



Product Features

- Universal input voltage / Full range: 110~305Vac;
- Constant power design, output current programming adjustable;
- (M types) off-line programmable, (V types) output current adjustable by built-in potentiometer;
- 3-in-1 dimmable: 0~10Vdc / PWM/ Timer dimming. Dim-to-off;
- Constant lumen output;
- Output and Dimming Signal Isolating;
- Surge protection: 6KV line-line , 10KV line-earth;
- Protections: Input OVP/Input UVP/SCP/OTP;
- IP67 design for indoor and outdoor applications;
- Suitable for dry / damp / wet locations;
- 5 years warranty.

Application

- Suitable for LED roadway lighting, industrial lighting, landscape lighting, etc.

DESCRIPTION

The X6-75W series is a 75W outdoor off-line programmable LED driver that operates in constant current with high PF value and universal input voltage range 110~305Vac model. A wide range of output current in a single driver, which delivers maximum flexibility with customized operating settings and intelligent control options for lighting manufacturers, as one driver can be adjusted for many different luminaire designs. X6 also helps clients to improve logistics and inventory management. The compact metal case and high efficiency enables the driver to operate with high reliability and extending product lifetime. Overall protection is provided against lightening surge, input over voltage, input under voltage, short circuit, and over temperature, to ensure low failure rate.

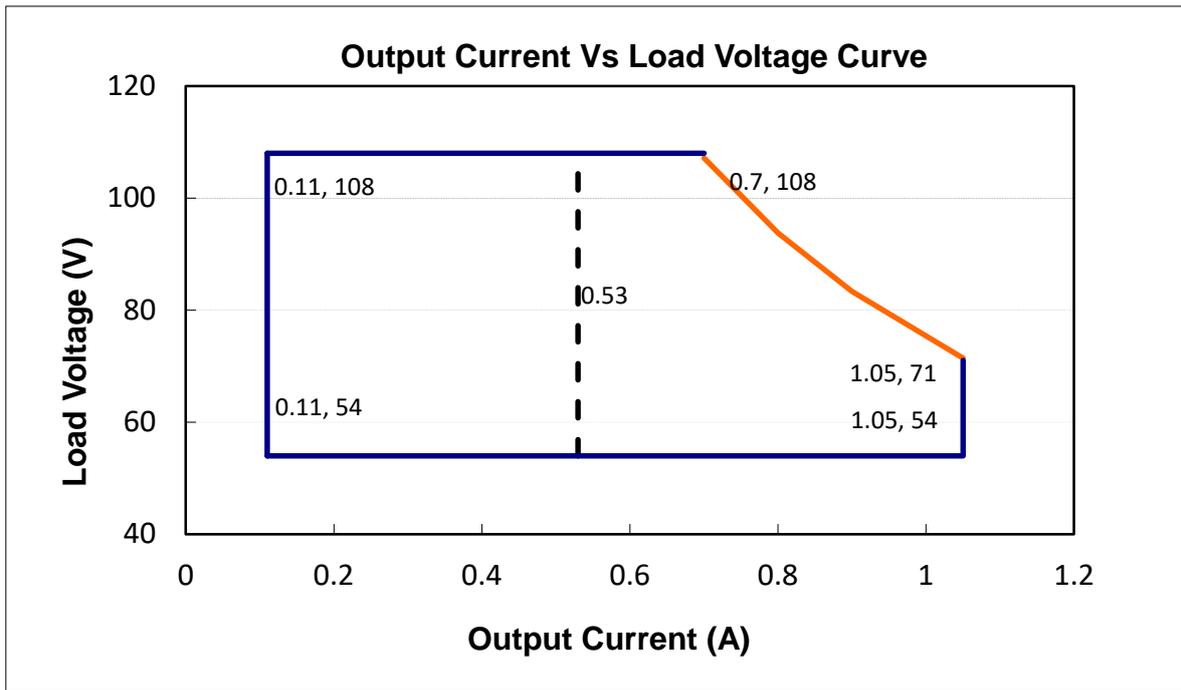
MODELS

Model Number [1]	Max Output Power (W)	Output Voltage Range (Vdc)	Output Current Adjustable Range (A)	Full Power Current Adjustable Range (A) [2]	Default Output Current Setting(A)	Typical Efficiency [3]	Power Factor
X6-075Y108	75	54-108	71-108	0.70-1.05	0.7	90%	0.96

Notes:

- [1]. Y can be M or V. Y=M means dimmable and off-line programmable, The adjustable lout range: 10%-100% I_{max}; Y=V means non-dimmable and output current adjusted by built-in potentiometer.
- [2]. Output current adjustable range with constant power at max output power;
- [3]. All specifications are measured at 25°C ambient temperature, input voltage 240Vac, and the typical value tested by full load if no specific note.

OPERATING AREA I-V



Notes: The drivers are not allowed to work in overloaded conditions, otherwise the warranty will expire.

Y=V is suitable for the right area of the dotted line; Y=M is suitable for the solid line contain area.

