c UL us LISTED E332689

FC Class P

Product Features

- Universal input voltage / Full range: 90~305Vac;
- Constant power design, output current programming adjustable;
- (M types) offline programmable, (V types) output current adjustable by built-in potentiometer;
- 3-in-1 dimmable: 0~10Vdc / PWM/ Timer dimming. Dim-to-off;
- (M types) Constant lumen output;
- Output and Dimming Signal Isolating;
- Surge protection: 5KV line-line, 10KV line-earth;
- Protections: SCP / OVP / OTP;
- IP67 design for indoor and outdoor applications;
- Suitable for dry / damp / wet locations;
- 5 years warranty.

Application

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

DESCRIPTION

The X6-105W series is 105W outdoor offline programmable LED driver that operates in constant current with high PF value and universal input voltage range 90~305Vac model. Offline Monitored by dimming cable connected with an USB kit programming device, the fully programmed drivers offer all dimming, dim-to-off, constant lumen output options and a wide range of output current in a single driver, which deliver maximum flexibility with customized operating settings and intelligent control options for lighting manufacturers, as one driver can be programmed for many different luminaire designs. X6 provides built-in timer dimming schedules further increasing the energy savings and CO_2 reductions achieved with LED lighting. It also helps clients to improve the management of logistics and stock.The compact metal case and high efficiency enables the driver to operating with high reliability, and extending product lifetime. Overall protection is provided against lightening surge, output over 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
							230Vac
X6-105Y062P	105	32-62	42-62	1.69-2.50	2.10	91%	0.97

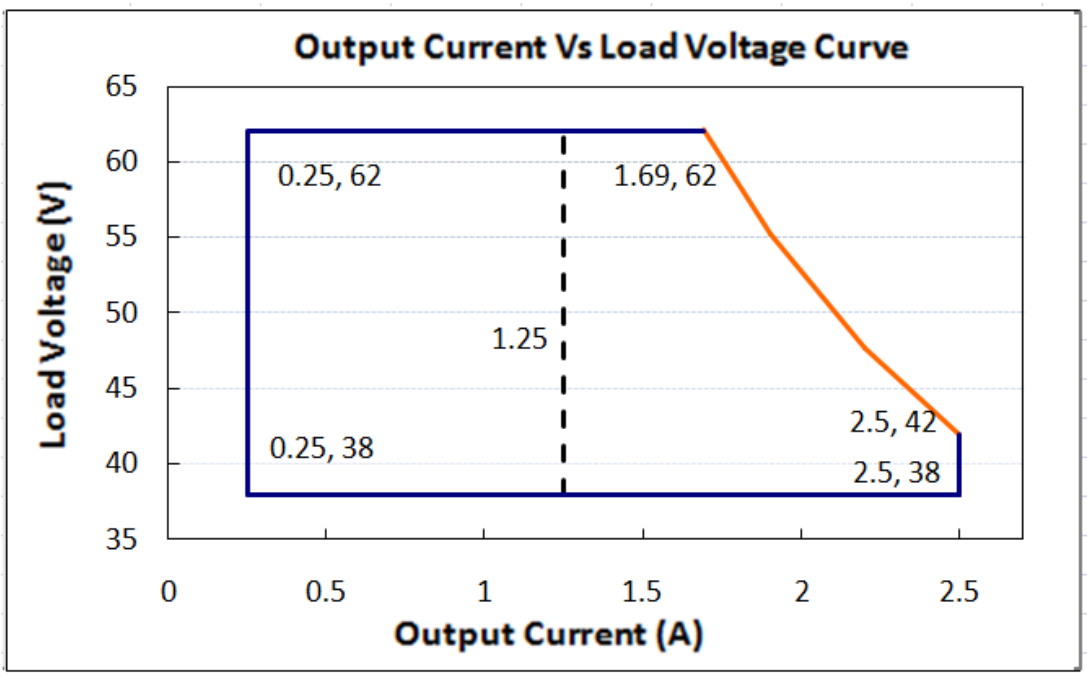
Notes:

[1]. Y can be M or V, Y=M means dimmable and offline programmable. The adjustable Iout range: 10%-100% Imax, 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℃ ambient temperature, input voltage 230Vac, 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 over-load condition, otherwise 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	
Input Frequency	47Hz	50/60	63Hz	
Leakage Current	-	-	0.70mA	277Vac/60Hz
Input AC Current	-	-	1.5A	100-277Vac &full load
Inrush Current	-	-	75A	230Vac & full load
Standby Power Consumption			2W	
Power Factor	0.97	0.99	-	115Vac, 50-60Hz,full load
	0.95	0.97		230Vac, 50-60Hz, full load
	0.92	0.95		277Vac, 50-60Hz, full load
THD	-	5%	10%	100-240Vac,50-60Hz, 50%-100% load
	-	-	10%	277Vac, 50-60Hz, 70%-100% load
Max. NO. of PSUs on CIRCUIT BREAKER	B10 3 / C10 5	B16 4 / C16 7	B25 7 / C25 11	230Vac

OUTPUT SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-5%	-	+5%	
Output Current Setting Range (A) X6-105Y062P	1.25	-	2.50	The 'M type' adjustable Iout range: 10%-100% Imax,
Output Current Setting Range with Constant Power X6-105Y062P	1.69	-	2.50	
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 X6-105Y062P	-	-	70V	
Line Regulation	-1%	-	+1%	25℃±10℃ ambient temperature, input voltage changes from 100Vac to277Vac.
Load Regulation	-3%	-	+3%	25℃±10℃ambient temperature, Input Voltage 230Vac, load changes from 60% to 100%.
Turn-on Delay Time	-	1S	2S	115Vac,100% load
	-	-	0.5S	230Vac,100% load

