



■ **Features**

- Input voltage: 90-305VAC
- Built-in active PFC function: 0.99 Typ.
- Low THD: 10% Typ.
- High efficiency: 93% 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																			
(MU150HXXXAQ_0-10V) (1)		035	045	053	070	085	105	120	140	150	175	185	210	245	280	300	315	350	420
(MU150HXXXAQ_0-10V/II) (2)		500																	
Input	Efficiency(120Vac)(Typ.) _{Note.1}	90.0%	90.0%	90.0%	90.0%	90.0%	89.0%	89.0%	89.0%	89.0%	89.0%	89.0%	89.0%	89.0%	89.0%	88.0%	88.0%	88.0%	88.0%
	Efficiency(230Vac)(Typ.) _{Note.1}	93.0%	93.0%	93.0%	93.0%	93.0%	92.0%	92.0%	92.0%	92.0%	92.0%	92.0%	92.0%	92.0%	92.0%	91.0%	91.0%	91.0%	91.0%
	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 with 80%~100% load,at 277Vac																	
	THD(Typ.)	<10% at 220VAC input 50Hz,80%~100% load																	
		<15% at 110VAC and 277VAC input 60Hz,80%~100% load																	
Output	AC Current(Typ.)	1.8A at 100VAC input, 0.9A at 230VAC																	
	Inrush Current(Max.)	65A 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 input for class I; 0.5mA at 277VAC/60Hz input for classII																	
	Voltage range (V)	214-428	167-333	142-283	107-214	88-176	71-142	63-125	54-107	50-100	43-85	41-81	36-71	31-61	27-53	25-50	24-48	21-42	18-36
	Rated Current(mA)	350	450	530	700	850	1050	1200	1400	1500	1750	1850	2100	2450	2800	3000	3150	3500	4200
	Rated Power (W)	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
	Ripple&Noise Current(Typ.)	≤10%((PK-AV) /AV) with LED default mode and full load)																	
	Current Tolerance	±5%																	
	Line Regulation	±1%																	
	Load Regulation	±3%																	
Protection	Current ADJ. Range	-																	
	Turn on delay Time	<1.2s, at 120Vac; <1s, at 277Vac																	
	Over Voltage(V)	599	466	396	300	246	199	175	150	140	119	113	99	85	74	70	67	59	50
	Short Circuit	Hiccup mode.The power supply shall be self-recovery when the fault is removed.																	
Environment	Over temperature	Protection type : Decrease output current . When TC reaches 105±10℃ , the output current decrease to 50% rate value until the TC reaches 75±15																	
	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℃)																	
Safety & EMC	Vibration	10-500Hz,5G 12min/cycle , period for 72min each along X、Y、Z axes																	
	Safety Standard	UL8750, UL1012, CAN/CSA-C22.2No.107.1-01,EN61347-1, EN61347-2-13 ,EN60598-1,EN62384,GB19510.1,GB19510.14,GB7000.1																	
	Withstand Voltage	I/P-O/P:3.75KVAC I/P-FG:1.875KV O/P-FG:1.5KV for class I;I/P-O/P:3.75KVAC I/P-Case:3.75KV O/P--Case:1.5KV for class II																	
	Isolation Resistance	I/P-O/P ,I/P-FG,O/P-FG:100M Ohms/500VDC/25℃/70%RH for class I;I/P-O/P ,I/P-Case,O/P-Case:100M Ohms/500VDC/25℃/70%RH for class II																	
	EMC Emission	EN55015/FCC Part 15 Class B , EN61000-3-2 Class C , EN61000-3-3																	
Others	EMC Immunity	0-4-2,3,4,5,6,8,11 (Surge L,N-FG 6KV , L-N 4KV) , EN61547 for class I;EN61000-4-2,3,4,5,6,8,11 (Surge L,N-Case 4KV , L-N 4KV) , EN61547 for class II																	
	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	221 x 67.5 x 40 (mm) (LxWxH)																	
Weight		1.05kg(Typ.)																	