INPUT SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Notes			
Input Voltage	90Vac	100-277Vac	305Vac	Rated Input Voltage is 240Vac			
Input Frequency	47Hz	50/60	63Hz				
Leakage Current	-	-	0.7mA	277Vac/60Hz			
Input AC Current	-	-	1.1A	100-277Vac & full load			
Inrush Current	-	-	75A	230Vac & full load			
Standby Power Consumption			2W	230Vac/50Hz			
Power Factor	0.97	0.99	-	120Vac, 50-60Hz, full load			
	0.95	0.97		230Vac, 50-60Hz, full load			
	0.9	0.92		277Vac, 50-60Hz, full load			
THD	-	8%	15%	100-240Vac, 50-60Hz, 70%-100% load			
	-	-	20%	277Vac, 50-60Hz, 70%-100% load			
Max. NO. of PSUs on CIRCUIT BREAKER	B10	3	B16	4	B25	7	230Vac
	C10	5	C16	7	C25	11	

OUTPUT SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-5%Iset	-	5%Iset	
Output Current Setting Range (A) X6-075Y108	0.53	-	1.05	The 'M type' adjustable lout range: 10%-100% I _{max} ,
Output Current Setting Range with Constant Power X6-075M108	0.7	-	1.05	
Total Output Current Ripple(pk-pk)	-	5%	10%	20MHz BW, full load& LED load, the ripple would be tiny different under different LED load.
Startup Overshoot Current	-	-	10%	100~277Vac & 100% Load, load is LED
No Load Output Voltage X6-075Y108	-	-	120	
Line Regulation	-1%	-	+1%	25°C±10°C ambient temperature, input voltage changes from 100Vac to 277Vac.
Load Regulation	-3%	-	+3%	25°C±10°C ambient temperature, Input Voltage 230Vac, load changes from 60% to 100%.
Turn-on Delay Time	-	1S	3S	120Vac, 100% load
	-	0.5S	1S	230Vac, 100% load

GENERAL SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Notes
Efficiency @120Vac X6-075Y108 I _o =0.7 I _o =1.05	86% 86%	88% 88%	-	Measured at full load and 25 °C a temperature
Efficiency @230Vac X6-075Y108 I _o =0.7 I _o =1.05	88% 88%	90% 90%	-	Measured at full load and 25°C ambient temperature
Efficiency @277Vac X6-075Y108 I _o =0.7 I _o =1.05	88% 88%	90% 90%	-	Measured at full load and 25°C ambient temperature
Dielectric Strength	Input-Output	-	3750Vac	-
	Input-PE	-	1600Vac	-
	Output-PE	-	1600Vac	-
Grounding Resistance	-	-	0.1Ω	25A/60S, under 25°C±10°C ambient temperature
Insulation Resistance	10MΩ	-	-	Input-Output, Input-PE, Output-PE, 500Vdc/60S/25°C/70%RH
MTBF	-	200000Hrs	-	25°C±10°C ambient temperature, 230Vac, 80% load (MIL-HDBK-217F)

Lifetime	-	50000Hrs	-	230Vac&100% load, 75°C case temperature, refer to lifetime curve for details
Ambient Temperature	-40°C		+60°C	230Vac&100% load
Operating Case Temperature for Safety Tc_s	-40°C	-	+90 °C	
Operating Case Temperature for Warranty Tc_s	-40°C	-	+75°C	5 years warranty case temperature Humidity: 10% to 95% RH
Storage Temperature	-40°C	-	+85°C	Humidity: 5% to 100% RH
Dimensions (LxWxH)mm	L128.6*W68*H37			
Net Weight	570±100g/PCS			
Package	L488mm*W298mm*H200mm; 15PCS/Ctn, Gross Weight:9.8Kg			

DIMMING

Parameter	Min.	Typ.	Max.	Notes	
0~10V Absolute Maximum Voltage on the V dim (+) Pin	-	10V	-		
0~10V Source Current on V dim(+)Pin	-	200uA	400uA		
Dimming Output Range	X6-075M108	10%Imax	-	100%Imax	I _{max} =1.05A
	X6-075M108	0.11	-	1.05	
Recommended Dimming Range for 0-10V	0V	-	10V	Default 0-10V/ PWM Dimming(0-10V,0-9V,0-5V,0-3.3V Positive and Reverse Logic can be customized as request)	
PWM_in High Level	9.7V	-	10.3V		
PWM_in Low Level	0V	-	0.3V		
PWM_in Frequency Range	300Hz	-	2KHz		
PWM_in Duty Cycle	1%	-	99%		

SAFETY STANDARDS

Safety Category	Country / Territory	Standards	Approved
CCC	China	GB/T 19510.213, GB/T 19510.1	√
CE	Europe	EN61347-1, EN61347-2-13	√
		EN62493	√
		EN62384	√
ENEC	CB Countries	IEC61347-1, IEC61347-2-13	√
CB	India	IS 15885(PART 2/SEC 13)	√
BIS	USA	UL 8750	√
UL	Canada	CSA C22.2 No.250.13	√
CUL	South Korea	K61347-1, K61347-2-13	√
KC	Japan	J61347-1, J61347-2-13	√
PSE	Australia	AS/NZS IEC 61347.2.13	√
SAA		AS/NZS 61347.1	√
		ГОСТ Р МЭК 61347-1-2011 ГОСТ IEC 61347-2-13-2013	√