GENERAL SPECIFICATIONS

Parameter		Min.	Typ.	Max.	Notes
Efficiency @115Vac X6-105Y062P I_O=1.69 I_O=2.50		86.5% 86.5%	90% 90%		Measured at full load and 25℃ambienttemperature
Efficiency @230Vac X6-105Y062P I_O=1.69 I_O=2.50		89% 89%	91% 91%	-	Measured at full load and 25℃ambient temperature
Efficiency @277Vac X6-105Y062P I_O=1.69 I_O=2.50		89% 89%	91% 91%		Measured at full load and 25℃ambient temperature
Dielectric Strength	Input-Output	-	3750Vac	-	Max 5mA/60S
	Input-PE	-	1600Vac	-	
	Output-PE	-	1600Vac	-	
Grounding Resistance		-	-	0.1Ω	25A/60S, under 25℃±10℃ambient temperature
Insulation Resistance		10MΩ	-	-	Input-Output, Input-PE, Output-PE, 500Vdc/60S/25℃/70%RH

MTBF	-	200000Hrs	-	25℃±10℃ambient temperature, 230Vac,80% load (MIL-HDBK-217F)
Lifetime	-	50000Hrs	-	230Vac&100% load, 75℃ case temperature, refer to lifetime curve for details
Ambient Temperature	-40℃		+60℃	230Vac&100% load
Operating Case Temperature for Safety Tc_s	-40℃	-	+90℃	
Operating Case Temperature for Warranty Tc_s	-40℃	-	+75℃	5 years warranty case temperature Humidity: 10% to 95% RH
Storage Temperature	-40℃	-	+85℃	Humidity: 5% to 100% RH
Dimensions (LxWxH)mm	L153.6*W68*H37			
Net Weight	700±100g/PCS			
Package	L488mm*W298mm*H200mm; 15PCS/Ctn, Gross Weight:12.2Kg			

DIMMING

Parameter		Min.	Typ.	Max.	Notes
0~10V Absolute Maximum Voltage on the Vdim (+) Pin		-	10V	-	
0~10V Source Current on Vdim(+)Pin		-	200uA	400uA	
Dimming Output Range	X6-105M062P	10%Imax	-	100%Imax	I_{max}=2.50A
	X6-105M062P	0.25	-	2.50	
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	GB19510.1, GB19510.14	
CE	Europe	EN61347-1, EN61347-2-13	
		EN62493	
ENEC		EN62384	
CB	CB Countries	IEC61347-1, IEC61347-2-13	
BIS	India	IS 15885(PART 2/SEC 13)	
UL	USA	UL 8750	√
CUL	Canada	CSA C22.2 No.250.13	√
KC	South Korea	K61347-1, K61347-2-13	
PSE	Japan	J61347-1, J61347-2-13	
SAA	Australia	AS/NZS IEC 61347.2.13	
		AS/NZS 61347.1	
EAC	Russia	ГОСТ Р МЭК 61347-1-2011 ГОСТ IEC 61347-2-13-2013 ГОСТ IEC 62493-2014	

		СТБ ЕН 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)	

Insulation

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	/

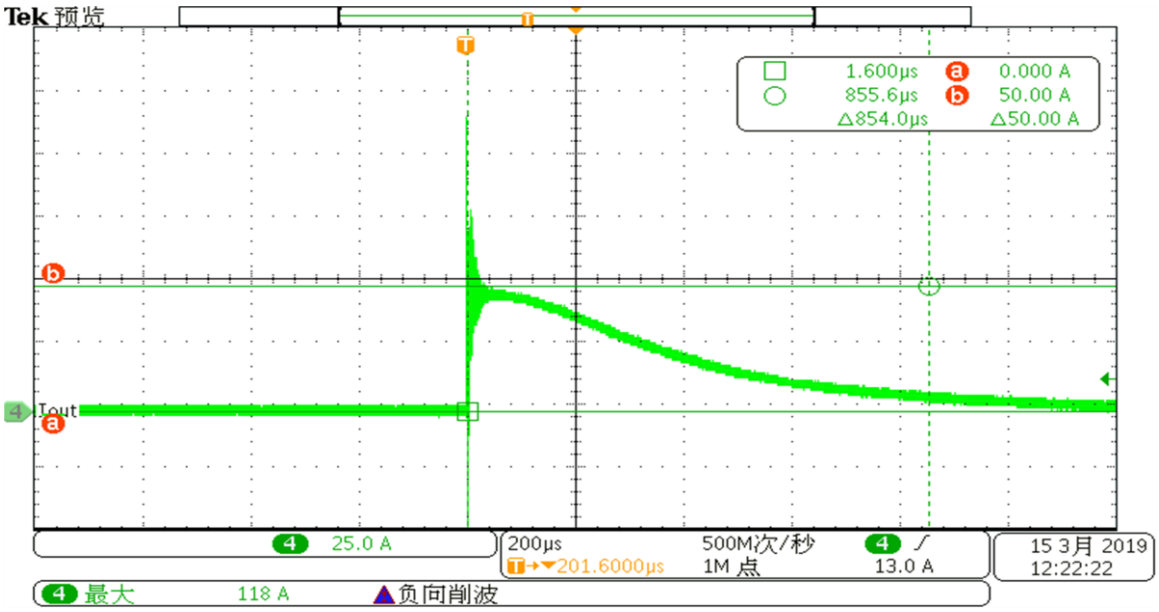
EMC COMPLIANCE

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	√

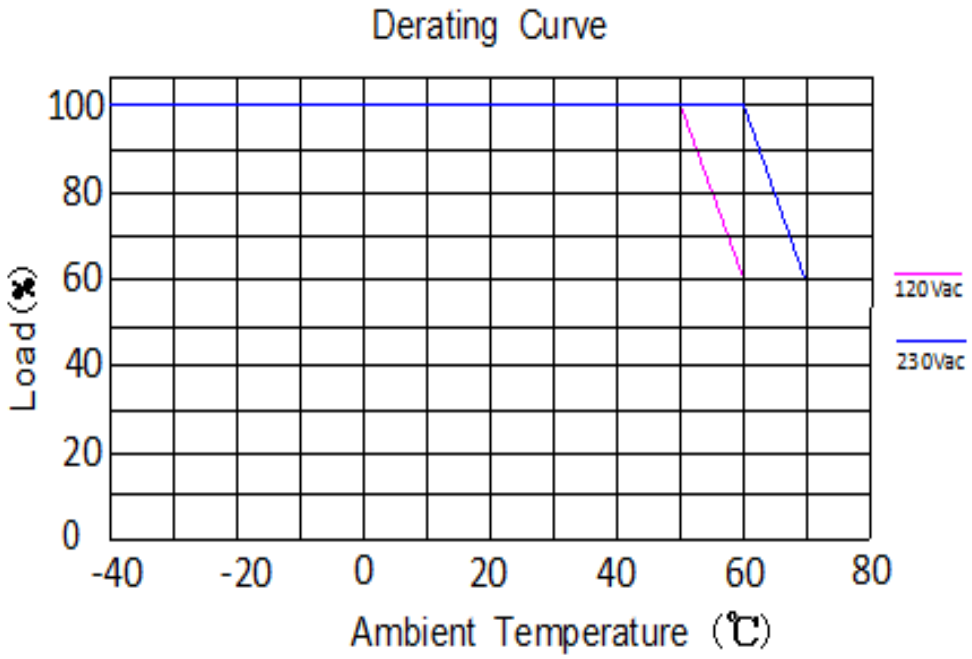
NOTE:

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

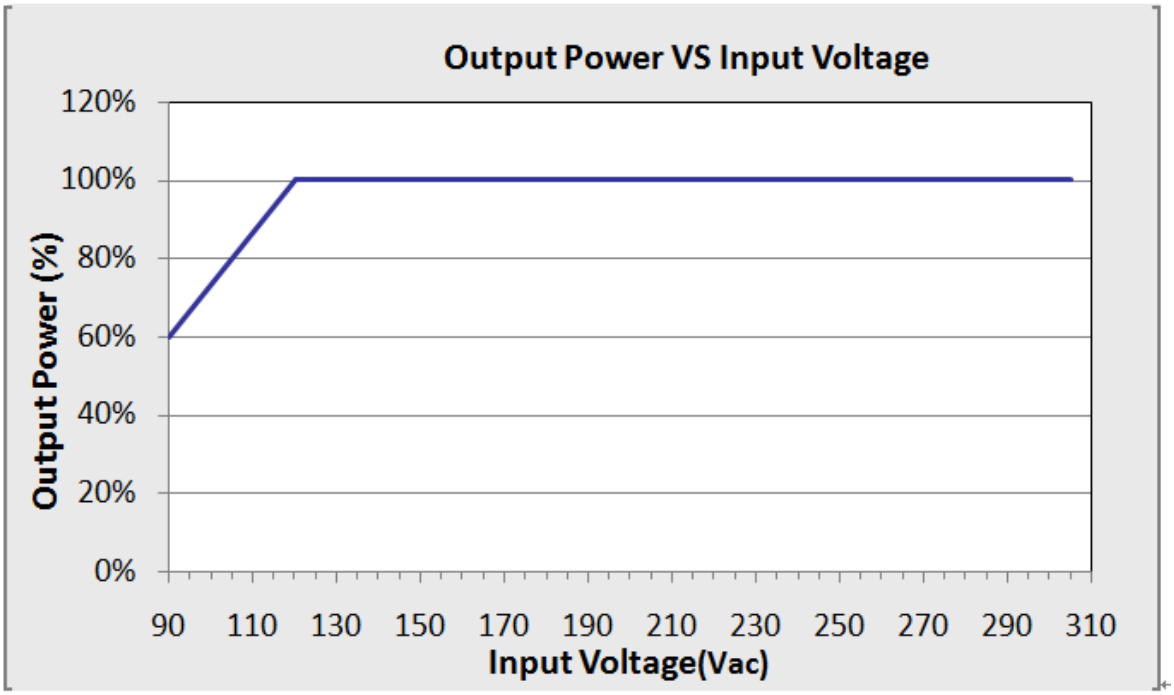
INRUSH CURRENT WAVEFORM



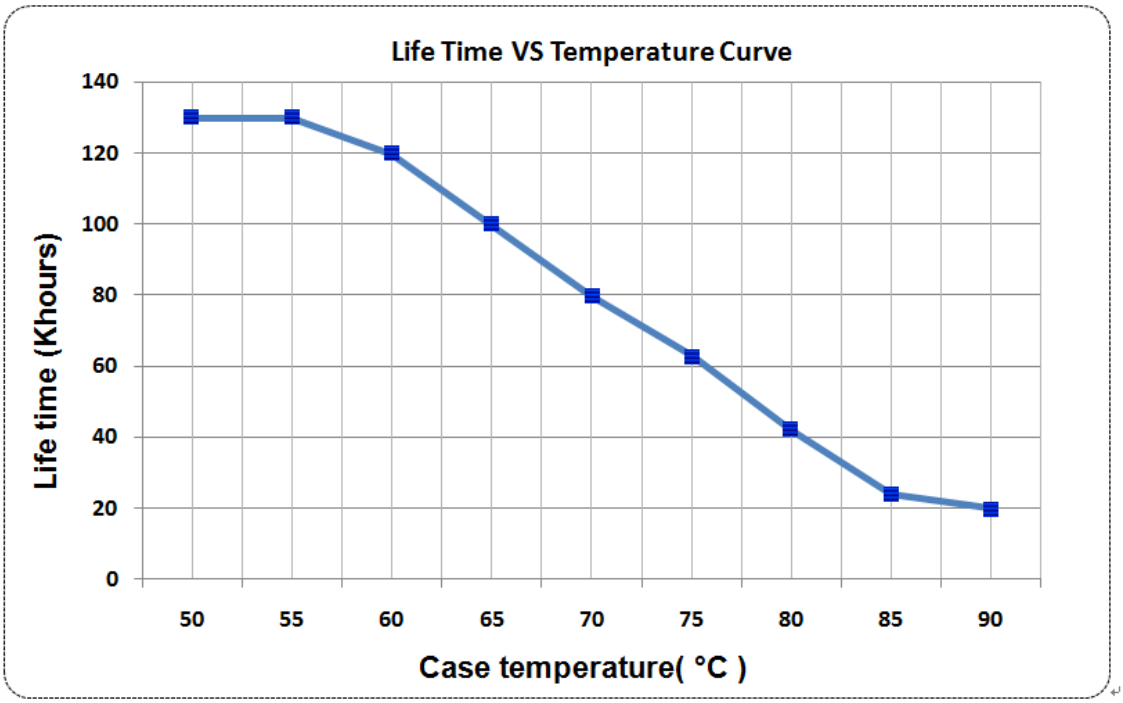
