Product Features：

- Universal input voltage : 110~305Vac;
- Constant power design, output current offline programming adjustable;
- 3-in-1 dimmable: 0~10Vdc, PWM, Timer dimming. Dim-to-off;
- Constant lumen output;
- Self adapting-midnight dimming;
- Output and Dimming Signal Isolating;
- Surge protection:5KV 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, plant lighting, industrial lighting, landscape lighting, etc.

DESCRIPTION

The X6-240 series is 240W outdoor offline 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 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, 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)	Full Power Output Voltage Range (Vdc)	Full Power Current Adjustable Range (A) [2]	Default Output Current Setting(A)	Typical Efficiency [3]	PF
X6-240Y062-I	240	38-62	42-62	3.88-5.71	5.00	92%	0.97

Notes:

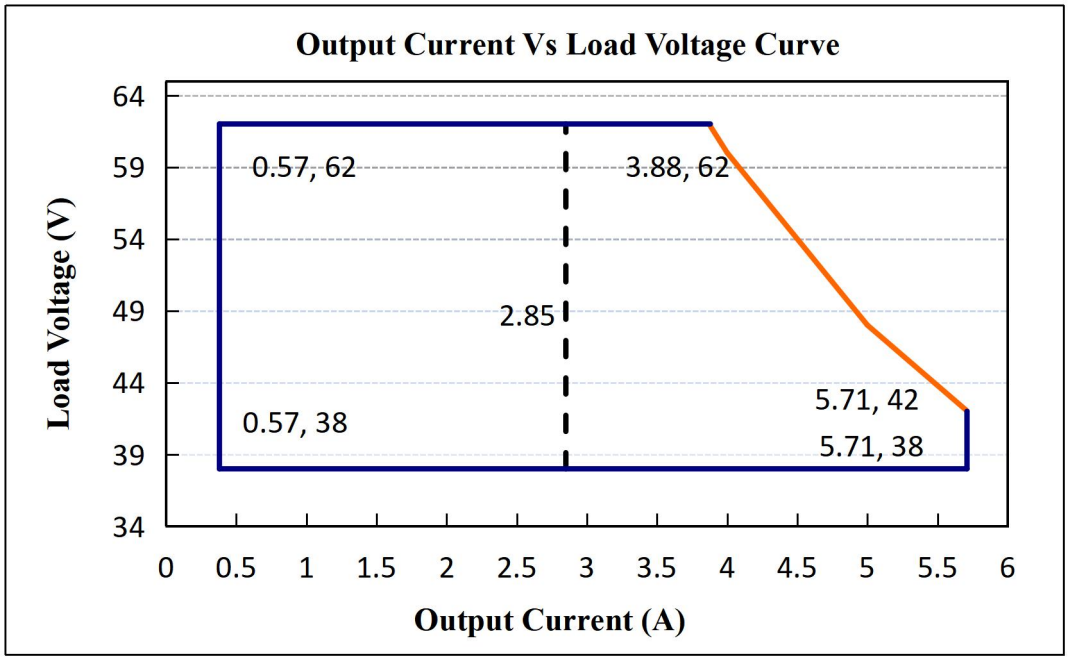
[1]. Y can be M or V. Y=M means dimmable and offline programmable, The adjustable Iout range: 10%-100% Imax; Y=V means non-dimmable and output current adjusted by built-in potentiometer.

[2]. Output current adjustable range with constant power at max output power;

[3]. All specifications are measured at 25℃ ambient temperature, input voltage 240Vac, and the typical value tested by full load, if no specific note.

OPERATING AREA

X6-240Y062



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	110Vac	120-277Vac	305Vac	Rated Input Voltage is 240Vac
Input Frequency	47Hz	50/60	63Hz	
Leakage Current	-	-	0.70mA	277Vac/60Hz
Input AC Current	-	-	3.3A	120-277Vac &full load
Inrush Current	-	-	75A	240Vac & full load
Standby Power Consumption				240Vac/50Hz
Power Factor	0.97	0.99	-	120Vac, 50-60Hz,full load
	0.95	0.97		240Vac, 50-60Hz, full load
	0.93	0.95		277Vac, 50-60Hz, full load
THD	-	5%	10%	120-240Vac,50-60Hz, 70%-100% load
	-	-	15%	277Vac, 50-60Hz, 70%-100% load
Max. NO. of PSUs on CIRCUIT BREAKER	B10 1	B16 2	B25 2	230Vac
	C10 2	C16 3	C25 4	

OUTPUT SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-5%	-	5%	
Output Current SettingRange(A)	0.57	-	5.71	
Output Current Setting Rangewith Constant Power	3.88	-	5.71	
Total Output Current Ripple(pk-pk)	-	5%	10%	20MHz BW, full load& LED load, the ripplewould be tiny different under differentLED load.
Startup Overshoot Current	-	-	10%	120~277Vac &100% Load, load is LED
No Load Output Voltage(V)	-	-	70	
Line Regulation	-1%	-	1%	25℃±10℃ ambient temperature, input voltage changes from 100Vac to277Vac.
Load Regulation	-3%	-	3%	25℃±10℃ambient temperature, Input Voltage 240Vac, load changes from 60% to 100%.
Turn-on Delay Time	-	1S	2S	120Vac,100% load
	-	-	0.5S	240Vac,100% load