EAC	Russia	ГОСТ IEC 62493-2014 СТБ EH 55015-2006 ГОСТ IEC 61547-2013 ГОСТ 30804.3.2-2013 (IEC 61000-3-2:2009) ГОСТ 30804.3.3-2013 (IEC 61000-3-3:2008)	
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Isolation conditions

Insulation	Input/Mains	Dimming	LED Output	Case
Input/Mains	/	Double	Double	Basic
Dimming	Double	/	Basic	Basic
LED Output	Double	Basic	/	Basic
Case	Basic	Basic	Basic	/

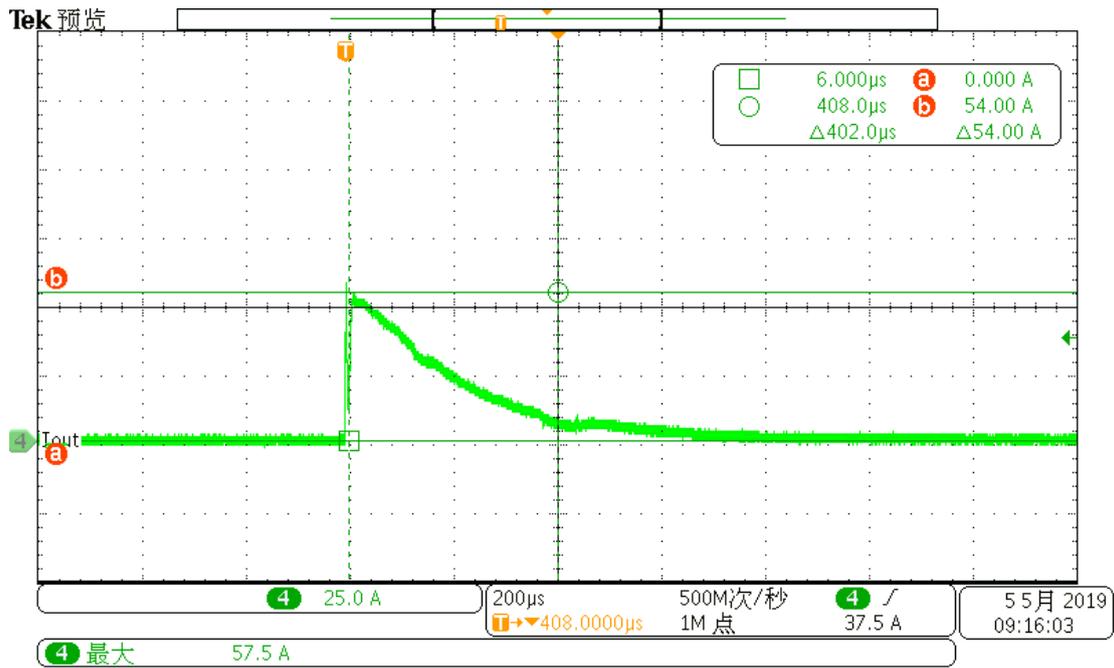
EMC COMPLIANCE

EMC Category	Country / Territory	Standards	Approved
CCC	China	GB/T 17743, GB 17625.1	√
CE	Europe	EN 55015	√
		EN 61000-3-2, EN 61000-3-3	√
		EN61000-4-2,3,4,5,6,11	√
		EN 61547	√
KC	South Korea	K61547	
		K00015	
PSE	Japan	J55015	
FCC	USA	FCC part 15	√

NOTE:

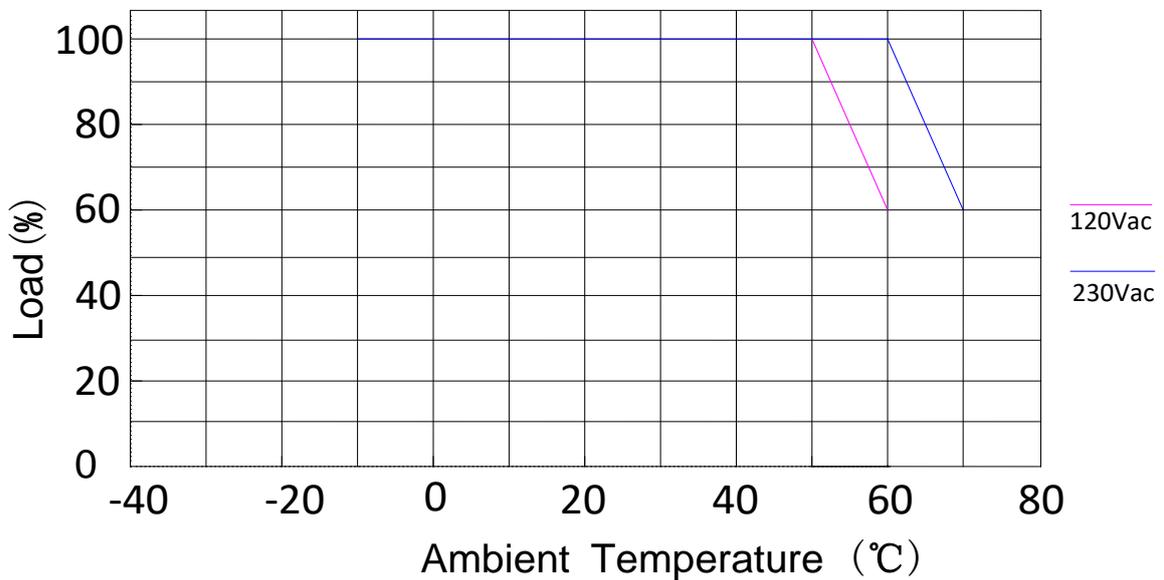
This LED driver meets the EMI specifications above, but as a component of a luminaire, the end customer needs to identify the EMI performance of a luminaire including the LED driver, other devices connected to the driver, and on the luminaire itself.