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 ;

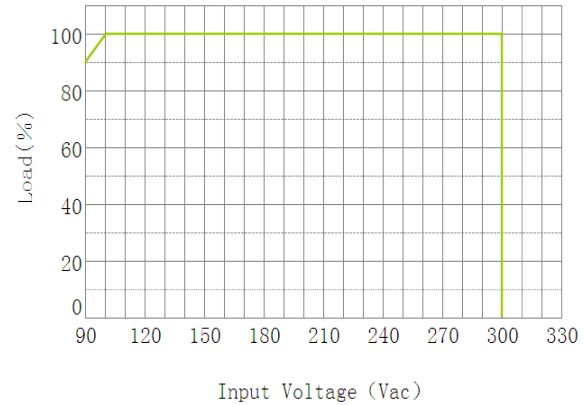
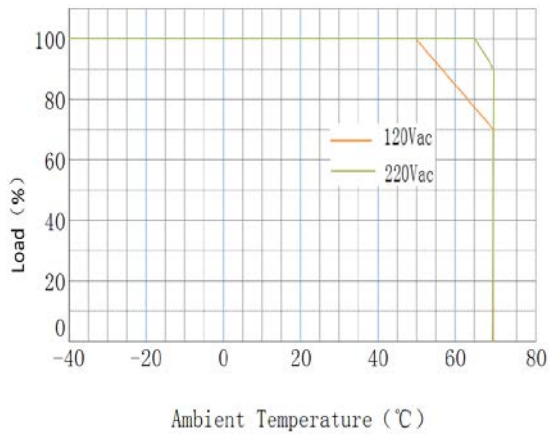
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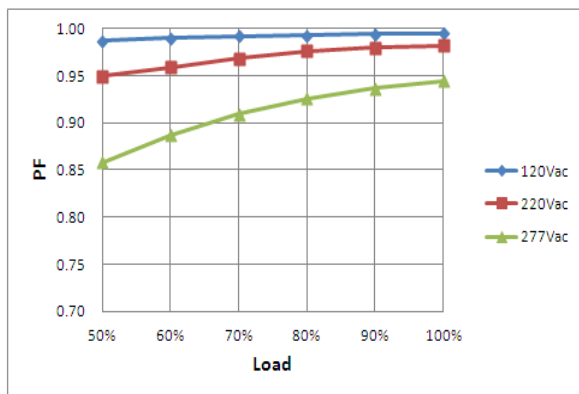
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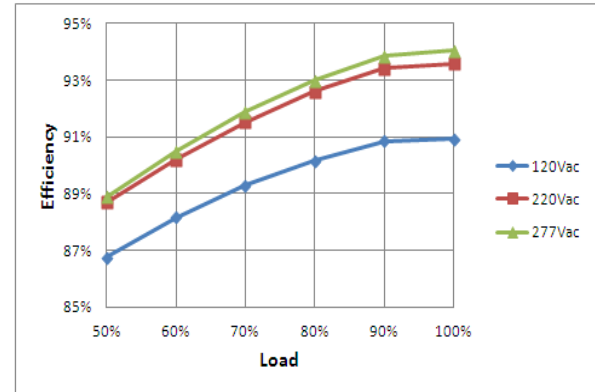
Derating Curve



