



Product Features

- Universal input voltage / Full range: 110~305Vac;
- 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;
- Constant lumen output;
- 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 X6-200W series is 200W 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

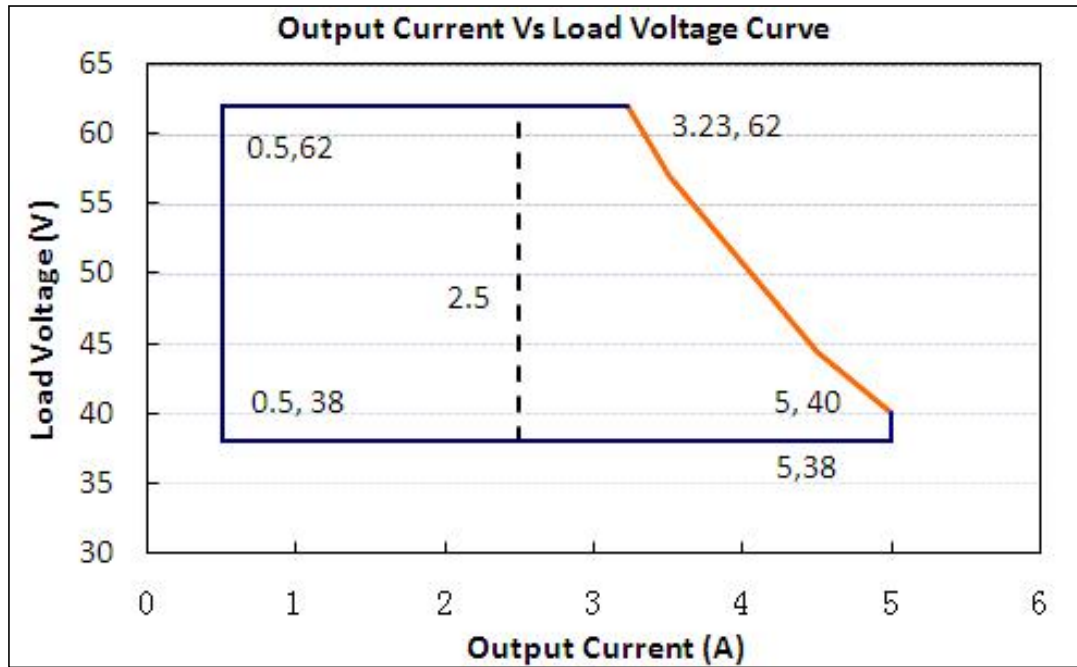
Model Number [1]	Max Output Power (W)	Output Voltage Range (Vdc)	Full Power Output Voltage Range (Vdc)	Full Power Current Adjustable Range (A)	Default Output Current Setting(A)	Typical Efficiency [3]	Power Factor
							240Vac
X6-200V062-1(input 440V over voltage)	200	38-62	40-62	3.23-5.00	4.90	92%	0.97

Notes:

- [1]. Y can be M or V, Y=M means dimmable and offline 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

X6-200Y062-I(Input 440V over voltage)



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	-	-	2.8A	120-277Vac & full load			
Inrush Current	-	-	75A	240Vac & full load			
Standby Power Consumption			3W	240Vac/50Hz			
Power Factor	0.97	0.99	-	120Vac, 50-60Hz, full load			
	0.95	0.97		240Vac, 50-60Hz, full load			
	0.90	0.92		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	2	B16	4	B25	6	240Vac
	C10	4	C16	6	C25	10	

OUTPUT SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-5%	-	5%	
Output Current Setting Range (A) X6-200Y062-I	0.50	-	5.00	The 'M type' adjustable lout range: 10%-100% I _{max} ,
Output Current Setting Range with Constant Power X6-200Y062-I	3.23	-	5.00	
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%	120~277Vac &100% Load, load is LED
No Load Output Voltage(V) X6-200Y062-I	-	-	70	
Line Regulation	-1%	-	1%	25°C±10°C ambient temperature, input voltage changes from 100Vac to277Vac.
Load Regulation	-3%	-	3%	25°C±10°C 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 @115Vac X6-200Y062-I I _o =3.23 I _o =5.0	88% 88%	90% 90%		Measured at full load and 25°C ambient temperature
Efficiency @240Vac X6-200Y062-I I _o =3.23 I _o =5.0	90% 90%	92% 92%	-	Measured at full load and 25°C ambient temperature
Efficiency @277Vac X6-200Y062-I I _o =3.23 I _o =5.0	90.5% 90.5%	92.5% 92.5%		Measured at full load and 25°C ambient temperature
Dielectric Strength	Input-Output	-	3750Vac	Max 5mA/60S
	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, 240Vac,80% load (MIL-HDBK-217F)
Lifetime	-	50000Hrs	-	240Vac&100% load, 75°C case temperature, refer to lifetime curve for details
Ambient Temperature	-40°C		+60°C	240Vac&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	L193.6*W68*H39			
Net Weight	940±100g/PCS			
Package	L500mm*W370mm*H160mm; 10PCS/Ctn, Gross Weight: 10Kg			

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	X6-200M062-I	10%Imax	-	100%Imax	Imax=5.0A
	X6-200M062-I	0.5	-	5.0	
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 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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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	/