INRUSH CURRENT WAVEFORM

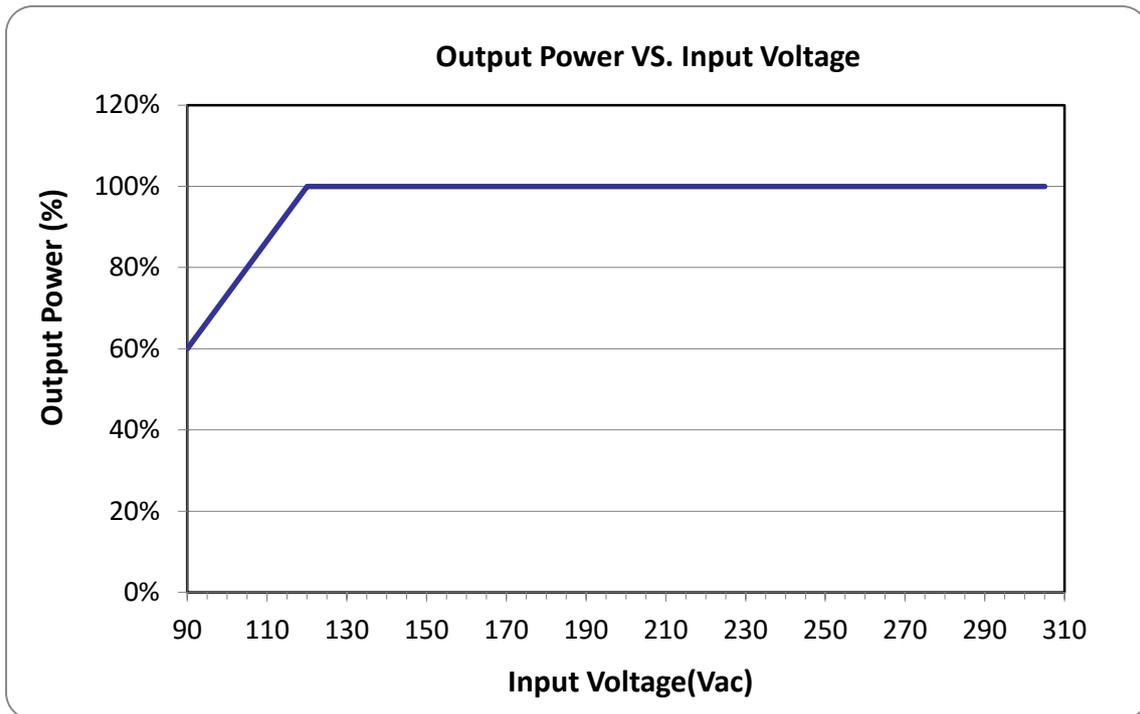


DERATING CURVE

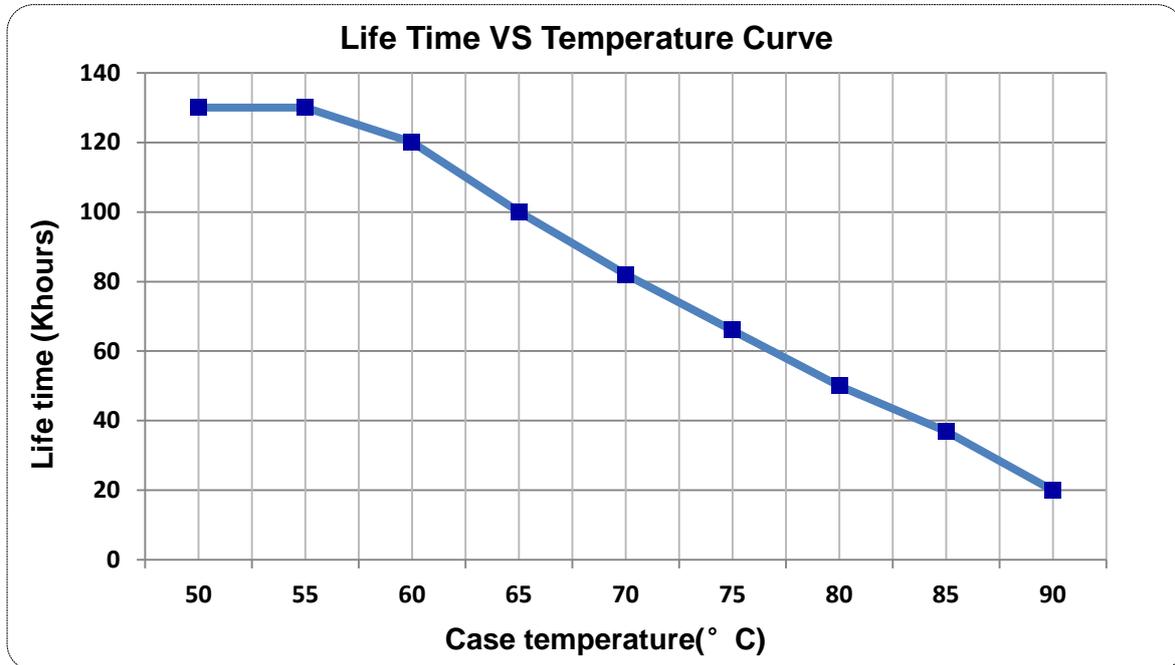
Derating Curve