DERATING CURVE



OUTPUT POWER VS INPUT VOLTAGE

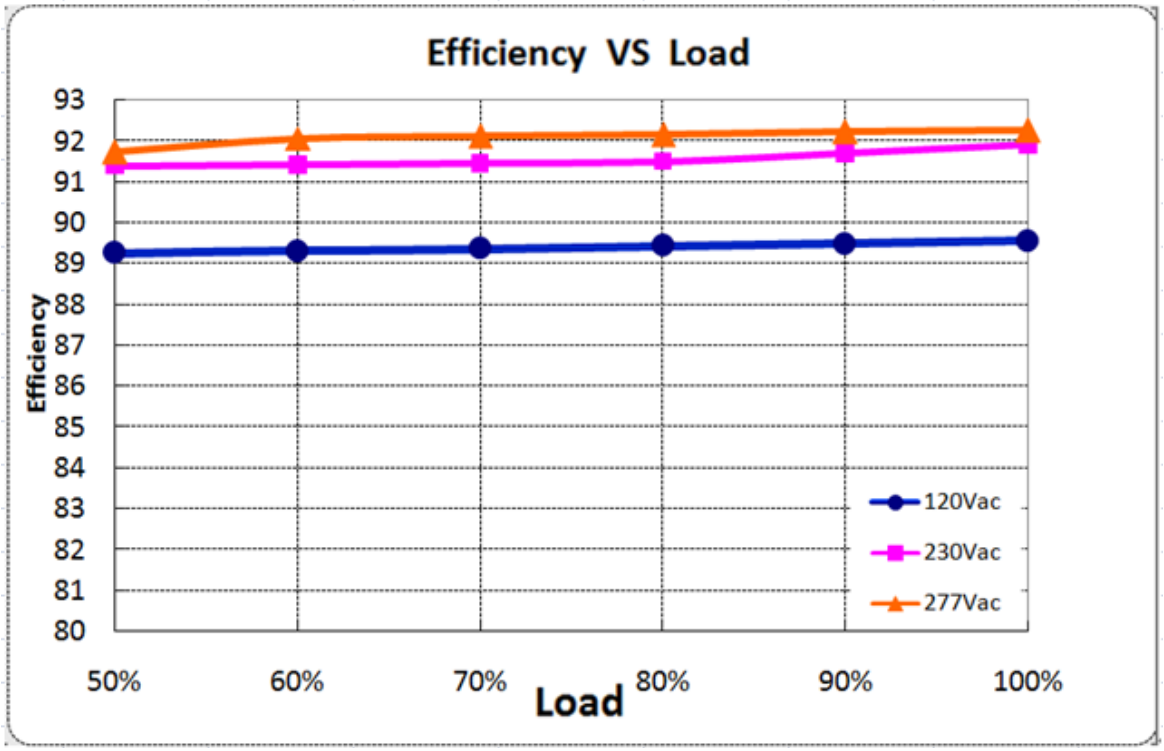


LIFETIME VS CASE TEMPERATURE

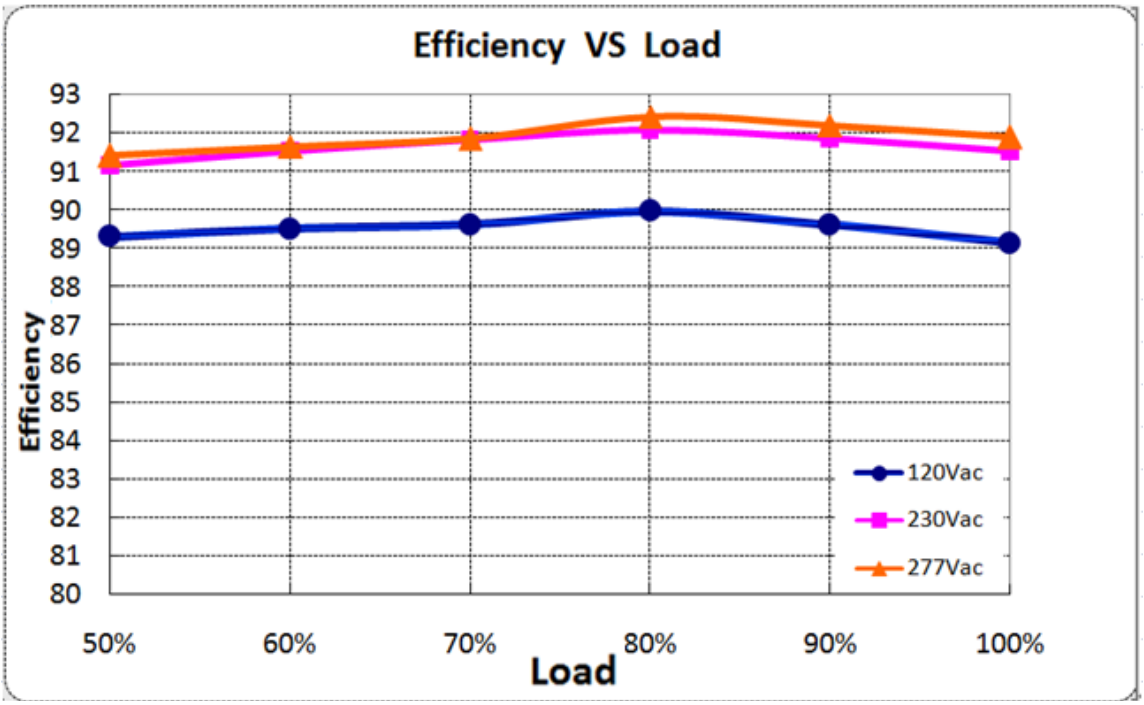