GENERAL SPECIFICATIONS

Parameter		Min.	Typ.	Max.	Notes
Efficiency @120Vac Io=3.88A Io=5.71A		88% 88%	90% 90%		Measured at full load and 25℃ambient temperature
Efficiency @240Vac I_O=3.88A I_O=5.71A		91% 91%	92% 92%	-	Measured at full load and 25℃ambient temperature
Efficiency @277Vac I_O=3.88A I_O=5.71A		92% 92%	93% 93%		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, 240Vac,80% load (MIL-HDBK-217F)
Lifetime		-	50000Hrs	-	240Vac&100% load, 75℃ case temperature, refer to lifetime curve for details
Ambient Temperature		-40℃		+60℃	240Vac&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 (L*W*H)mm	L208.W*68*H39			
Net Weight	1050±100g/PCS			
Package	L502mm*W372mm*H222mm; 15PCS/Ctn, Gross Weight: 16.2kg			

DIMMING

Parameter		Min.	Typ.	Max.	Notes
0~10VAbsolute Maximum Voltageon the Vdim (+) Pin		-	10V	-	
0~10VSource Current on Vdim(+)Pin		-	200uA	400uA	
DimmingOutput Range	X6-240M062	10%Imax	-	100%Imax	Imax=5.71A
	X6-240M062	0.571A	-	5.71A	
Recommended DimmingRange 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 Conditions