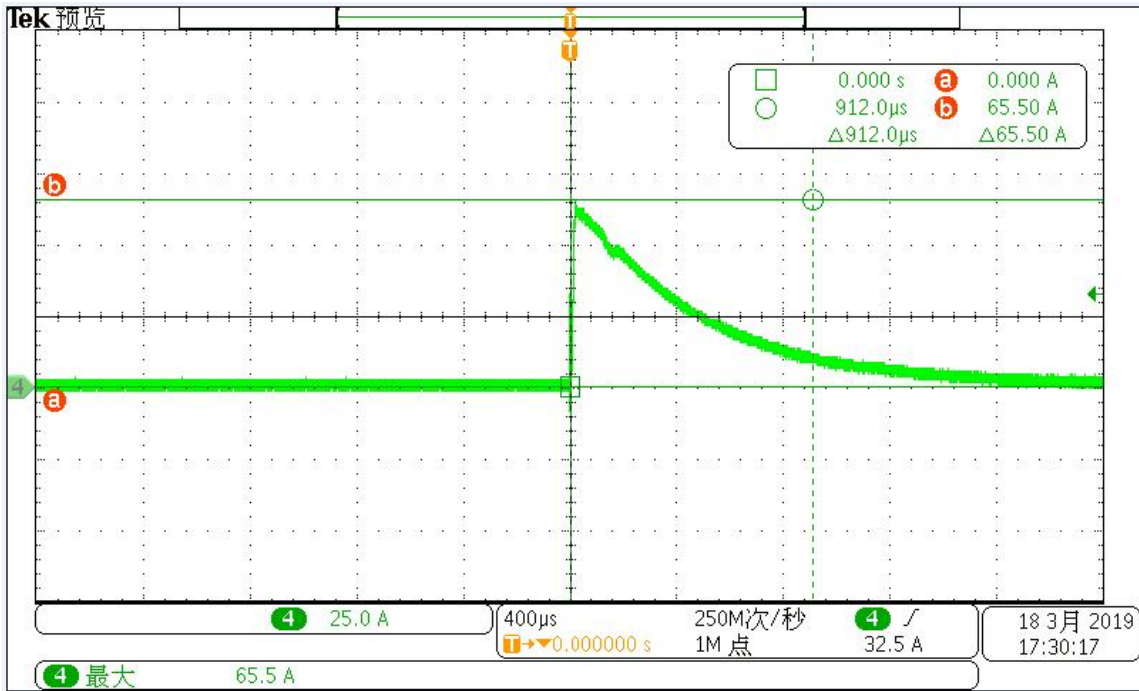
EMC COMPLIANCE

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:

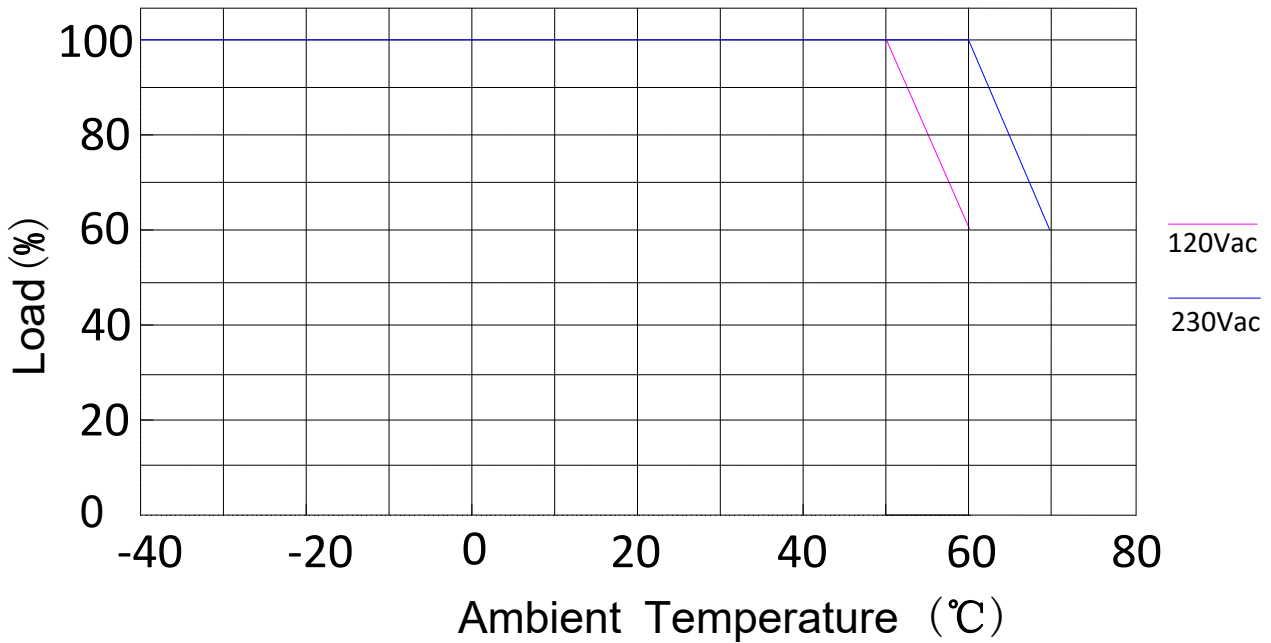
This LED driver meets the EMI specifications above, but as a component of a luminaire, end customer need to identify the EMI performance of a luminaire including LED driver, other devices connected to the driver and on the luminaire itself.