OUTPUT POWER VS INPUT VOLTAGE

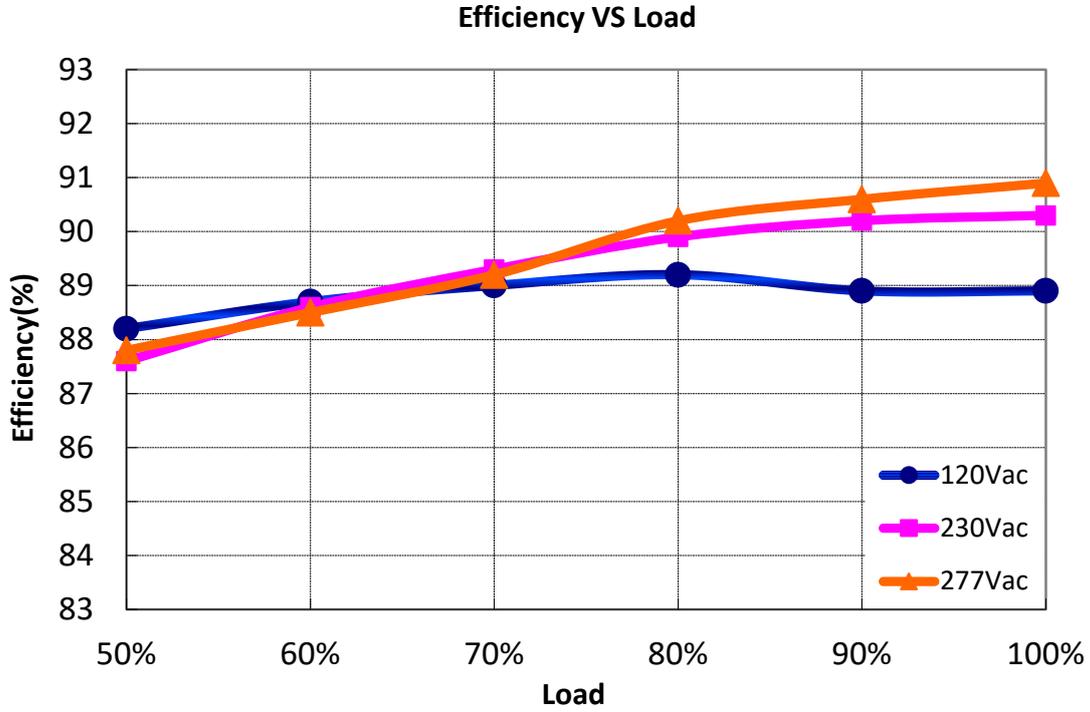


LIFETIME VS CASE TEMPERATURE

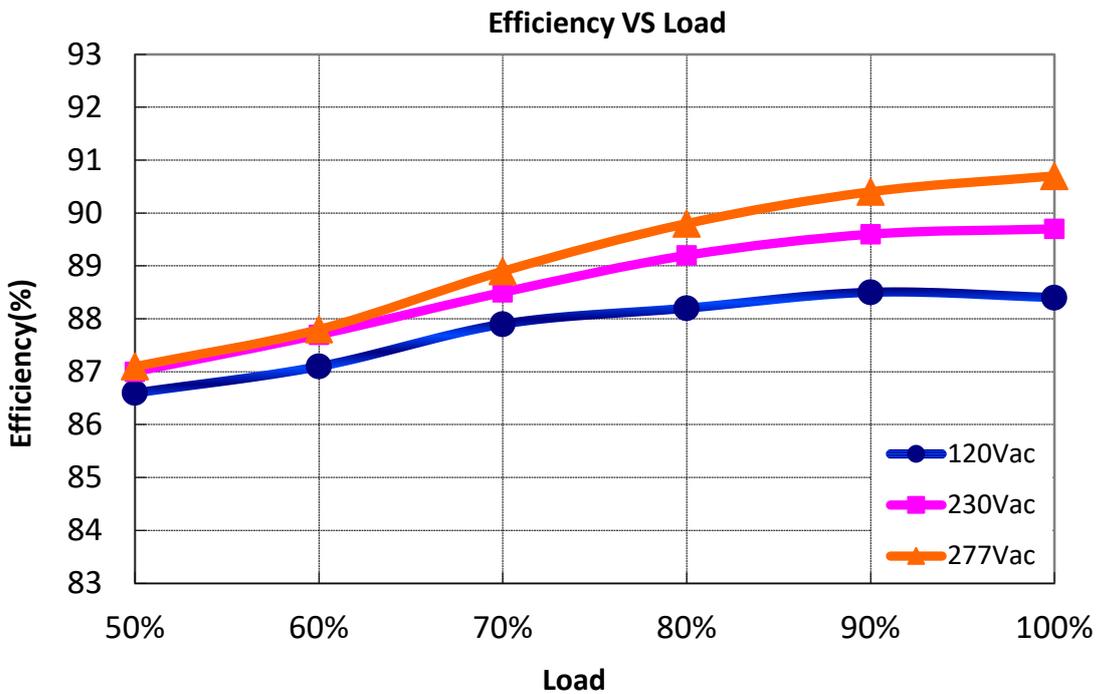


EFFICIENCY VS LOAD