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

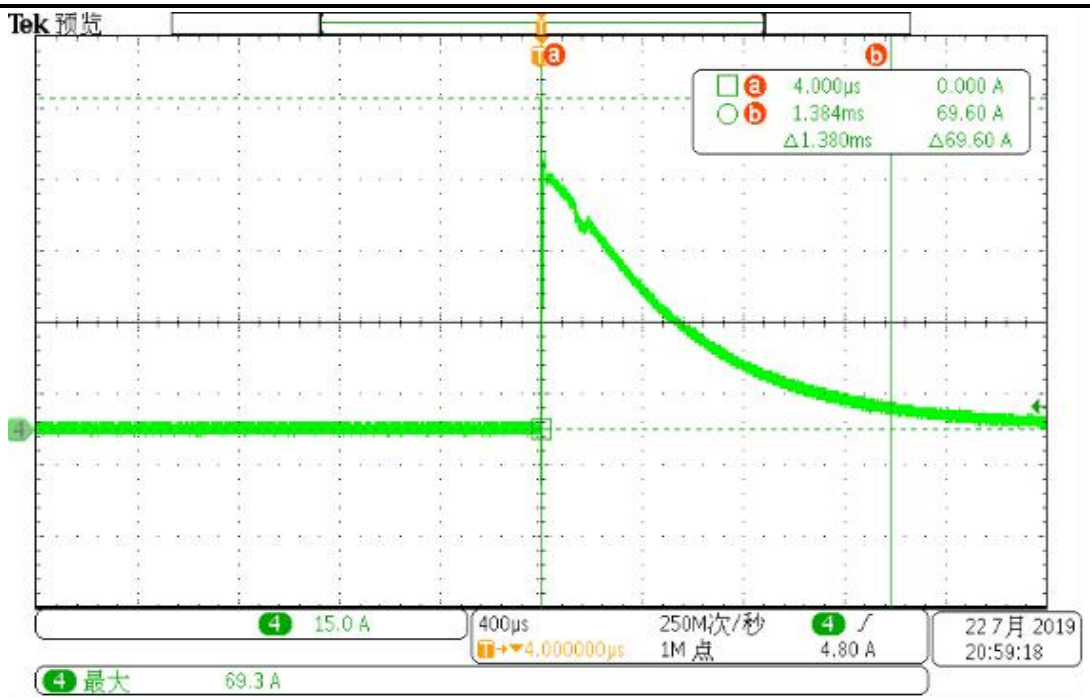
EMC COMPLIANCE

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	√

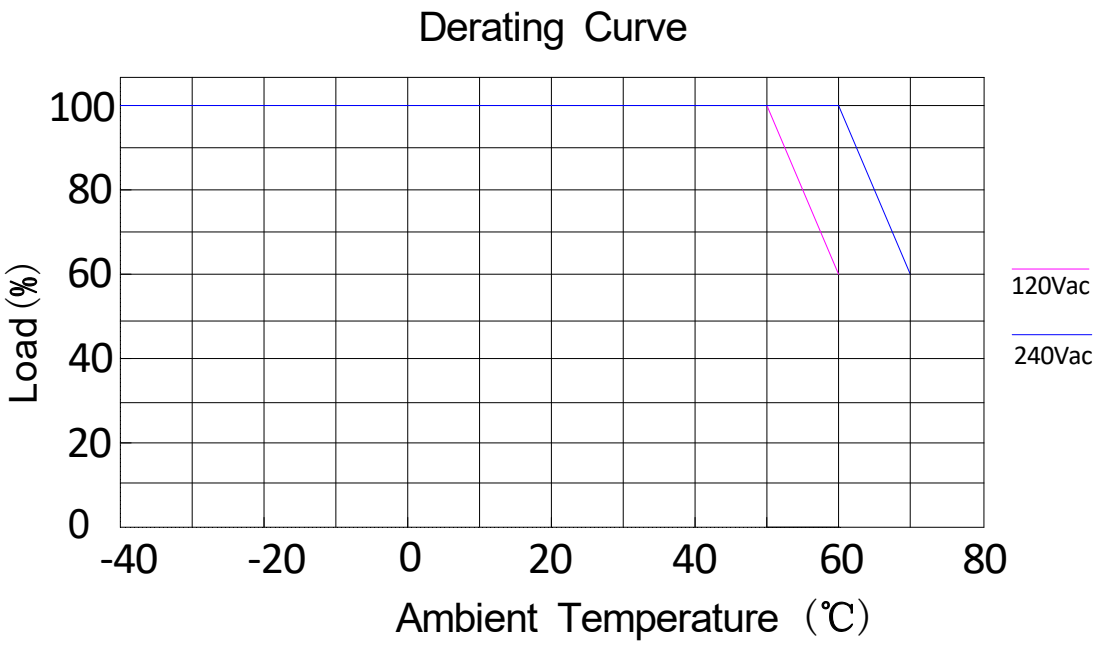
NOTE:

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.