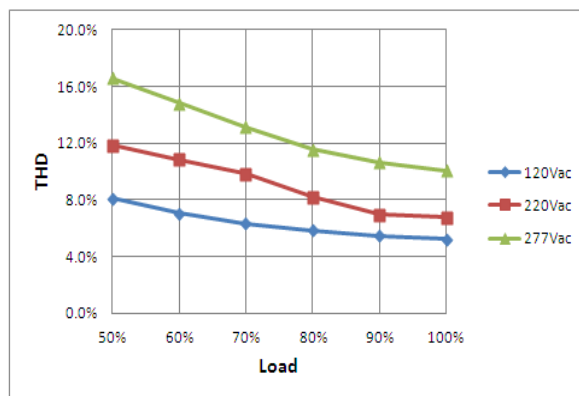
Power Factor VS. Load Curve



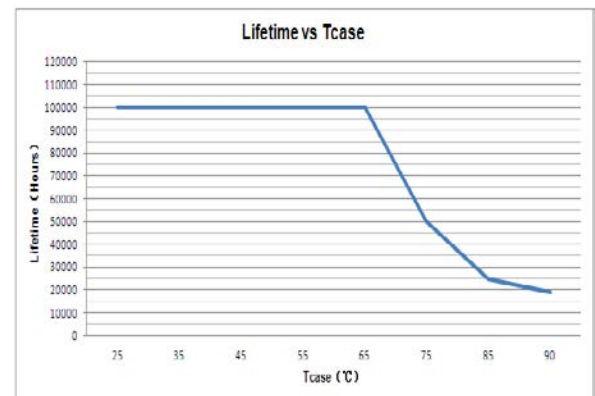
Efficiency VS. Load Curve



THD Curve



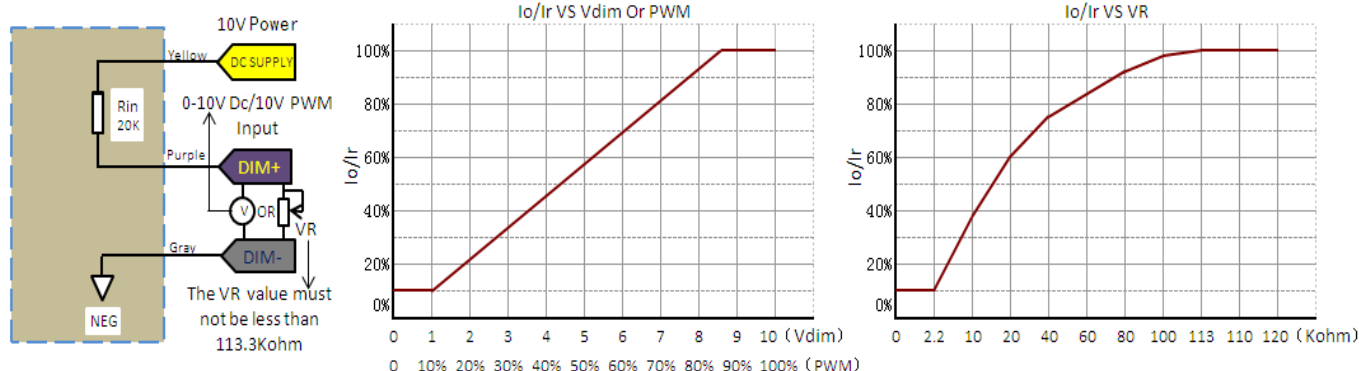
Life Time VS. Tcase (Ref.)



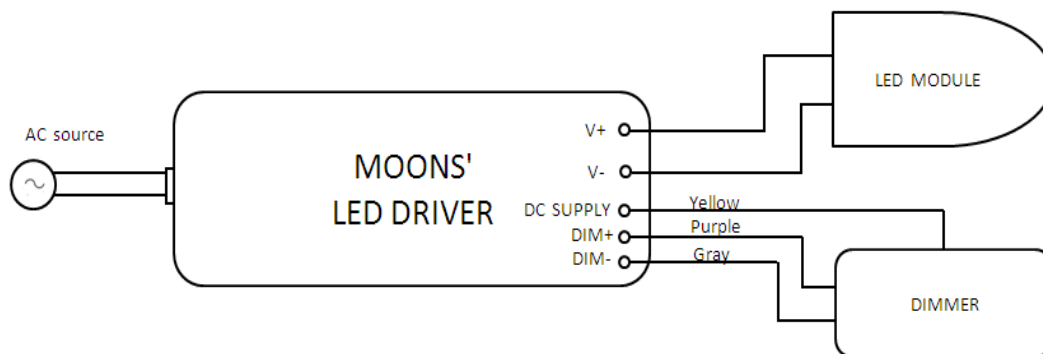
Dimming function description:

- 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:

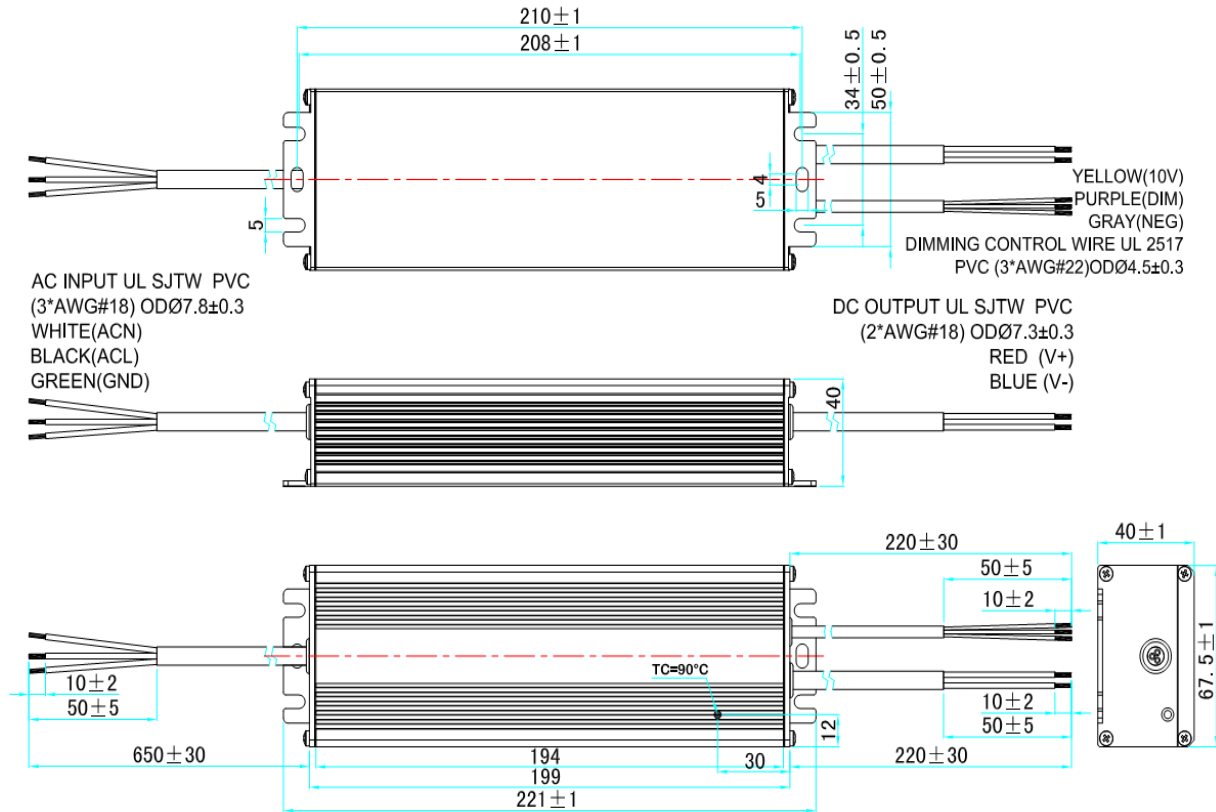
- 1.Io is actual output current with dimming control signal and Ir is rated output current.
- 2The dimming control signal can be operated output current from 100% to 10% Ir,output voltage must be maintained above 50% of the rated output voltage.
- 3.Do not connect dimming wire to the output;otherwise,the 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	

■ 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 ODΦ 6.8±0.3mm	RUBBER CCC+VDE 60245 IEC57 YZW/H05RN-F	Brown/+	2*1.0mm ² ODΦ 6.8±0.3mm	H05HRN-FODΦ 6.3±0.2mm or UL2517 PVCODΦ 4.5±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 CODΦ 4.5±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 ODΦ 6.8±0.3mm	PSE HVCTF/VCTF/VCTFK PVC	WHITE/+	2*0.75mm ² ODΦ 6.7±0.3mm	UL2517 PVCODΦ 4.5±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 ODΦ 7.3±0.3mm	RUBBER CCC+VDE 60245 IEC57 YZW/H05RN-F	Brown/+	2*1.0mm ² ODΦ 6.8±0.3mm	H05HRN-FODΦ 6.3±0.2mm or UL2517 PVCODΦ 4.5±0.3mm	BK/WH or YE/10V	3*0.5mm ² or 3*AWG#22
		BLUE/N			Blue/-			PU/DIM+	
		YE-GN/GN						GR/DIM-	

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