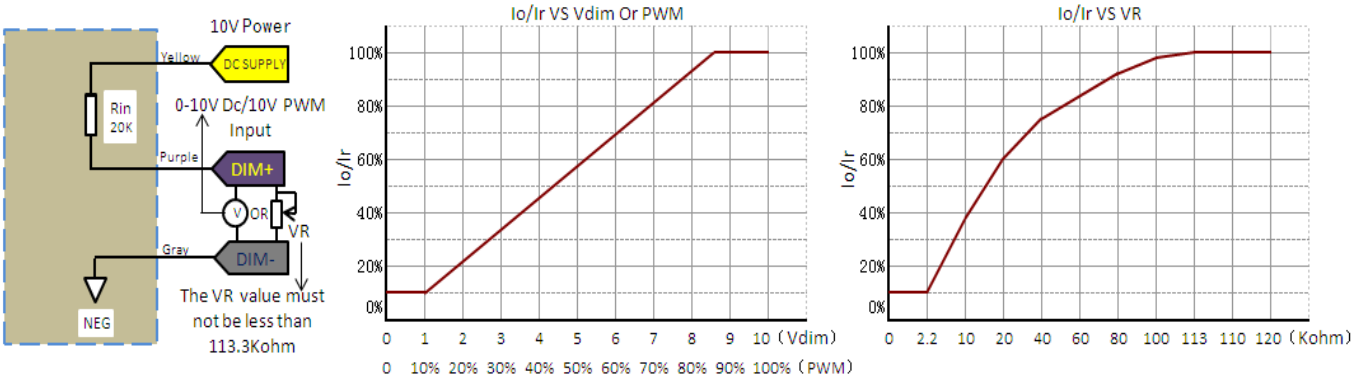
Dimming function description:

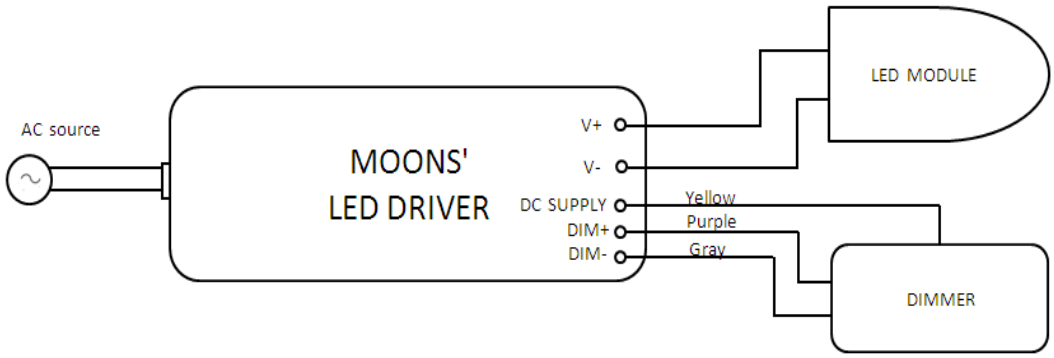
1.The dimmer control may be operated from an input signal of 0 - 10 Vdc / 10V PWM（Frequency range:500Hz to 5KHz,Duty:0-100%）.

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	8V	10V	12V	
DC supply output source current	0 mA	-	10 mA	
Absolute maximum voltage on the DIM+	-2V	-	12V	
Source current on the DIM+	0 mA	-	0.5 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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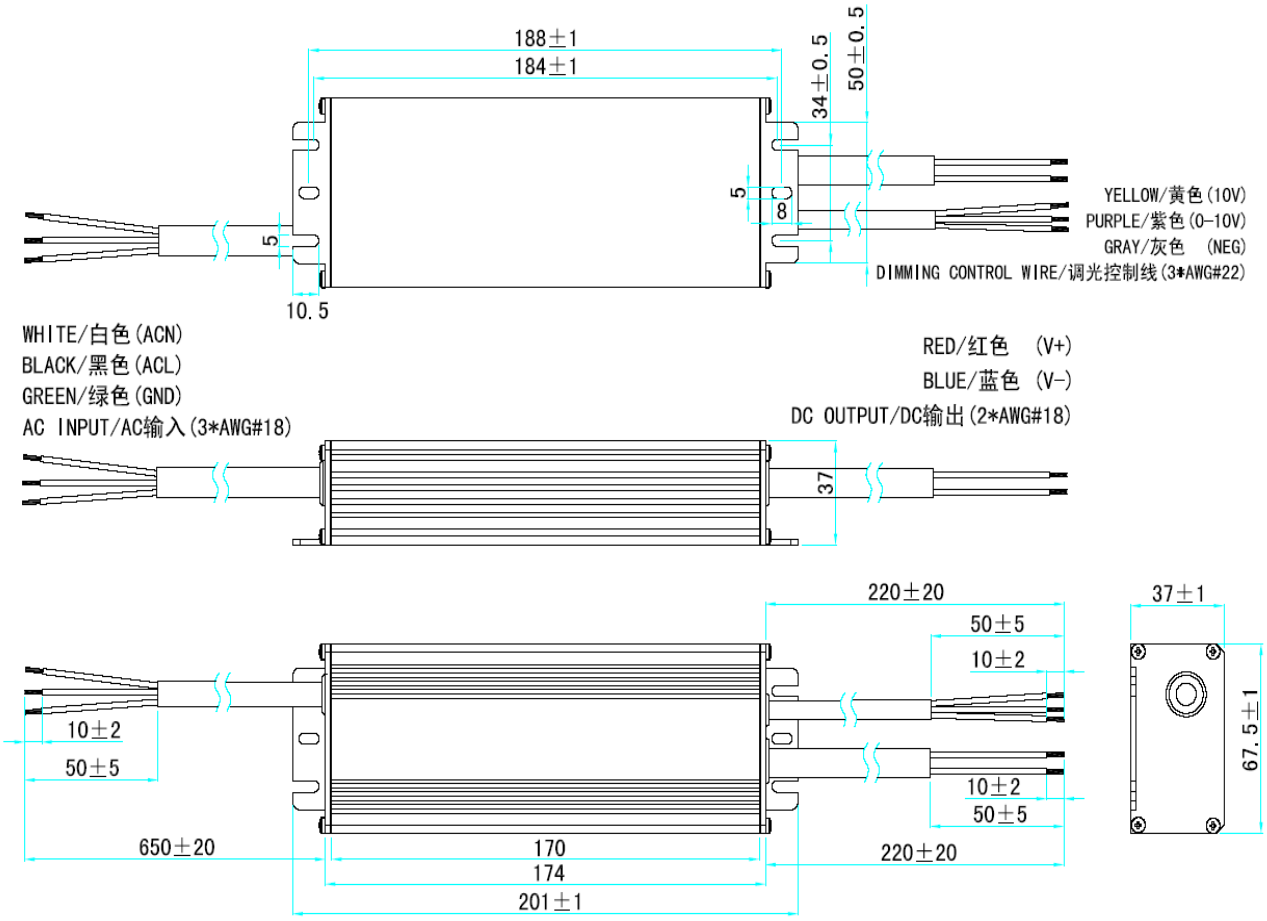
■ Mechanical Specification

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.

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