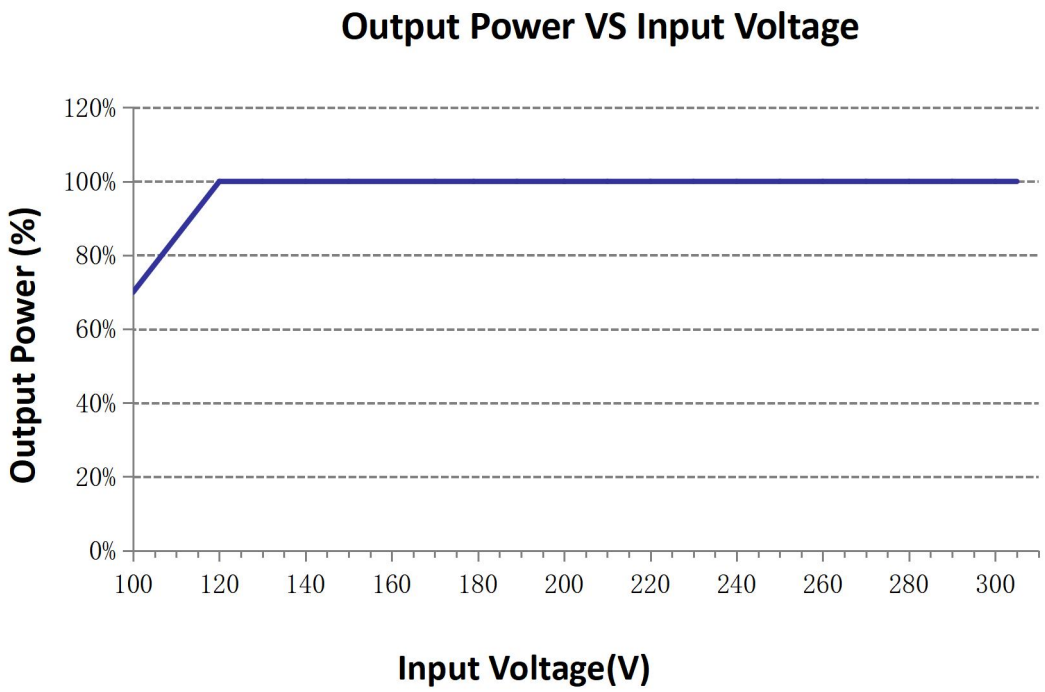
INRUSH CURRENT WAVEFORM



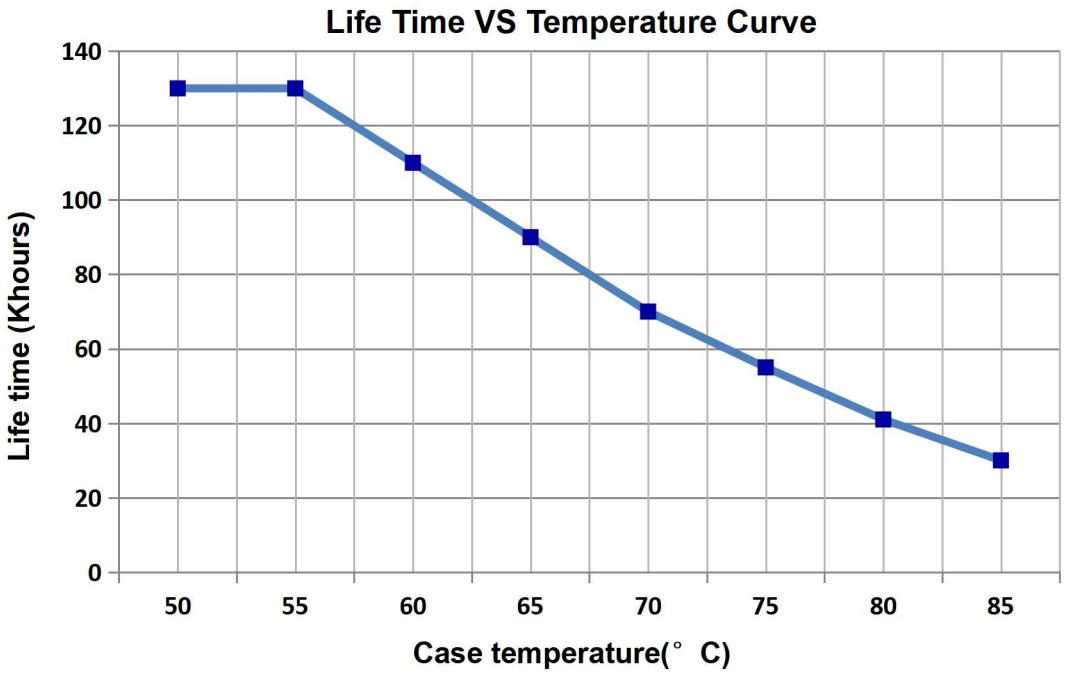
DERATING CURVE



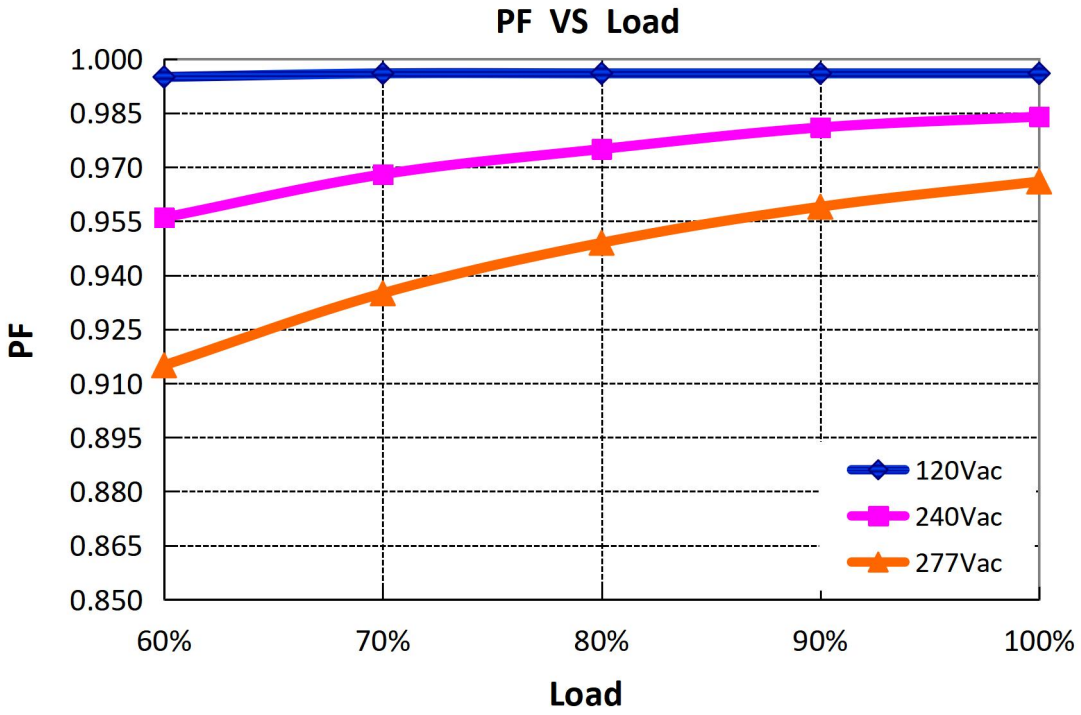
OUTPUT POWER VS INPUT VOLTAGE



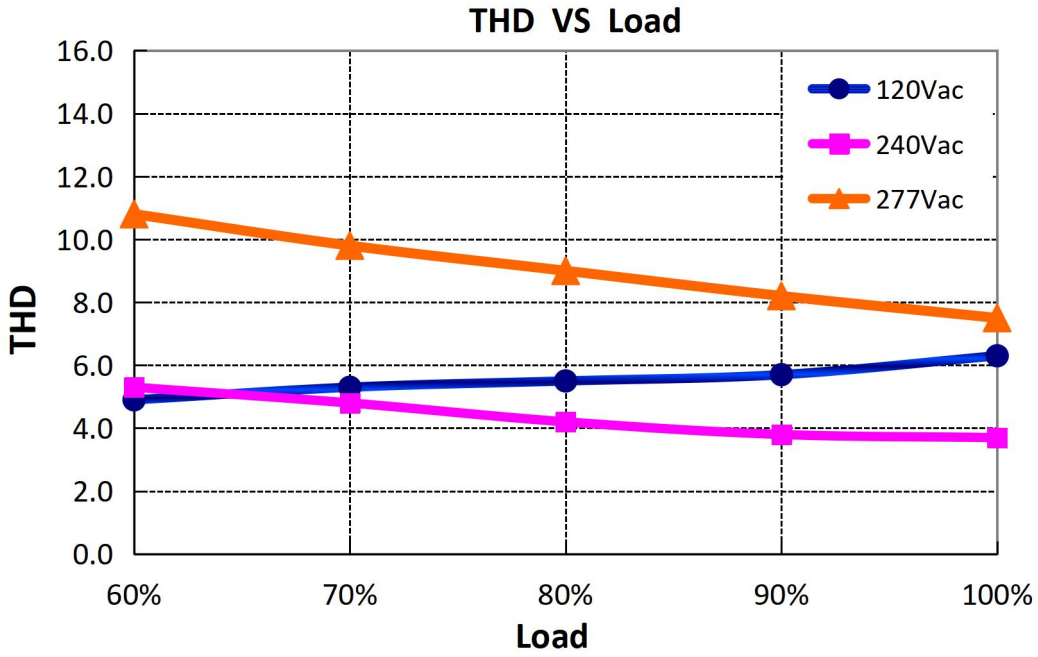
LIFETIME VS CASE TEMPERATURE



POWER FACTOR VS LOAD

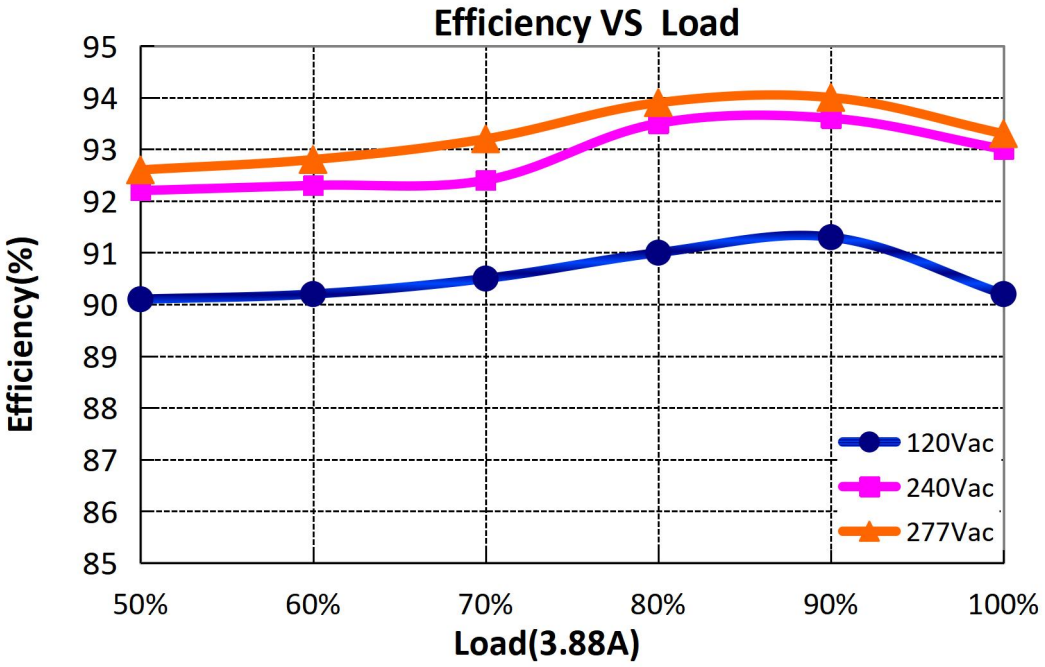


TOTAL HARMONIC DISTORTION

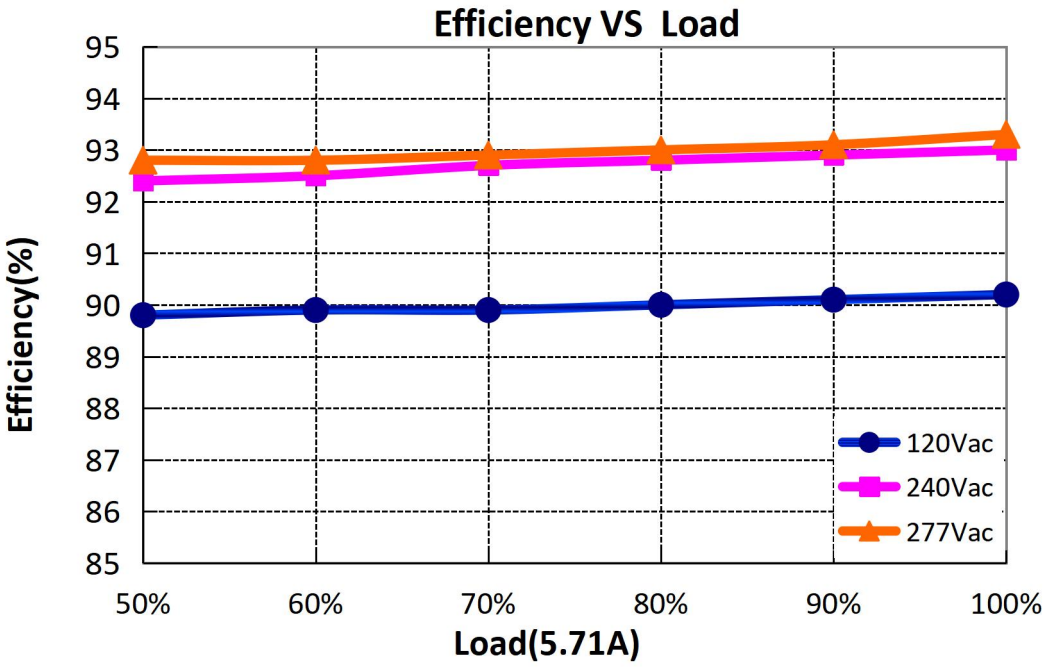


EFFICIENCY VS LOAD

