



- **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



■ **Specification**

Model		035	045	053	070	085	105	120	140	175	210	245	280	300	315	350	420	500
(MU120HXXXAQ_0-10V)																		
Input	Efficiency(120Vac)(Typ.) _{Note.1}	89%	89%	89%	89%	88%	88%	88%	88%	88%	87%	87%	87%	86%	86%	86%	85%	85%
	Efficiency(230Vac)(Typ.) _{Note.1}	91%	91%	91%	91%	90%	90%	90%	90%	90%	89%	89%	89%	88%	88%	88%	87%	87%
	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 80%~100% load,at 120Vac																
		0.96(Typ.),with 80%~100% load,at 230Vac																
		0.9(Typ.),with 80%~100% load,at 277Vac																
	THD(Typ.)	<15% (typical),at 100~277Vac input, with 80%~100% load conditions																
		<10% (typical), at 220Vac/50Hz input, with 80%~100% load conditions																
Output	AC Current(Typ.)	1.4A at 100VAC input, 0.7A at 230VAC																
	Inrush Current(Max.)	1.5A 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.)	1mA at 277Vac/60Hz																
	Voltage range (V)	171~343	133~261	113~222	86~171	70~141	57~114	50~100	43~86	34~69	29~57	24~48	21~43	20~40	19~38	17~34	14~28	12~24
	Rated Current(mA)	350	450	530	700	850	1050	1200	1400	1750	2100	2450	2800	3000	3150	3500	4200	5000
	Rated Power (W)	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120
	Ripple&Noise Current(Typ.)	≤30%((PK-AV typical) /AV) with LED default mode and full load)																
	Current Tolerance	±5%																
	Line Regulation	±3%																
	Load Regulation	±3%																
Protection	Current ADJ. Range	-																
	Turn on delay Time	<1.2s, at 120Vac; <1s, at 277Vac																
	Over Voltage(V)	446	347	280	222	180	148	134	112	90	74	62	56	52	49	44	36	31
	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.																
Environment	Over temperature	When the Tc of PSU rise to 90~110℃,Decreases output current,returning to normal after over temperature is removed.																
	Operating Temp.	-40~+70℃(Refer to 'Derating Curve')																
	Tc	90℃ max																
	Operating Humidity	10~100%RH																
	Storage Temp., Humidity	-40~+80℃ , 5-100%RH																
	Temp. Coefficient	0.03%/℃ (0~50℃)																
Safety & EMC	Vibration	10-500Hz, 5G 12min/cycle, period for 72min each along X、 Y、 Z axes																
	Safety Standard	UL8750, UL1012,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, 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	202 x 67.5 x 40 (mm) (LxWxH)																
	Weight	0.95kg																

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 ;