INRUSH CURRENT WAVEFORM

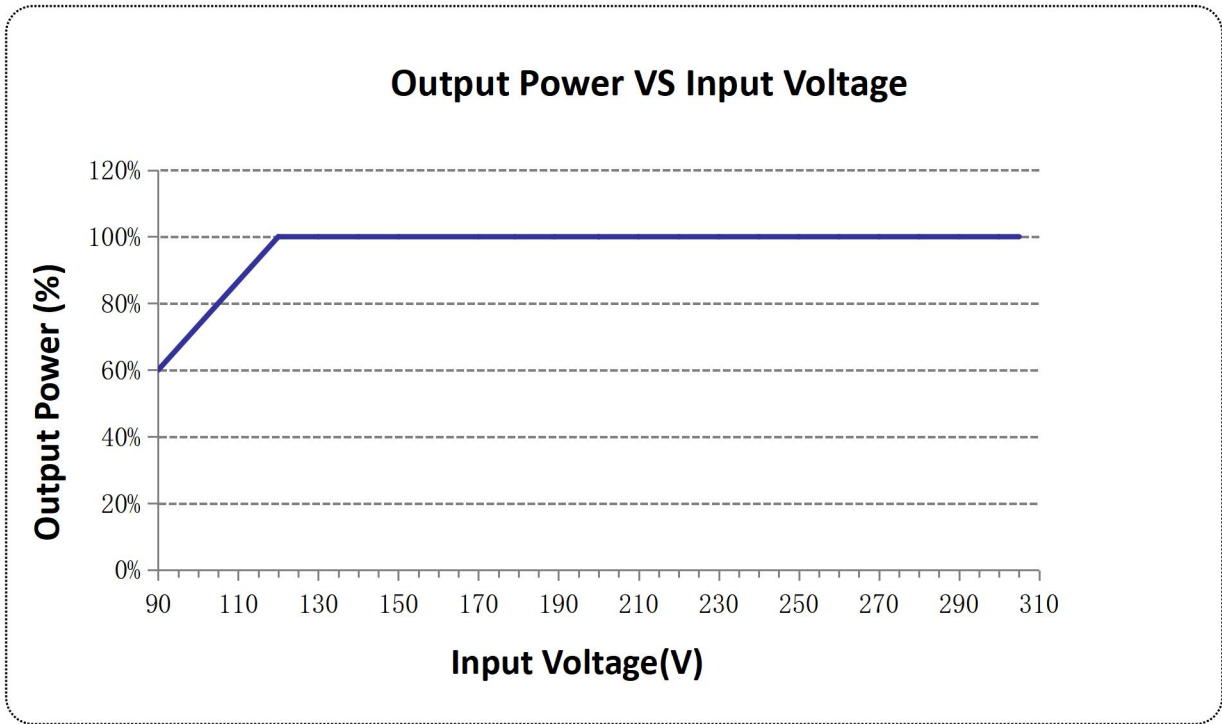


DERATING CURVE

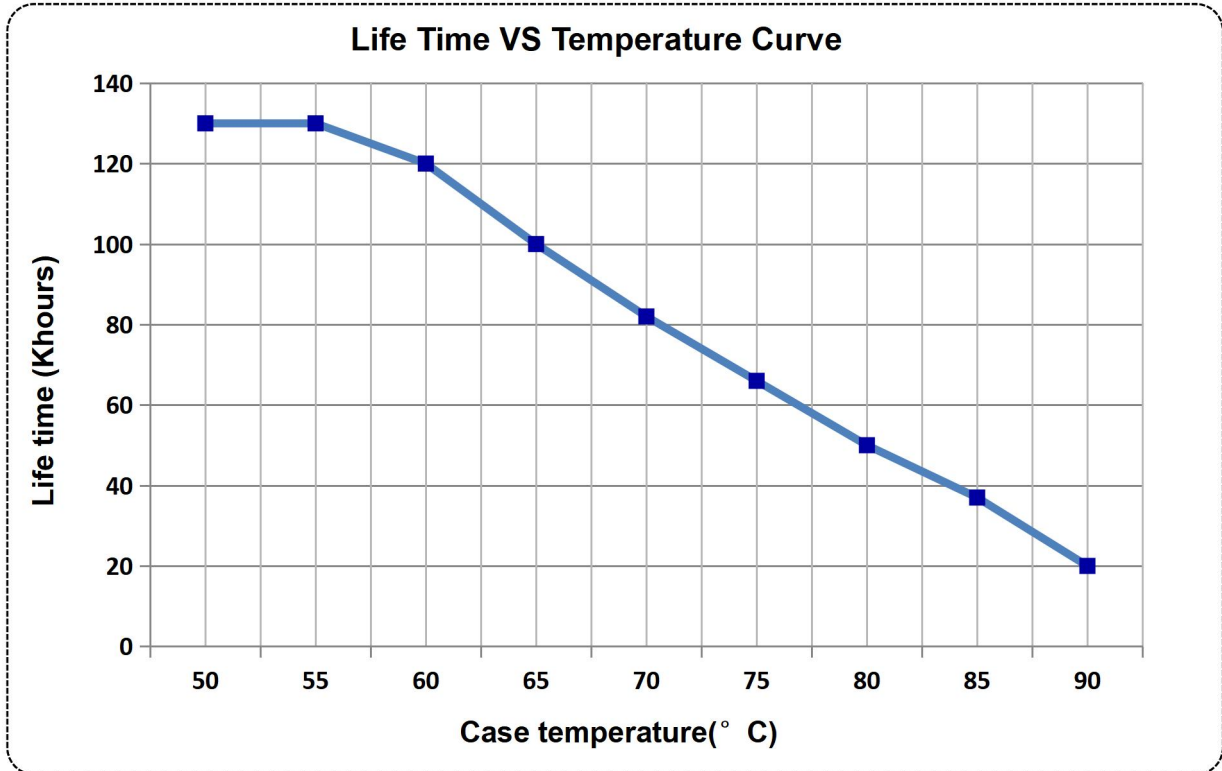
Derating Curve



OUTPUT POWER VS INPUT VOLTAGE

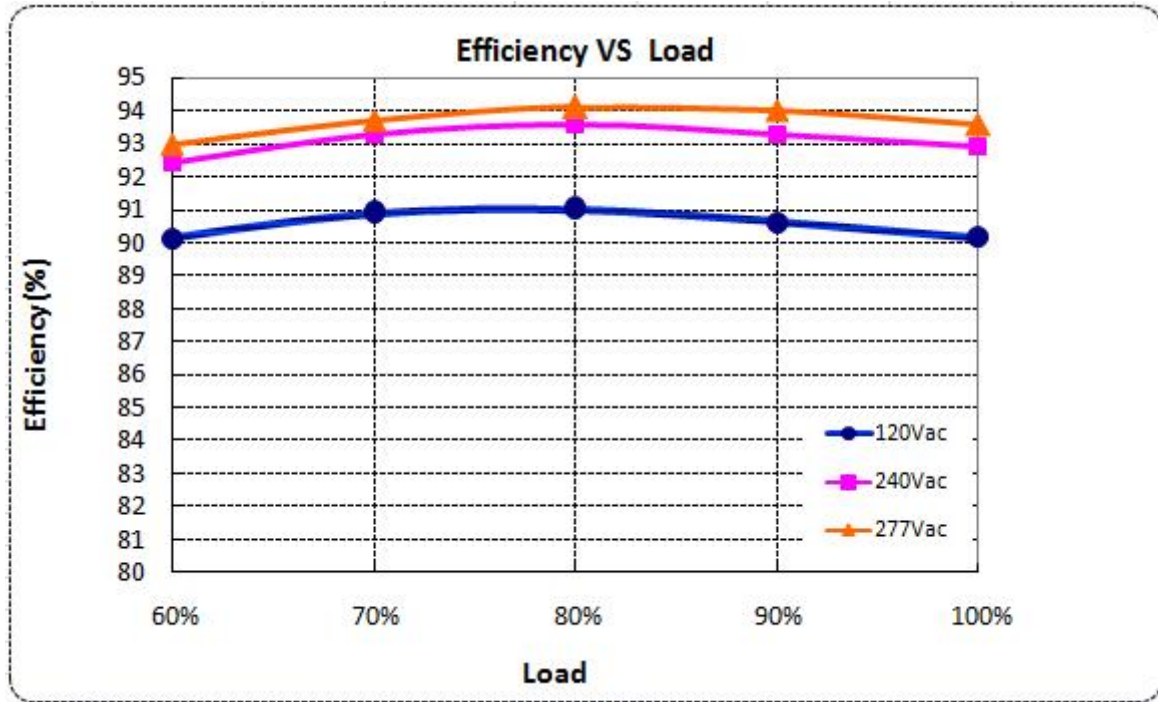