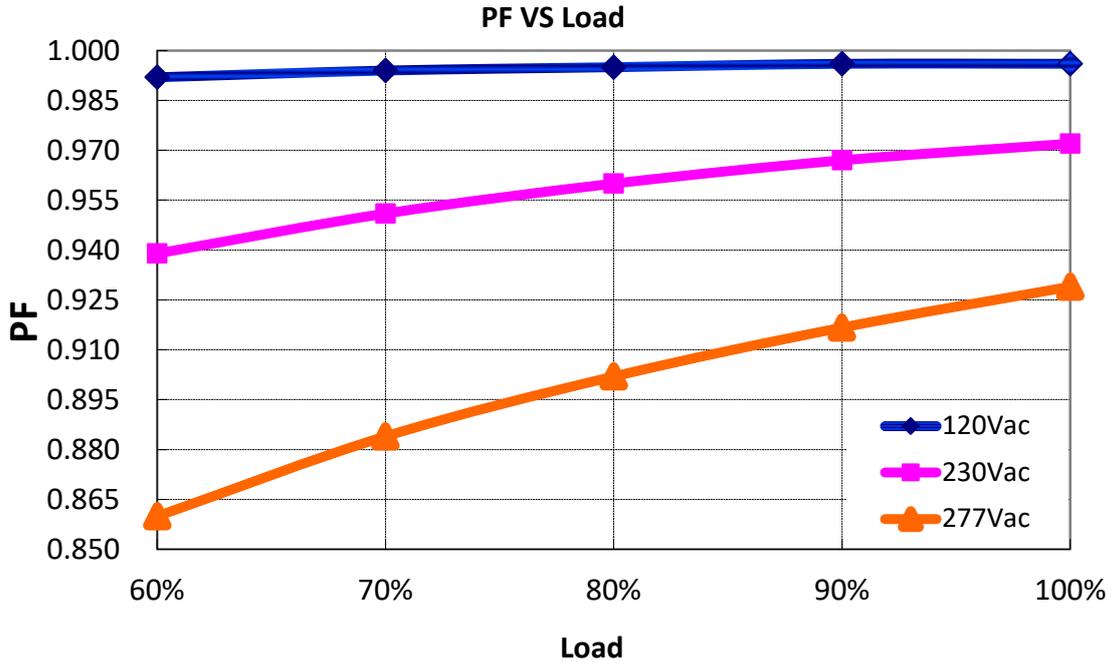
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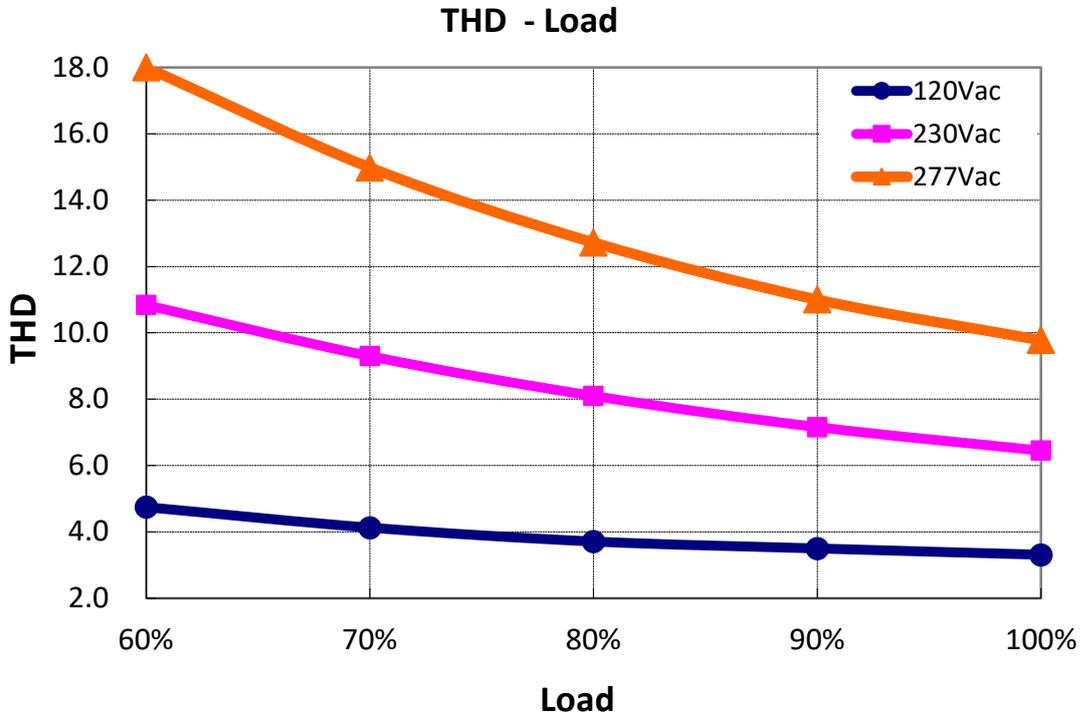
$I_o=1.05A$