EFFICIENCY VS LOAD

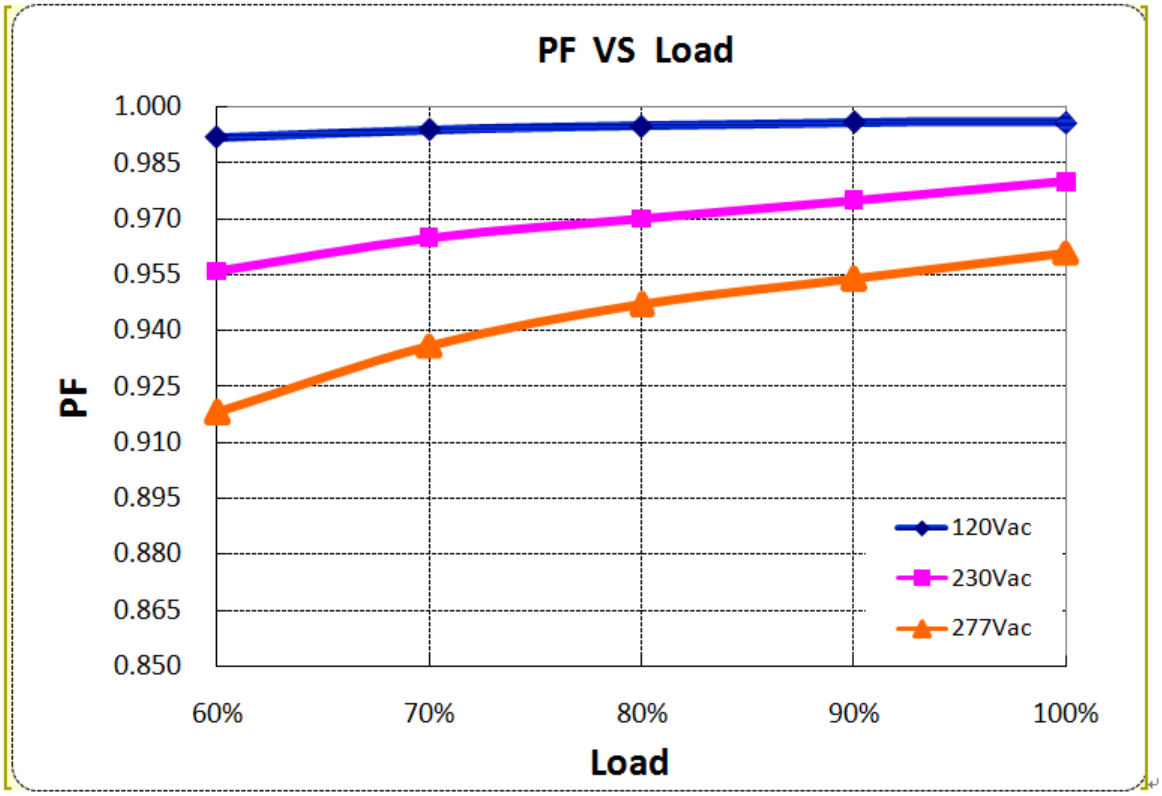
X6-105Y062P (Io=2.50A)



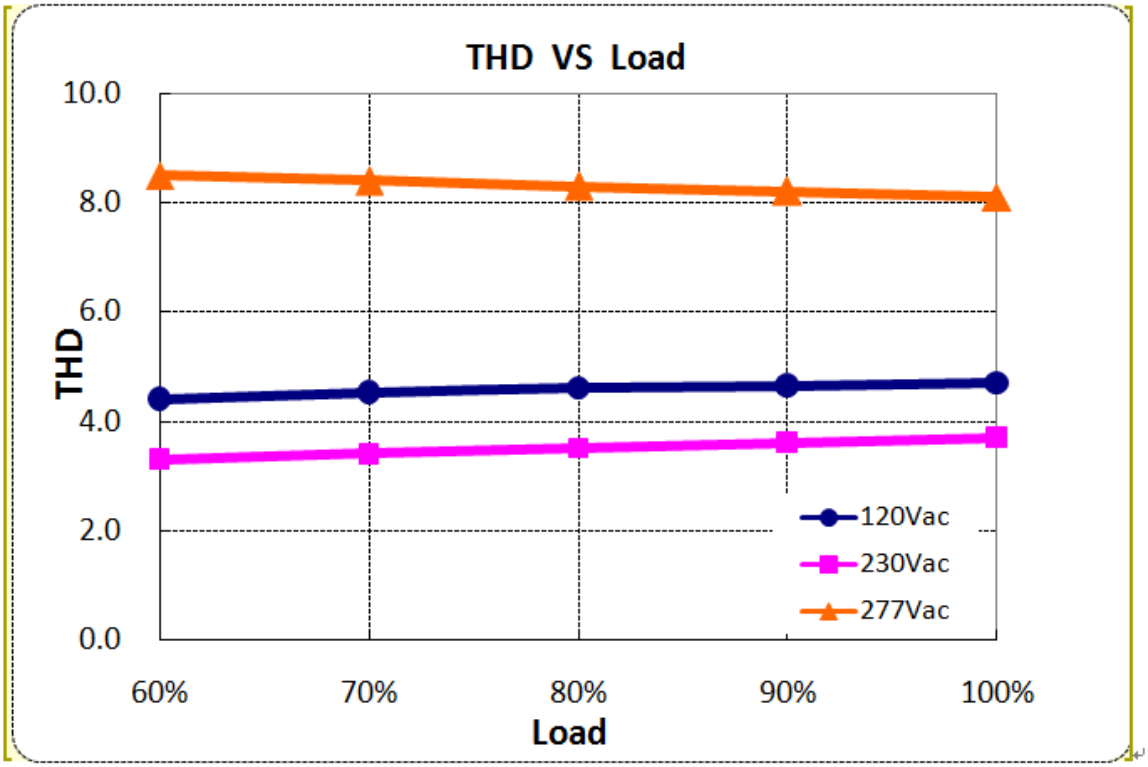
X6-105Y062P(Io=1.69A)