LIFETIME VS CASE TEMPERATURE

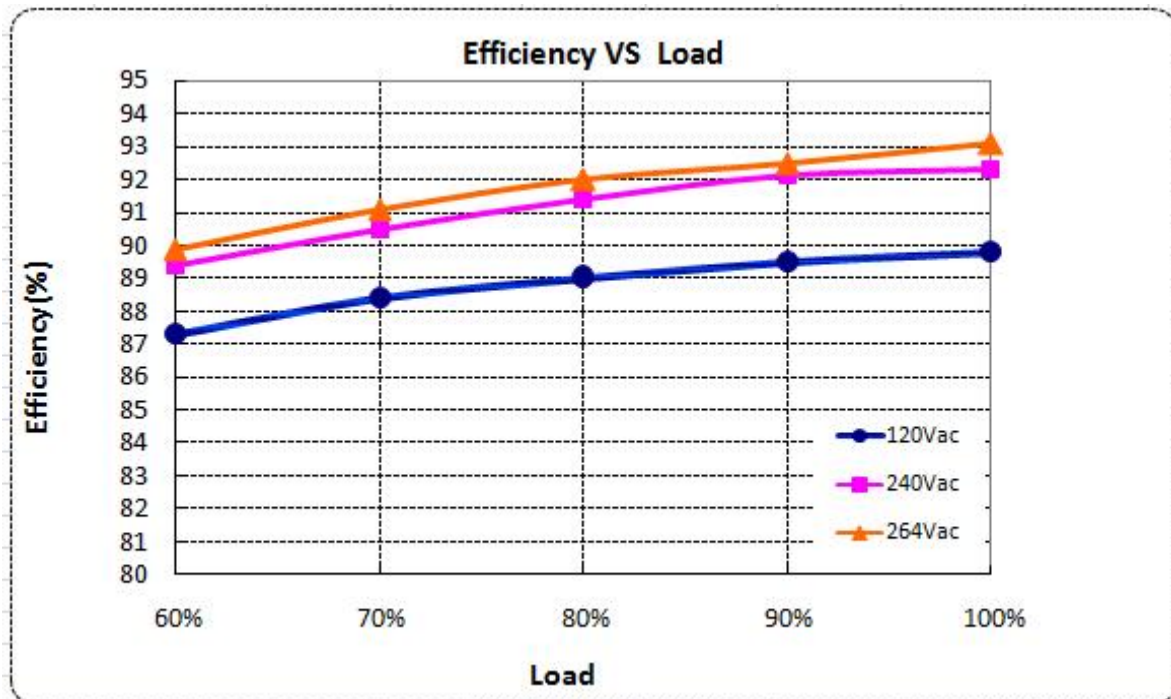


EFFICIENCY VS LOAD

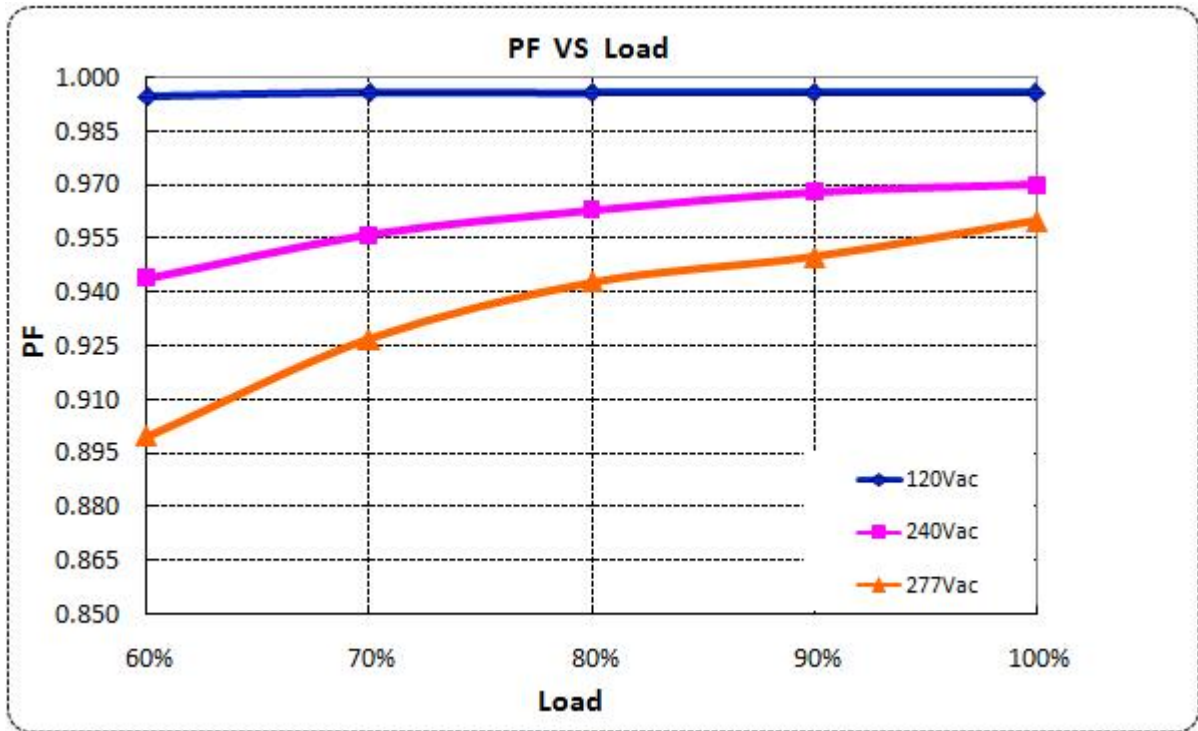
Io=3.23A



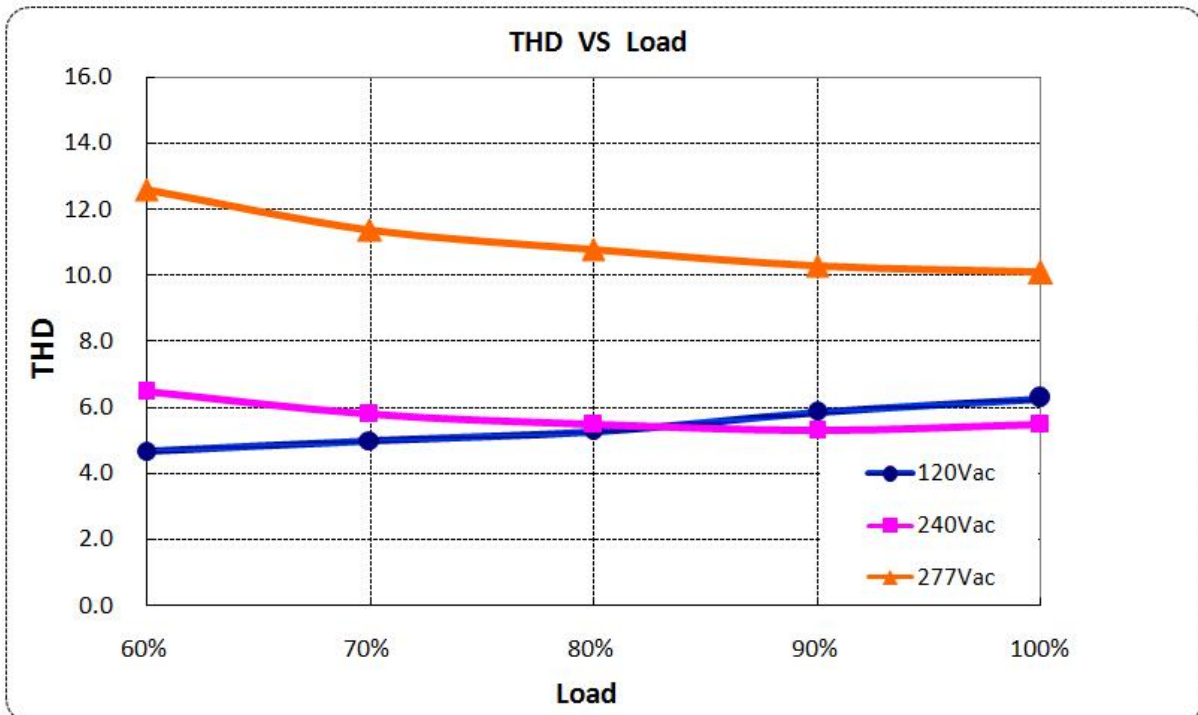
Io=5.0A