Io=3.88A



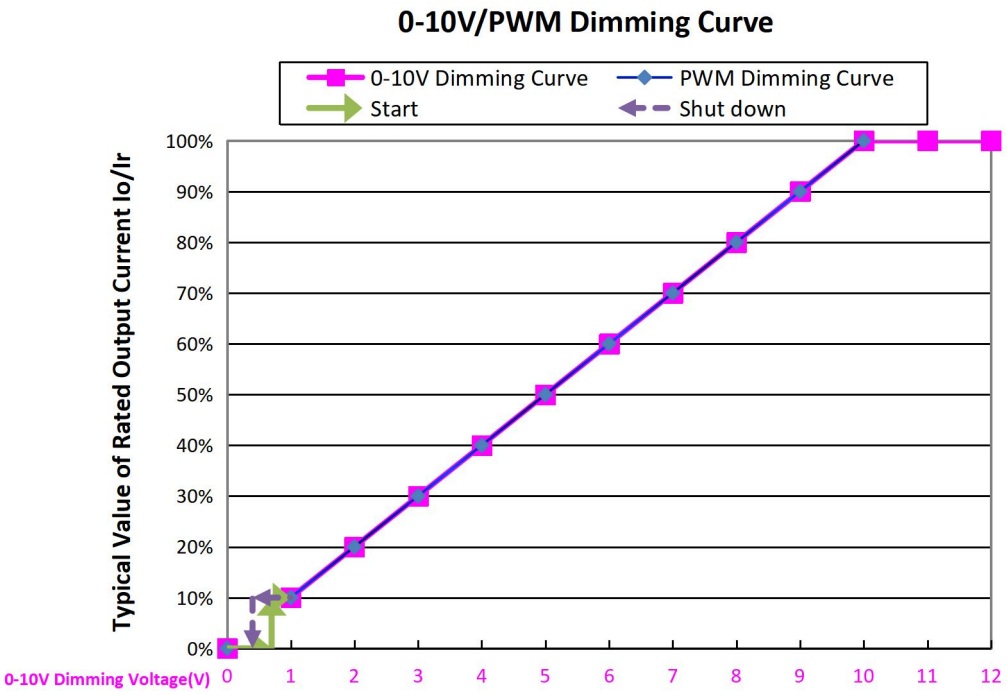
Io=5.71A



PROTECTIONS

Parameter		Min.	Typ.	Max.	Notes
Input Over Voltage Protection	Input ProtectionVoltage	315Vac	325Vac	360Vac	Turn off the output when the input voltage exceeds protection voltage.
	RecoveryVoltage	300Vac	-	315Vac	Auto Recovery. The driver will restart when the input voltage falls below recovery voltage.
	Max. of Input Over Voltage	-	-	440Vac	The driver can survive for 48 hours with input over-voltage of 440Vac.
Input Under Voltage Protection		The driver Can Survive input Voltage Stress of 100V for 48 hours			
Over Temperature Protection		Decreases output current, returning to normal after over temperature is removed.			
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		Limits output voltage at no load and in case the normal voltage limit fail			