POWER FACTOR VS LOAD



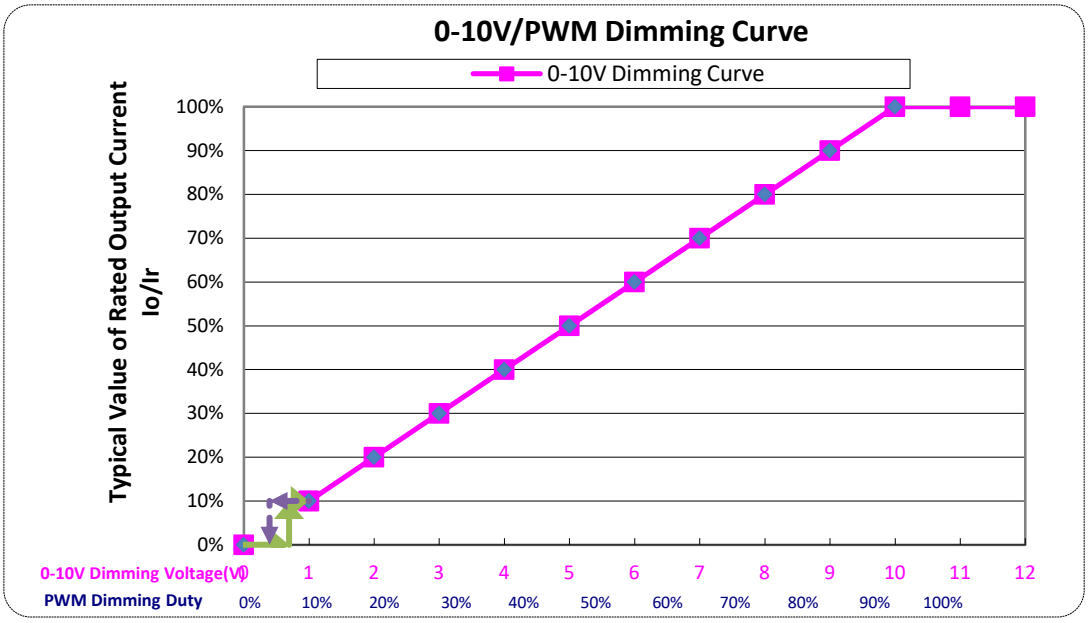
TOTAL HARMONIC DISTORTION



PROTECTIONS

Parameter	Notes
Over Temperature Protection	Decreases output current, returning to normal after over temperature is removed. The max derating could be 30% (typ.).
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.
Over Voltage Protection	Run into protection model when output voltage exceeds limit, and return to normal when the fault