POWER FACTOR VS LOAD



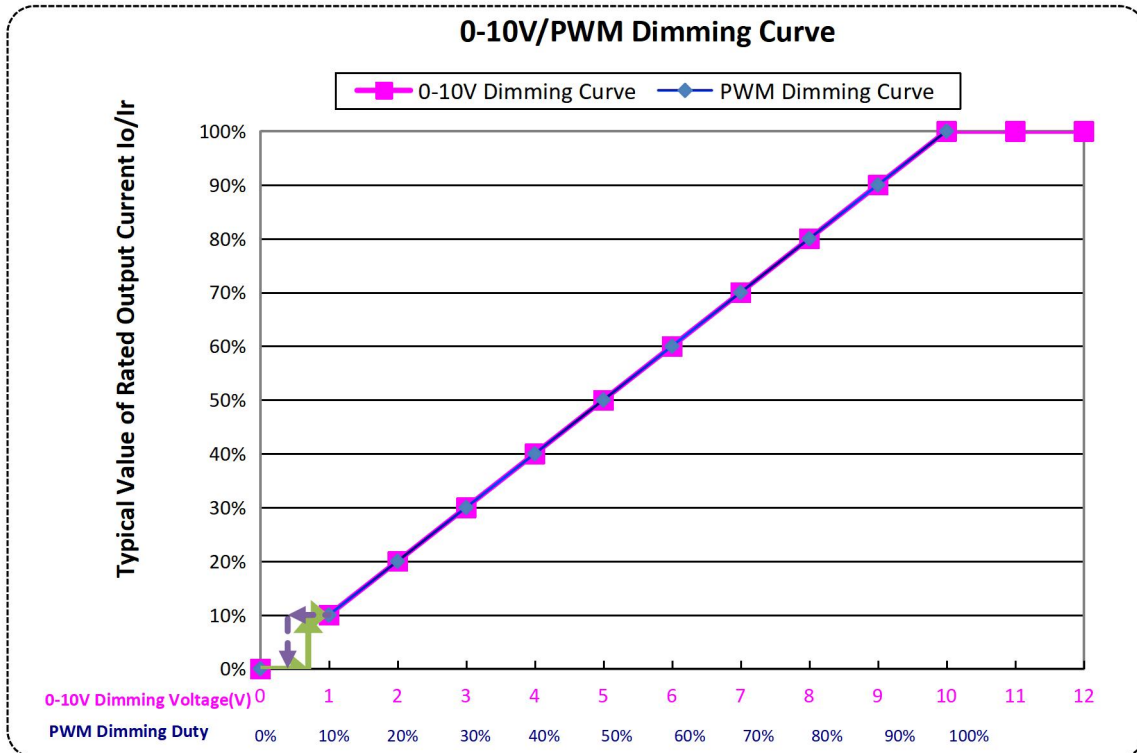
TOTAL HARMONIC DISTORTION



PROTECTIONS

Parameter		Min.	Typ.	Max.	Notes
Input Over Voltage Protection	Input Protection Voltage	315Vac	325Vac	335Vac	Turn off the output when the input voltage exceeds protection voltage.
	Recovery Voltage	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		90Vac	100Vac	110Vac	
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