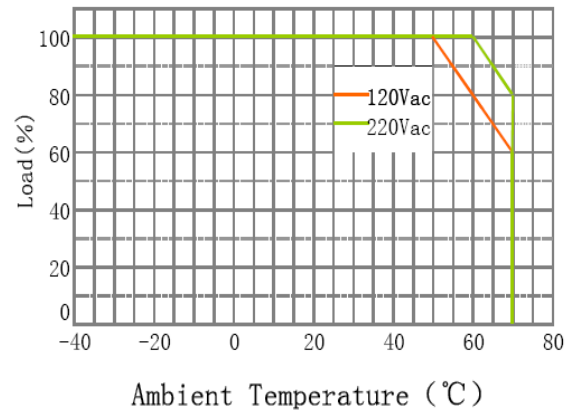
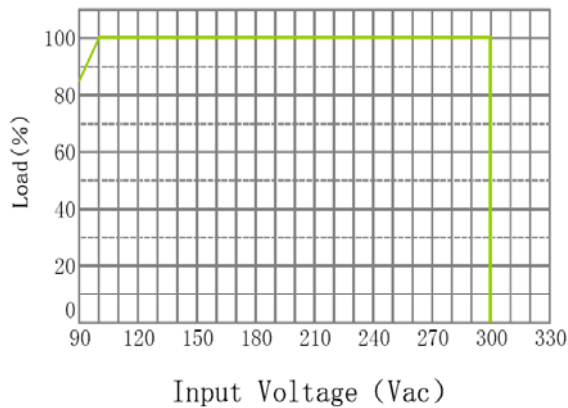
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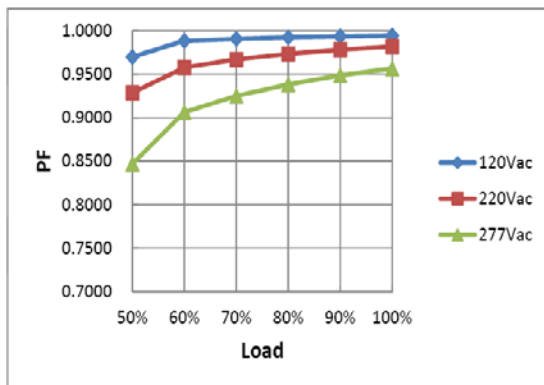
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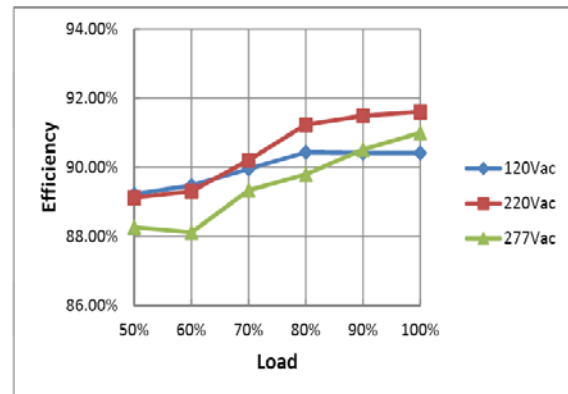
Derating Curve