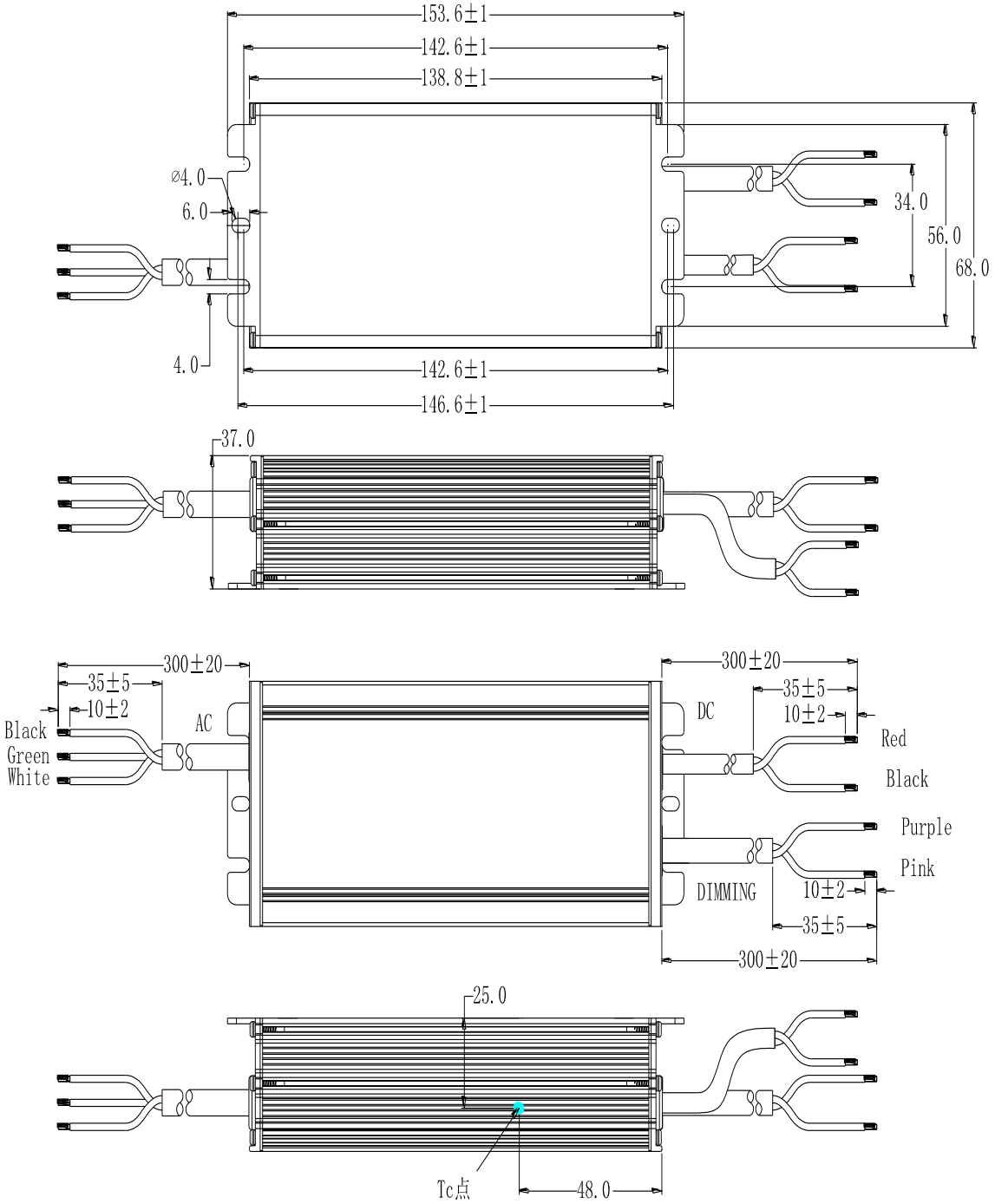
0-10V/PWM DIMMING



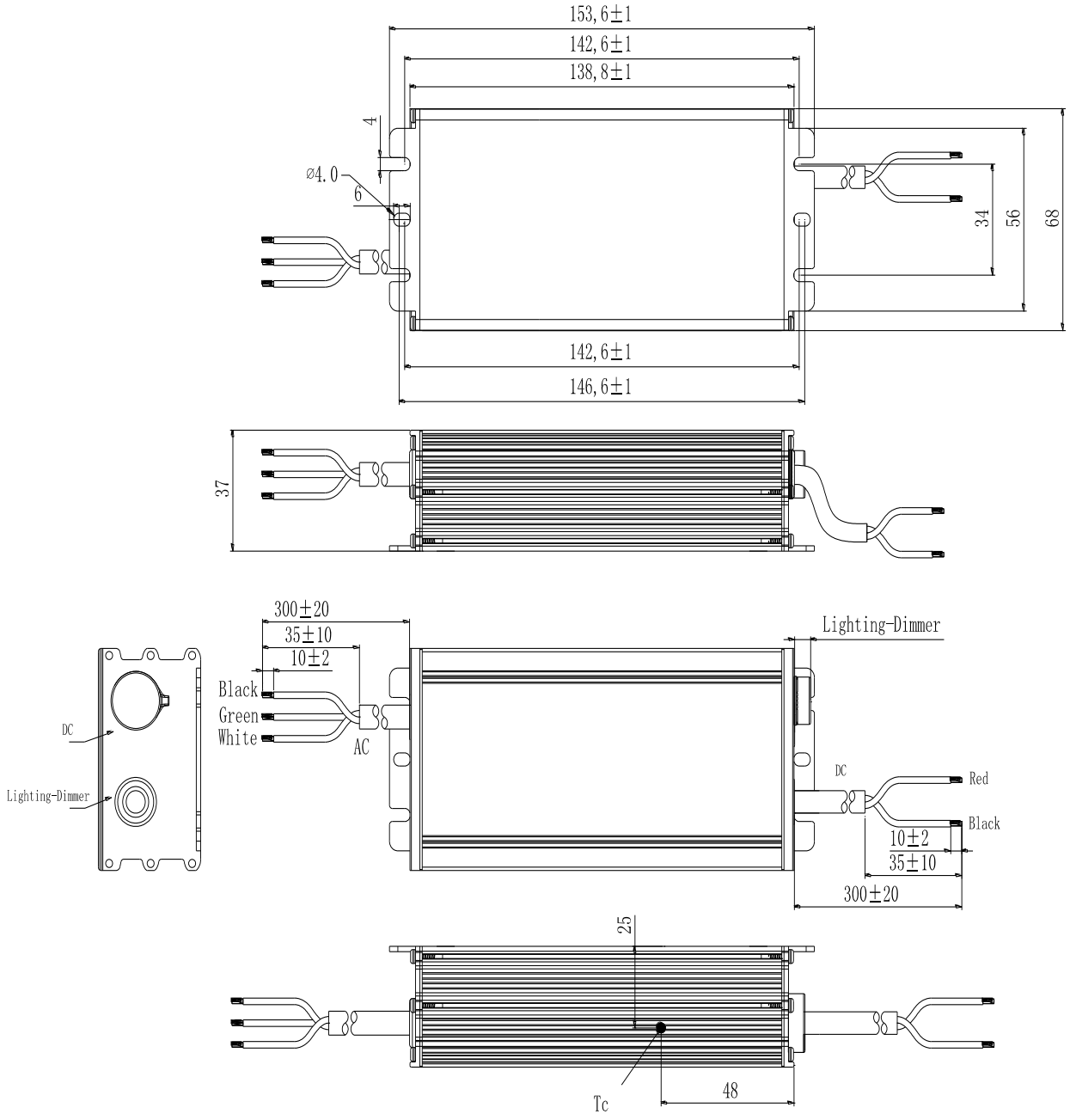
Note:Dim to off model is realized by decreasing the output voltage, the power supply still has residual voltage when dim to off, so the start up voltage of the lamp should be higher than residual voltage.