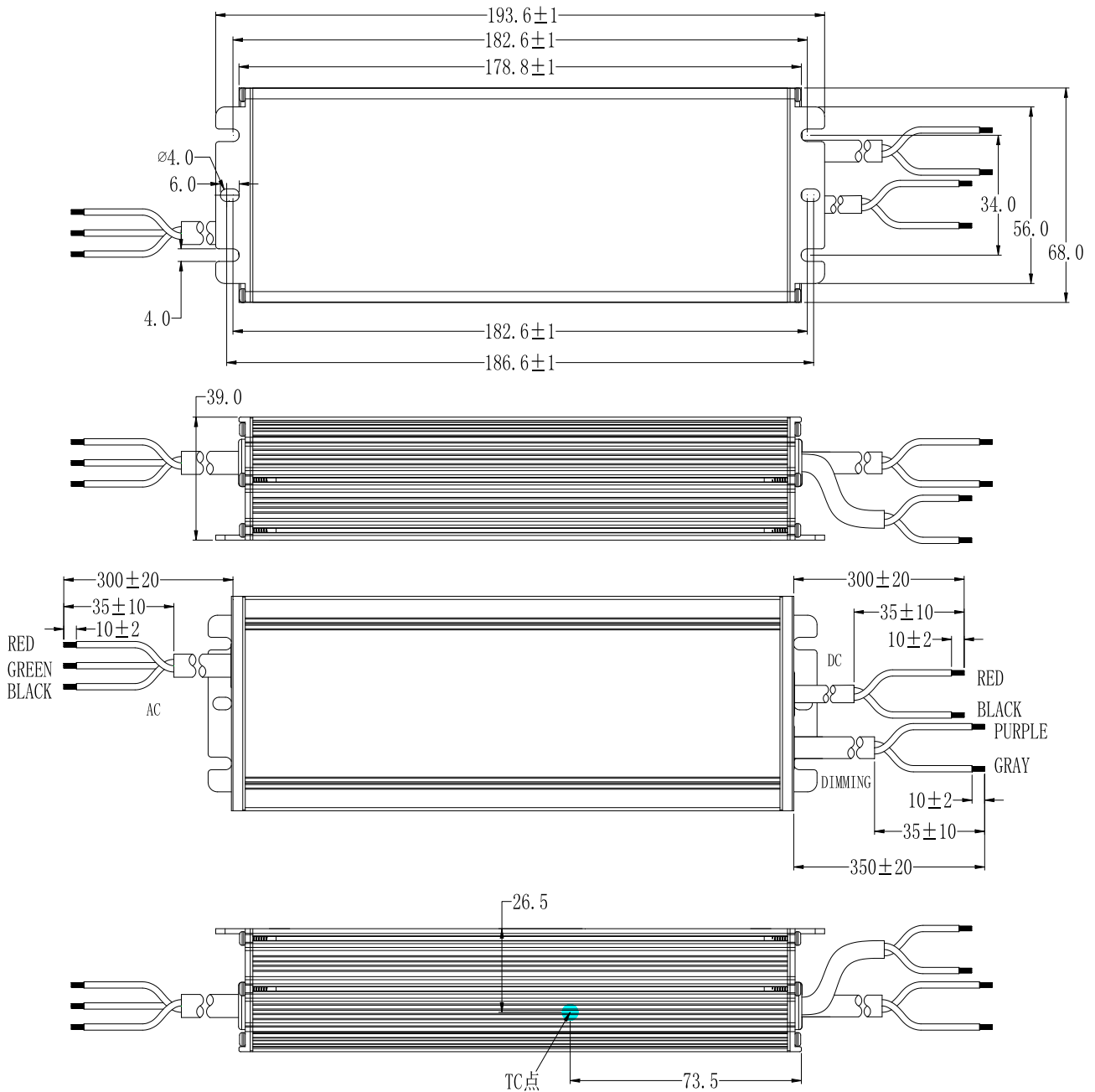


Note:

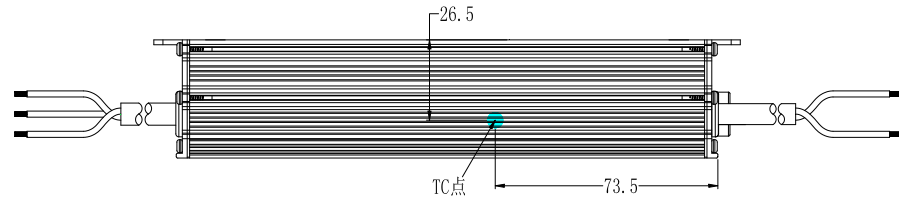
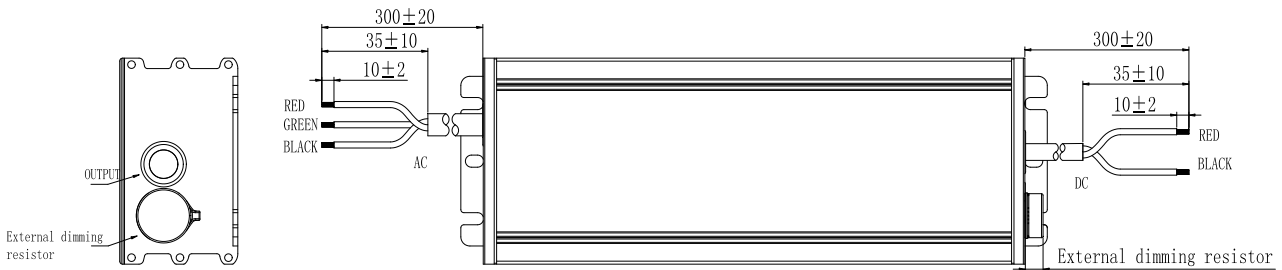
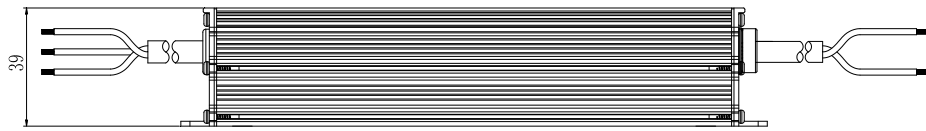
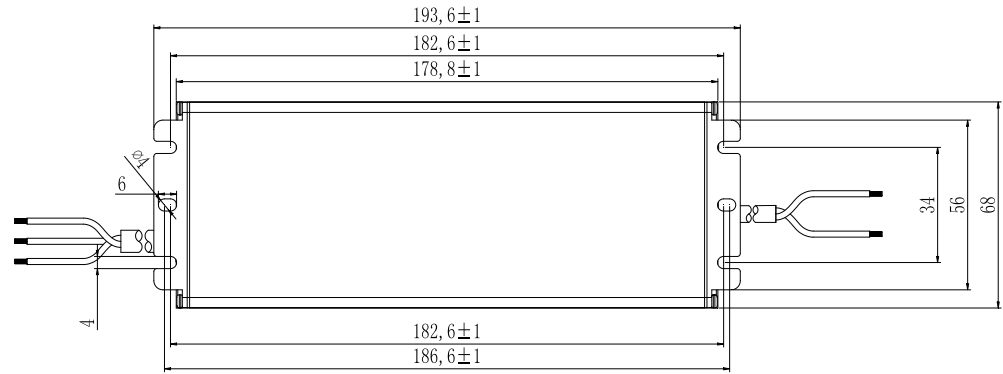
Dim to off model is realized by decreasing the output voltage, the power supply still has residual voltage when dim to off, so the start up voltage of the lamp should be higher than residual voltage.

MECHANICAL OUTLINE

X6-200M062-I



X6-200V062-I



Wire	Specification	Note
Input	BIS 9968 3*1.0mm ² OD=7.3mm L=300±20mm	for BIS
Output	BIS 9968 2*1.0 mm ² OD=7.0mm L=300±20mm	for BIS
Dimming	UL2733 22AWG*2C OD=5.45mm L=350±20mm	Y = M

LABEL

45.50 mm
169.00 mm

INPUT L RED G GREEN N BLACK	MOSO[®] X6-200M062 LED DRIVER	IS15885(Part2/Sec13) R-41077186 www.bis.gov.in 	IP67 SELV 	OUTPUT RED Vo + BLACK Vo - PURPLE DIM + GRAY DIM -						
<table border="1" style="width: 100%; border-collapse: collapse; font-size: 8px;"> <tr> <td style="width: 15%;">INPUT</td> <td>100-240V ~ 50/60Hz, 2.8A Max.PF:0.95</td> </tr> <tr> <td>OUTPUT</td> <td>38-62V ~ 0.50-5.00A Max: 70V ~ Max.Power:200W</td> </tr> <tr> <td>t_c: 90°C</td> <td>t_a: 50°C Input:100-200V ~ t_a: 60°C Input:200-240V ~</td> </tr> </table>		INPUT	100-240V ~ 50/60Hz, 2.8A Max.PF:0.95	OUTPUT	38-62V ~ 0.50-5.00A Max: 70V ~ Max.Power:200W	t _c : 90°C	t _a : 50°C Input:100-200V ~ t _a : 60°C Input:200-240V ~	<p style="font-size: 8px;">MADE IN CHINA For LED module only</p> <p style="font-size: 8px;">SHENZHEN MOSO ELECTRONICS TECHNOLOGY CO., LTD No.1061, Songbai Road, Xili Town, Nanshan District, Shenzhen, CHINA</p>		
INPUT	100-240V ~ 50/60Hz, 2.8A Max.PF:0.95									
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45.50 mm
169.00 mm

INPUT L RED G GREEN N BLACK	MOSO[®] X6-200V062 LED DRIVER	IS15885(Part2/Sec13) R-41077186 www.bis.gov.in 	IP67 SELV 	OUTPUT RED Vo + BLACK Vo - Io ADJ (+)						
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REVISION HISTORY

Version	Description of Change		Changed Date	Notes
	Before	Now		
A.1		Datasheets Release	2021-05-12	
B.2			2022-12-12	Long fu.Zhu

Specification subject to change without notice

Specification for Approval

Product Name: 200W outdoor off-line programmable driver

Product Model: X6-200M062-I
X6-200V062-I

Rev. B.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.		

XiLi Songbai Road 1061, Nanshan
Address: District, Shenzhen City, Guangdong Province, P.R.China Post Code: 518108

TEL: 0755-27657000 FAX: 0755-27657908

E-mail: wcx@mosopower.com Web site: <http://www.mosopower.com>

Prepared By	Checked By	Approved By

Product Specification

Product Name: 200W outdoor off-line programmable driver

Product Model: X6-200M062-I
X6-200V062-I

Rev. B.2

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Prepared By	Checked By	Approved By