0-10V/PWM DIMMING

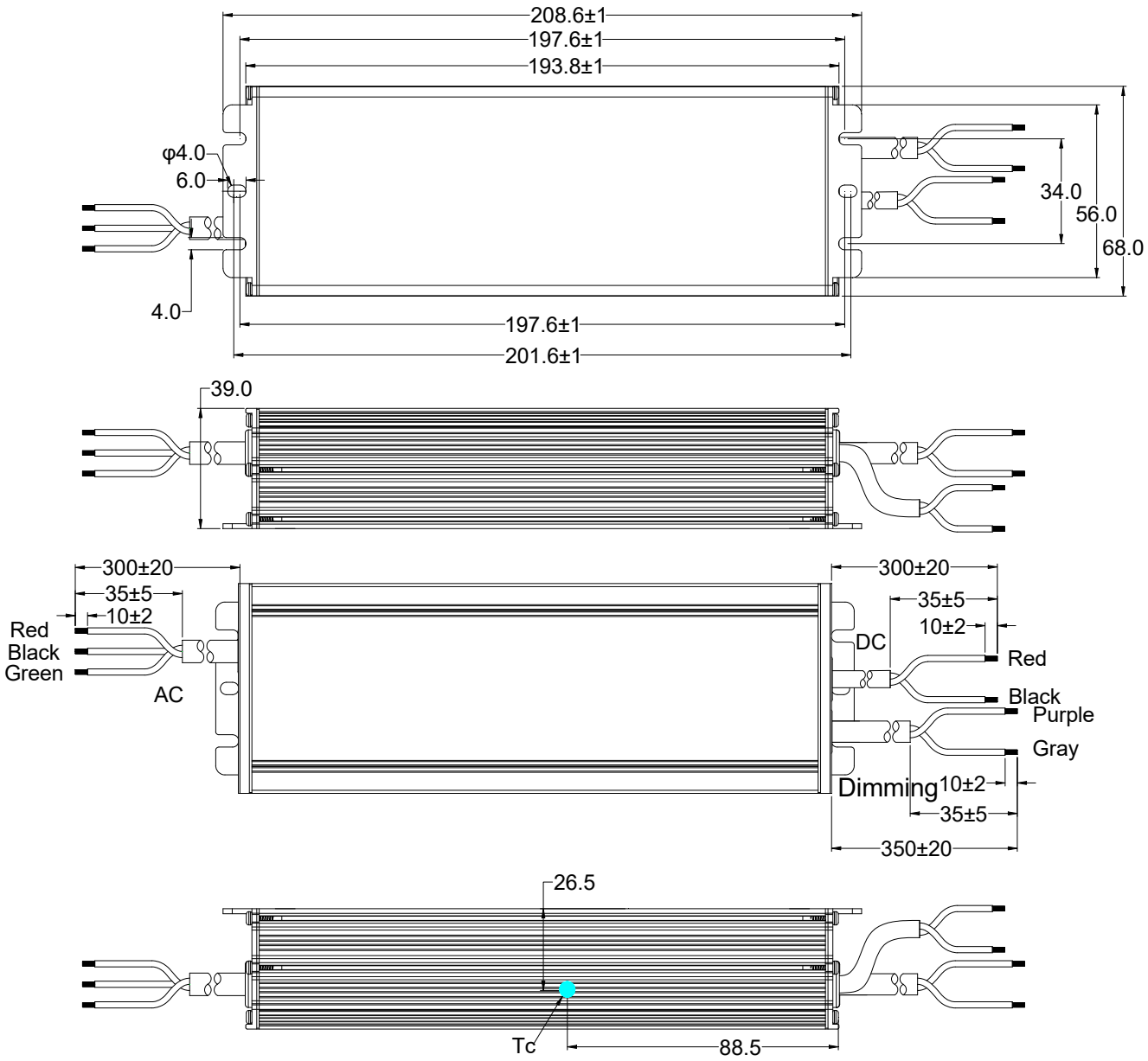


Note:

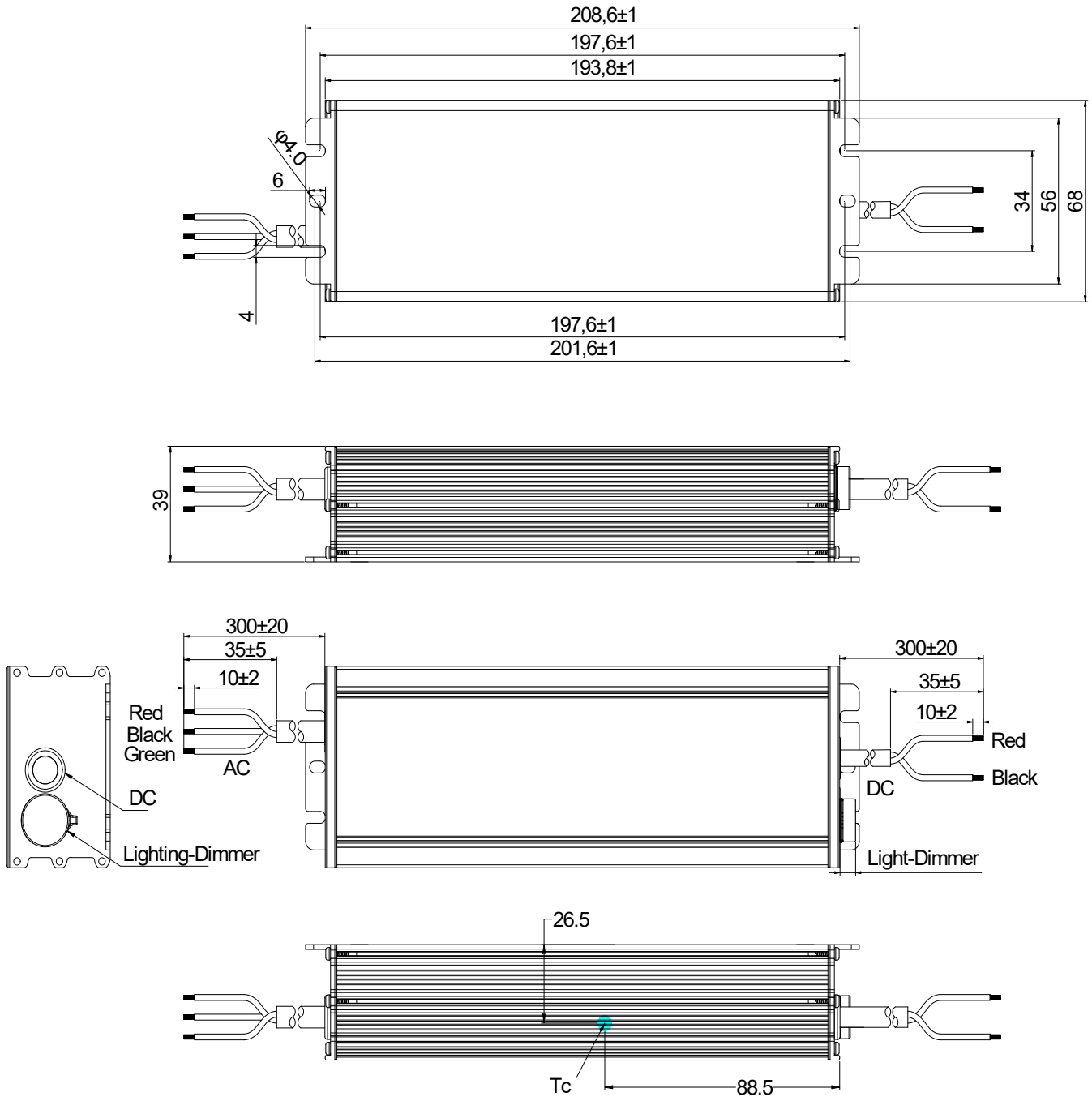
Dim to off model is realized by decreasing the output voltage, the power supply still has residual voltage when dim to off, so the start up voltage of the lamp should be higher than residual voltage.