MECHANICAL OUTLINE

X6-105M062P types

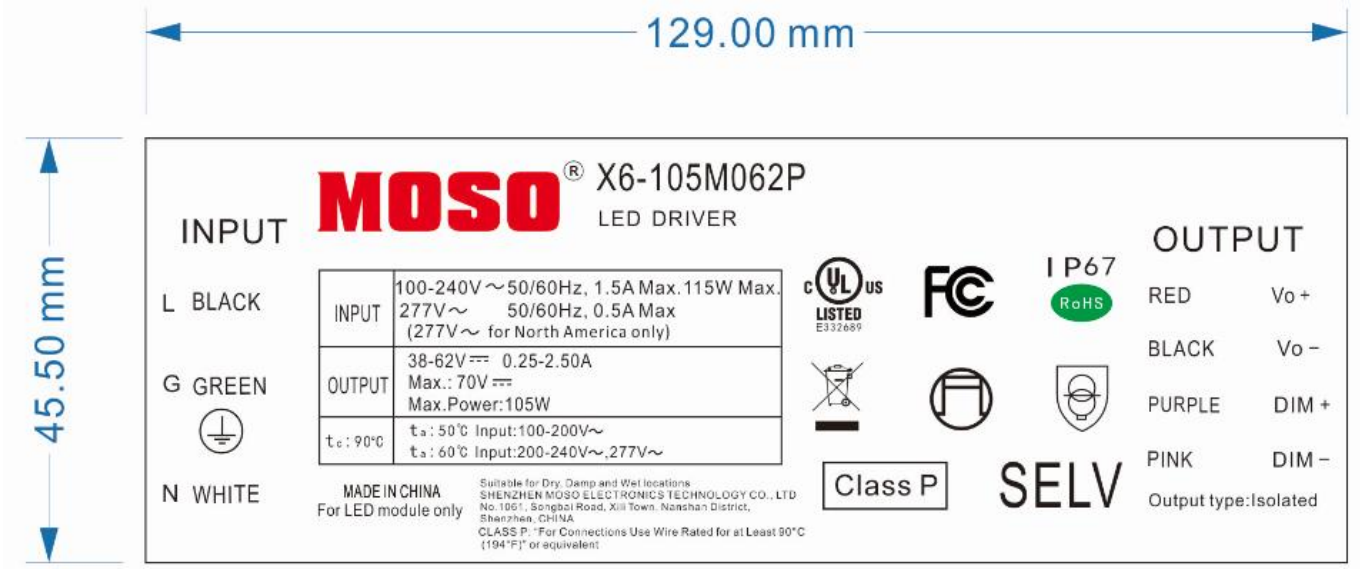


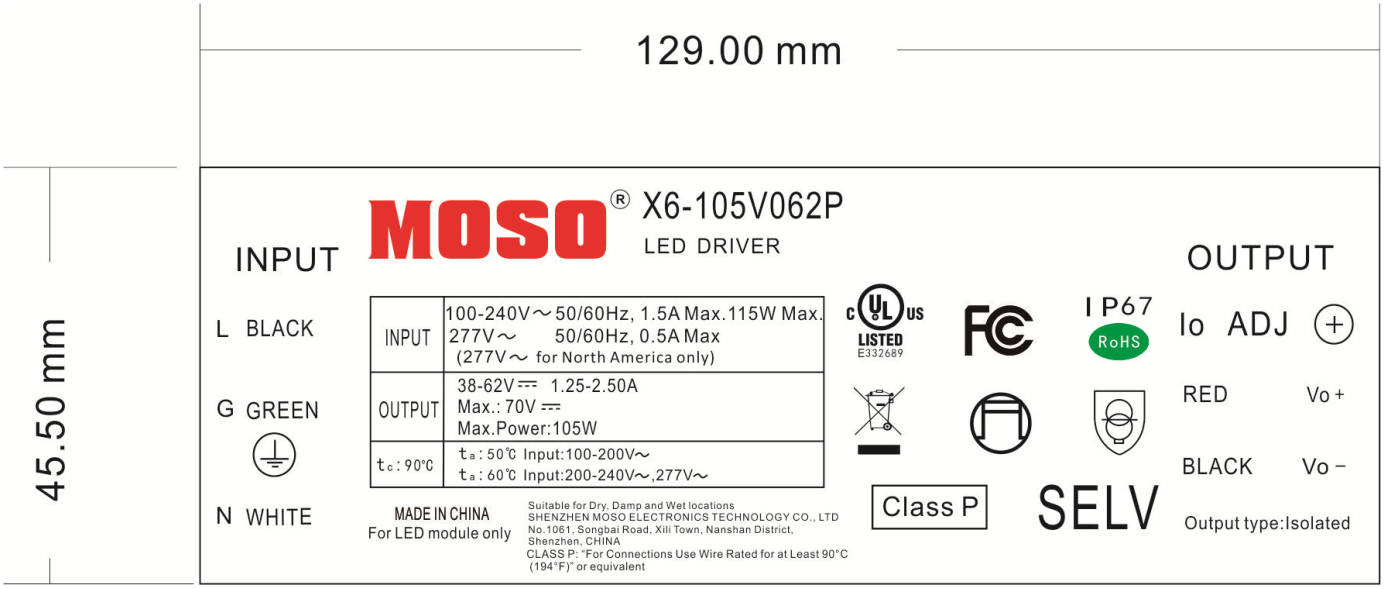
X6-105V062P Types



Wire	Specification	Note
Input	18AWG*3C UL SJOW external diameter: 7.8mm L=300±20mm, peel length 35mm, Tin-dip length 10mm	For UL
Output	18AWG*2C UL SJOW external diameter: 7.3mm L=300±20mm, peel length 35mm, Tin-dip length 10mm	For UL
Dimming	UL2733 22AWG*2C external diameter: 5.45mm L=350±20mm, peel length 35mm, Tin-dip 10mm	Y = M

LABEL


129.00 mm
45.50 mm
MOSO® X6-105M062P
LED DRIVER
INPUT
L BLACK
G GREEN
N WHITE
INPUT
100-240V～50/60Hz, 1.5A Max.115W Max.
277V～ 50/60Hz, 0.5A Max
(277V～ for North America only)
OUTPUT
38-62V⎓ 0.25-2.50A
Max.: 70V⎓
Max.Power:105W
tc: 90℃
ta: 50℃ Input:100-200V～
ta: 60℃ Input:200-240V～,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
CLASS P: "For Connections Use Wire Rated for at Least 90°C (194°F)" or equivalent
c UL us LISTED E332689
IP67
RoHS
Class P
SELV
OUTPUT
RED Vo+
BLACK Vo−
PURPLE DIM+
PINK DIM−
Output type:Isolated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c UL us LISTED E332689
IP67
RoHS
Class P
SELV
OUTPUT
Io ADJ
RED Vo+
BLACK Vo−
Output type:Isolated

REVISION HISTORY

Version	Description of Change		Date	Notes
	Before	Now		
A.4	—	Datasheets Release	2020-12-24	
B.2		ECL202104007	2021-06-07	Longfu Zhu
C.2		ECL202112193	2021-12-28	Longfu Zhu
D.2		ECL202205049	2022-05-16	Long fu.Zhu

Specification for Approval

Product Name:	105W outdoor off-line programmable driver
Product Model:	X6-105M062P ☑ X6-105V062P ☐
Rev.	D.2
Sample Date:	_

CUSTOMER AUTHORIZED SIGNATURE		
Tested By	**Checked By**	**Approved By**
(Company seal)Return one copy to MOSO with approved signature and company seal.		

Address: XiLi Songbai Road 1061, Nanshan District, Shenzhen City, Guangdong Province, P.R.China
Post Code: 518108
TEL: 0755-27657000
FAX: 0755-27657908
E-mail: info@mosopower.com
Web site: http://www.mosopower.com

Prepared By	Checked By	Approved By

Product Specification

Product Name:	105W outdoor off-line programmable driver
Product Model:	X6-105M062P ☑ X6-105V062P ☐
Rev.	D.2

Address:	XiLi Songbai Road 1061, Nanshan District, Shenzhen City, Guangdong Province, P.R.China	Post Code:	518108
TEL:	0755-27657000	FAX:	0755-27657908
E-mail:	Info@mosopower.com	Web site:	http://www.mosopower.com

Prepared By	Checked By	Approved By