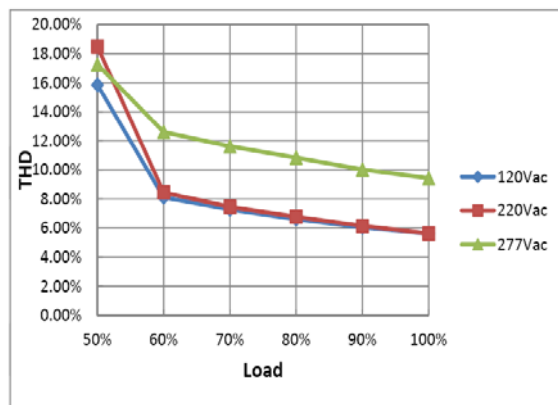
Power Factor VS. Load Curve



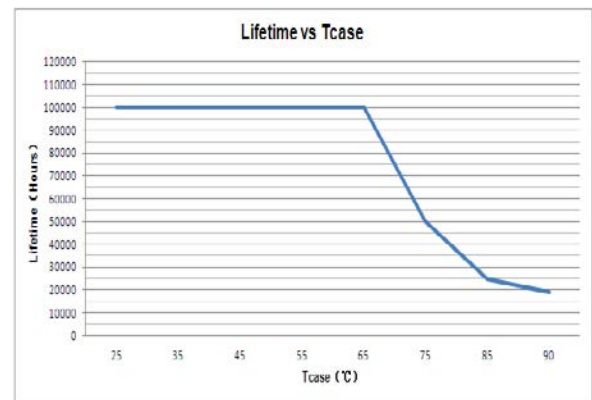
Efficiency VS. Load Curve



THD Curve



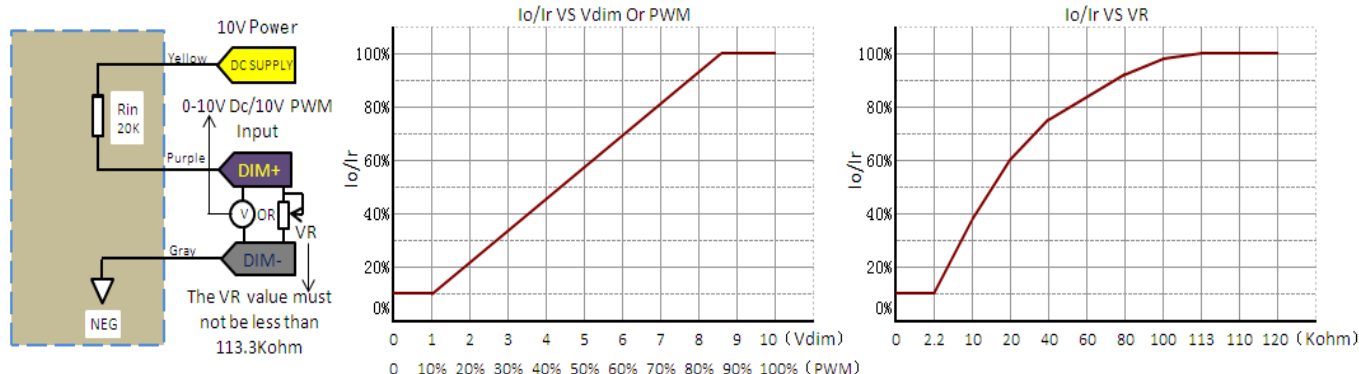
Life Time VS. Tcase (Ref.)



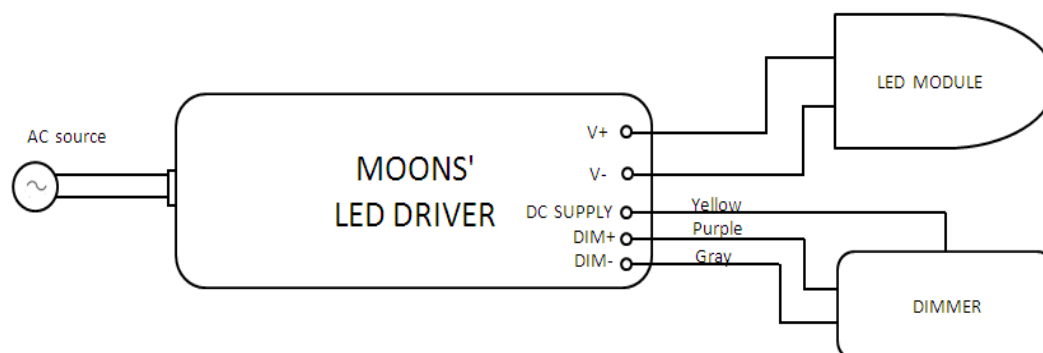
Dimming function description:

- 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:

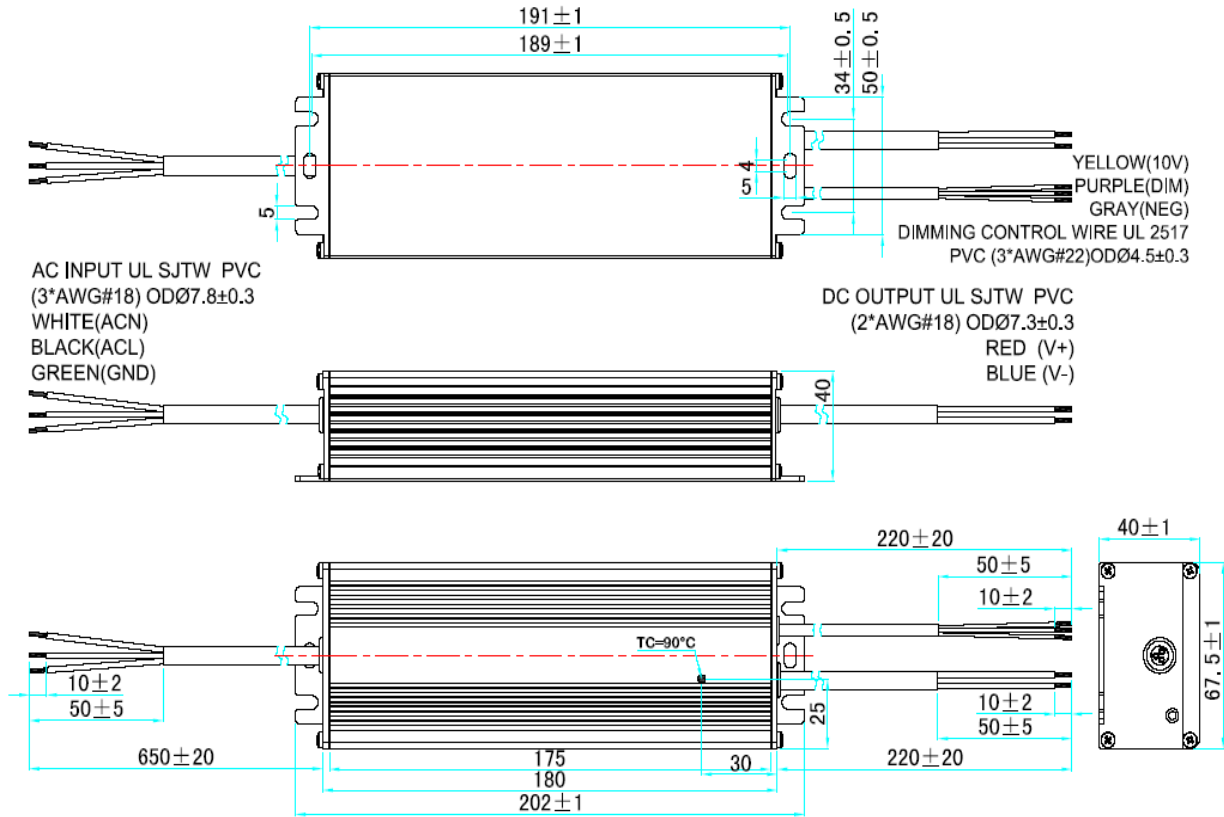
1. I_o is actual output current with dimming control signal and I_r is rated output current.
- 2The dimming control signal can be operated output current from 100% to 10% I_r ,output voltage must be maintained above 50% of the rated output voltage.
- 3.Do not connect dimming wire to the output;otherwise,the 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% I_r . (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 R_{in} (the resistor inside the LED driver which locate between the DIM+ and the DC	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
ENEC/CE approval for class II	RUBBER CCC+VDE 60245 IEC57 YZW/H05RN-F	BROWN/L	2*1.0mm ² OD $\varnothing$ 6.8 $\pm$ 0.3mm	RUBBER CCC+VDE 60245 IEC57 YZW/H05RN-F	Brown/+	2*1.0mm ² OD $\varnothing$ 6.8 $\pm$ 0.3mm	H05HRN-FOD $\varnothing$ 6.3 $\pm$ 0.2mm or UL2517 PVCOD $\varnothing$ 4.5 $\pm$ 0.3mm	BK/WH or YE/10V	3*0.5mm ² or 3*AWG#22
		BLUE/N			Blue/-			PU/DIM+	
UL approval	UL SJTW PVC	BLACK/L	3*AWG#18	UL SJTW PVC	RED/+	2*AWG#18	UL2517 PV COD $\varnothing$ 4.5 $\pm$ 0.3mm	YE/10V	3*AWG#22
		WHITE/N			BLUE/-			PU/DIM+	
PSE approval	PSE HVCTF/VCTF/VCTFK PVC	BLACK/L	3*0.75mm ² OD $\varnothing$ 6.8 $\pm$ 0.3mm	PSE HVCTF/VCTF/VCTFK PVC	WHITE/+	2*0.75mm ² OD $\varnothing$ 6.7 $\pm$ 0.3mm	UL2517 PVCOD $\varnothing$ 4.5 $\pm$ 0.3mm	YE/10V	3*AWG#22
		WHITE/N			BLACK/-			PU/DIM+	
CCC/CB/CE approval	RUBBER CCC+VDE 60245 IEC57 YZW/H05RN-F	BROWN/L	3*1.0mm ² OD $\varnothing$ 7.3 $\pm$ 0.3mm	RUBBER CCC+VDE 60245 IEC57 YZW/H05RN-F	Brown/+	2*1.0mm ² OD $\varnothing$ 6.8 $\pm$ 0.3mm	H05HRN-FOD $\varnothing$ 6.3 $\pm$ 0.2mm or UL2517 PVCOD $\varnothing$ 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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