POWER FACTOR VS LOAD



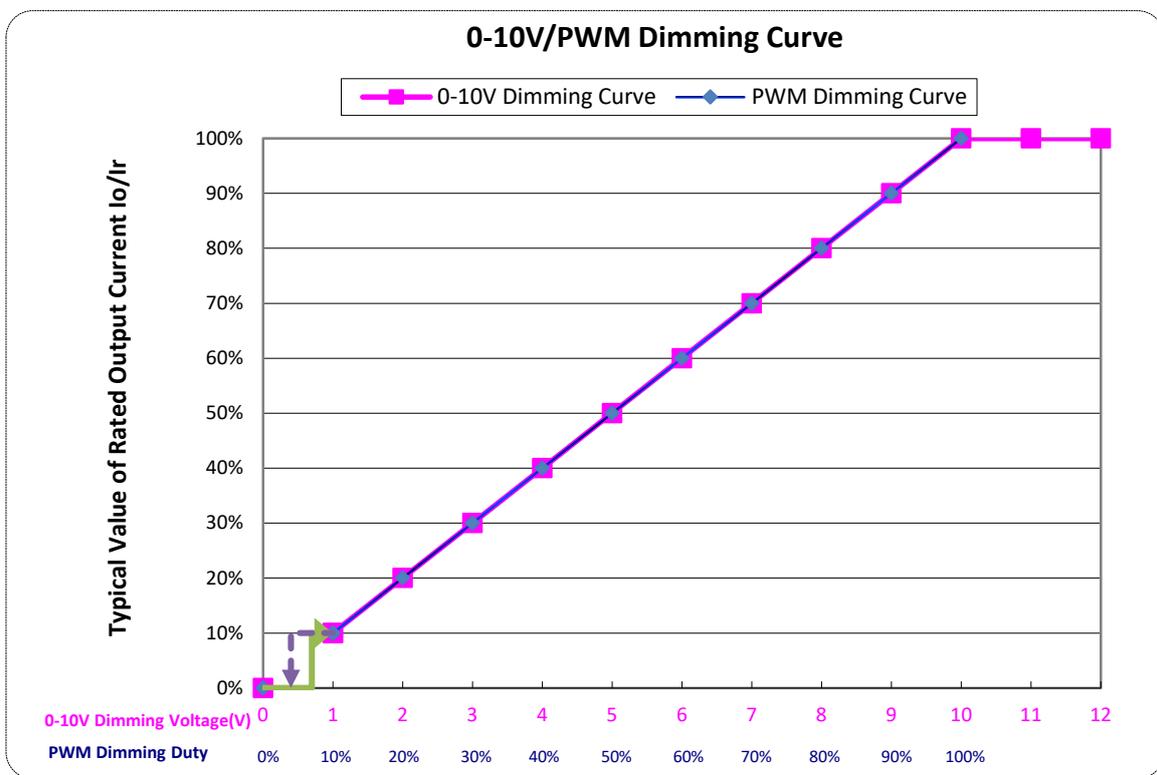
TOTAL HARMONIC DISTORTION



PROTECTIONS

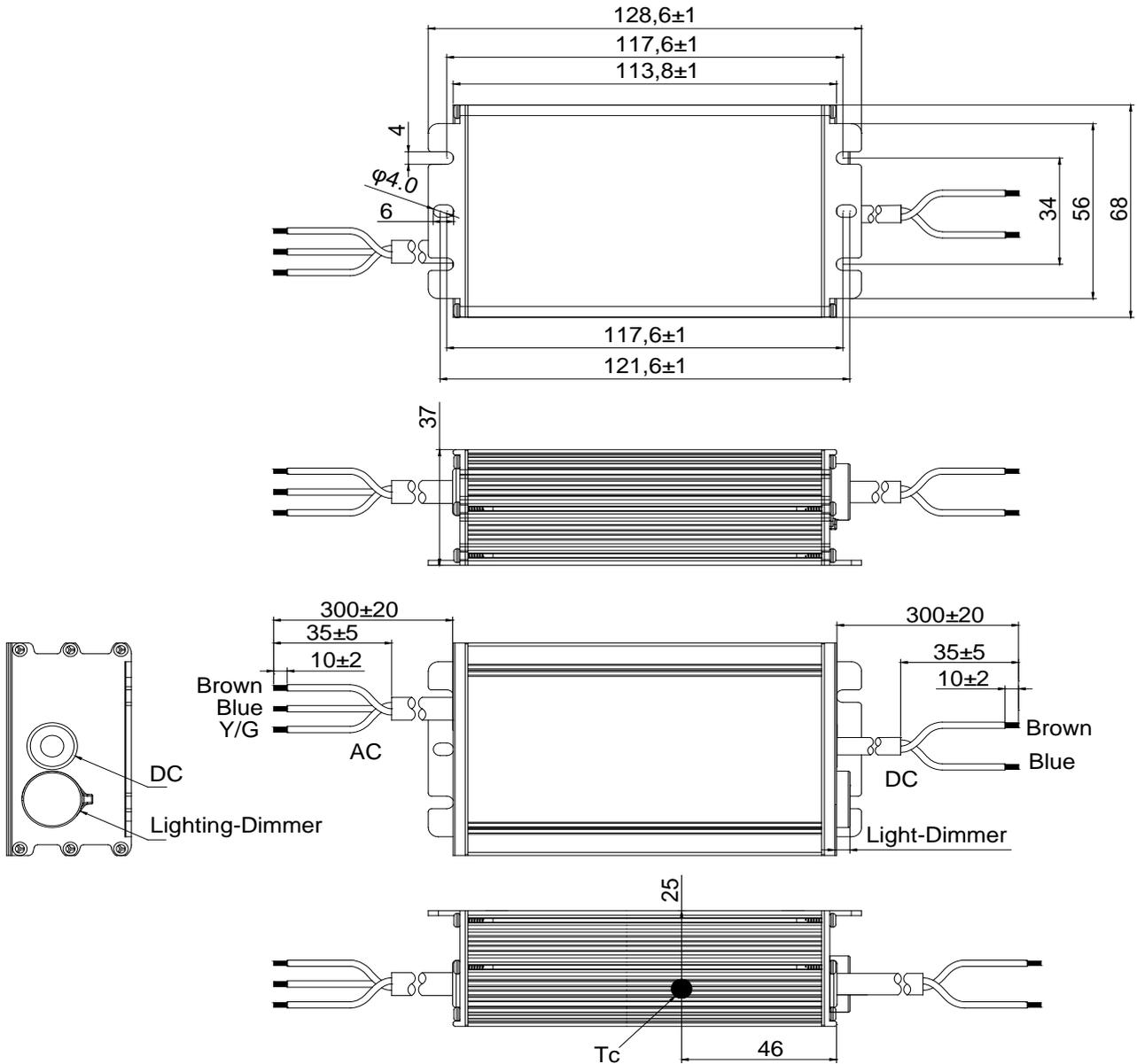
Parameter	Notes
Over Temperature Protection	Decreases output current, returning to normal after over temperature is removed. The max derating could be met Max Temperature 85°C and Max Humidity 85%.
Short Circuit Protection	Hiccup mode and auto recovery. No damage will occur when any output is short-circuited. The output shall return to normal when the fault condition is removed.
Output Over Voltage Protection	Run into protection mode when output voltage exceeds limit, and return to normal when the fault is eliminated and restart the power supply.

0-10V/PWM DIMMING



Note: The dim to off model is realized by decreasing the output voltage, the power supply still has a residual voltage when dim to off, so the start up voltage of the lamp should be higher than residual voltage.