MECHANICAL OUTLINE

X6-240M062-I types



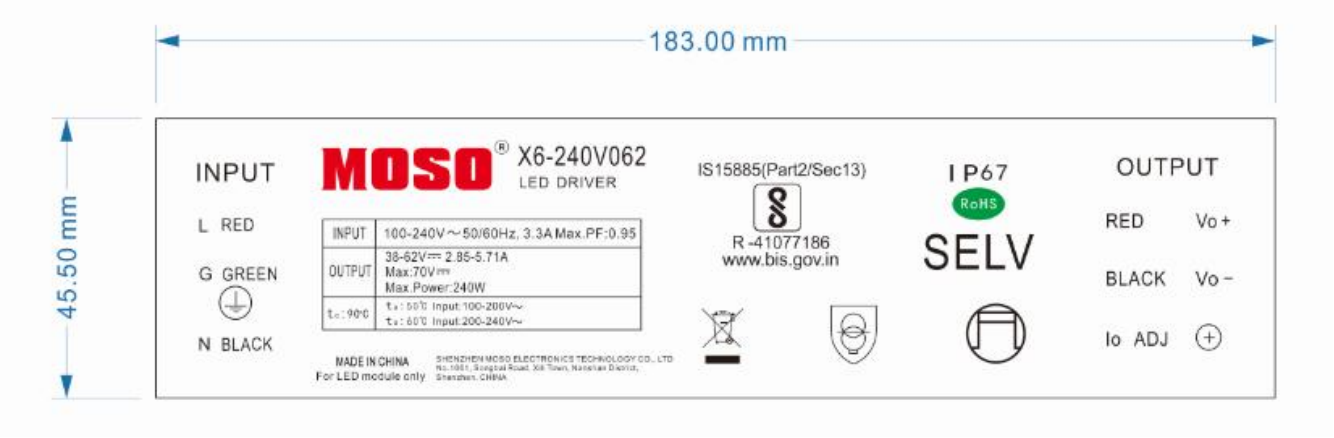
X6-240V062-I types



Wire	Specification	Note
Input	BIS 9968 *3C L=300±20mm	BIS
Output	BIS 9968*2C L=300±20mm	BIS
Dimming	UL2733 22AWG*2C L=350±20mm	Y=M

LABE


183.00 mm
45.50 mm
INPUT
L RED
G GREEN
N BLACK
MOSO®
X6-240M062
LED DRIVER
INPUT
100-240V～50/60Hz, 3.3A Max.PF:0.95
OUTPUT
38-62V⎓ 0.57-5.71A
Max:70V ⎓
Max.Power:240W
MADE IN CHINA
For LED module only
IS15885(Part2/Sec13)
R-41077186
www.bis.gov.in
IP67
RoHS
SELV
OUTPUT
RED Vo+
BLACK Vo-
PURPLE DIM+
GRAY DIM-


183.00 mm
45.50 mm
INPUT
L RED
G GREEN
N BLACK
MOSO®
X6-240V062
LED DRIVER
INPUT
100-240V～50/60Hz, 3.3A Max.PF:0.95
OUTPUT
38-62V⎓ 2.85-5.71A
Max:70V ⎓
Max.Power:240W
MADE IN CHINA
For LED module only
IS15885(Part2/Sec13)
R-41077186
www.bis.gov.in
IP67
RoHS
SELV
OUTPUT
RED Vo+
BLACK Vo-
Io ADJ

REVISION HISTORY

Version	Description of Change		Date	Notes
	Before	Now		
A.1	Original Release		2021-01-12	
B.2		ECL202104007	2021-06-08	Long Fu Zhu
C.2		ECL202109041	2021-09-14	Qi bin yuan
D.2		ERL202303084	2023-03-29	Long Fu Zhu

Specification for Approval

Product Name: 240W outdoor off-line programmable driver

Product Model: X6-240M062-I ☐

X6-240V062-I ☑

Rev. D.2

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:	240W outdoor off-line programmable driver
Product Model:	X6-240M062-I ☐
	X6-240V062-I ☑
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