MECHANICAL OUTLINE



Wire	Specification	Note
Input	SJOW 17AWG*3C L=300±20mm	CCC/CE/UL
Output	SJOW 17AWG*2C L=300±20mm	CCC/CE/UL

LABEL

←----- 104.00 mm -----→

↑----- 45.50 mm -----↓

INPUT

L (BROWN 棕)

G (Y/G 黄/绿)

N (BLUE 蓝)

X6-075V108
LED DRIVER
LED 控制装置(恒流型)

OUTPUT

(BROWN 棕) Vo +

(BLUE 蓝) Vo -

Io ADJ (+)

INPUT (输入)	100-277V~ 50/60Hz, 1.1A Max. PF:0.95
OUTPUT (输出)	54-108V== 0.53-1.05A Uout(最大电压)= 120V== Max.Power(最大功率):75W
t _c : 90°C	t _a : 50°C Input:100-200V~ t _a : 60°C Input:200-277V~

MADE IN CHINA
For LED module only

Suitable for Dry, Damp and Wet locations
SHENZHEN MOSO ELECTRONICS TECHNOLOGY CO., LTD
No.1061, Songbai Road, Xili Town, Nanshan District,
Shenzhen, CHINA



Product Specification

Product Name: 75W off-line programmable driver

Product Model: X6-075M108

X6-075V108

Rev. C.2

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