Description

The X7I series is outdoor constant current LED driver that operates with high PF value and full power input voltage range 140~305Vac, and output current is adjustable with build-in potentiometer. It also helps clients to improve the management of logistics and stock. The compact metal case and high efficiency enable the driver to operate with high reliability, and it provides extreme durability with an IP67 rating and extends product lifetime. Overall protection is provided against lightning surge, output over voltage, short circuit and over temperature to ensure low failure rate.

IS15885(Part2/Sec13)

R-41246603
www.bis.gov.in

Product Features

- Universal input voltage: 108~305Vac;
- Full power work range: 140~305Vac;
- Isolate constant power design;
- Adjustable output current with potentiometer
- 440Vac Protection: >48hours
- High surge protection: 6KV 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

Road and street lighting,
Tunnel lighting
Area and flood lighting
High-bay lighting

Models

Model Number	Input Voltage Range (Vac)	Max Output Power (W)	Output Voltage Range (Vdc)	Full Power Output Current Range (A)	Default Current(A)	Eff. (Typ.)	PF(Typ.)	THD(Typ.) @Full load
X7I-150V214	140-305	150	115-214	0.70~1.05	0.70	> 90%	0.97	5%-10%

NOTES:

[1]. Non-dimming control, adjustable output current with potentiometer

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

Input Specifications

Parameter	Min	Typ.	Max	Notes
Input Voltage Range	108Vac	220~240Vac	305Vac	
Full Power Work Range	140Vac	220~240Vac	305Vac	Refer to Output Power vs. Input Voltage curve
Input Frequency AC	47Hz	50/60Hz	63Hz	
Max Input Current	-	-	1.3A	140Vac＆100% load
Max Input Power	-	-	170W	240Vac＆100% load
Leakage Current	-	-	0.70mA	IEC 60598-1; 240Vac/60Hz
Inrush Current	-	-	75A	240Vac，100% load
Power Factor (PF)	0.95	0.97	-	220-240Vac，50-60Hz，70%-100% load
Total Harmonic Distortion (THD)	-	5%	10%	220-240Vac，50-60Hz，70%-100% load
MCB(B16)	-	8	-	240Vac；100%load

Output Specifications

Parameter	Min	Typ.	Max	Notes
Output Voltage Range	115Vdc	-	214Vdc	The full power cannot be lower than 143Vdc
Open Circuit Protection	-	-	270Vdc	Present, LED Driver tolerates sustained open circuit output condition without damage.
Output Current Range	0.65A	-	1.05A	Adjustable output current with potentiometer, full power performance range 0.7A-1.05A.
Current Accuracy	-5%	-	+5%	
Total Output Current Ripple (pk-pk)	-	5%	10%	20MHz BW full load＆LED load, the ripple is slightly different for different leds
Startup Overshoot Current	-	5%	10%	220-240Vac full load condition，LED load
Line Regulation	-3%	-	+3%	25℃±10℃ ambient temperature, input changes from 200Vac to 264Vac
Load Regulation	-3%	-	+3%	Load varies from 60% to 100% with 240Vac input at 25℃±10℃ ambient temperature
Turn-on Delay Time	-	-	1.0s	240Vac,100% load

General Specifications

parameter	Min	Typ.	Max	Notes
Effciency@240Vac 1.05A 0.70A	 90.0% 90.0%	 92.0% 92.0%	-	100% load，25℃ ambient temperature
Mean Time Between Failure (MTBF)	-	200Khours	-	25℃ ±10℃ ambient temperature，240Vac，80% load condition (MIL-HDBK-217/SR-332)
Lifetime	-	50Khours	-	240Vac＆100% load，Tc 75℃，refer to Lifetime vs. Case Temperature curve
Operating Temperature Ta	-40℃	-	+55℃	Output Power vs. Ambient Temperature curve
Operating Tc for Safety Tc_s	-40℃	-	+90℃	
Operating Tc for Warranty Tc_w	-40℃	-	+75℃	5-year warranty case temperature, humidity: 10% to 95% RH
Storage Temperature Ta	-40℃	-	+85℃	Humidity: 5% to 100% RH
Altitude	-60m	-	4000m	
Input Under voltage Protection	65Vac	75Vac	85Vac	Turn off the output when the input voltage falls below protection voltage.
Input Over voltage Protection	325Vac	340Vac	350Vac	Turn off the output when the input voltage exceeds protection voltage.
Recovery Voltage	300Vac	310Vac	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
Over Temperature Protection Tc	-	90℃	-	Decreases output current, returning to normal after over temperature is removed.
Short Circuit Protection	-	-	-	Constant current mode. The output shall return to normal when the fault condition is removed.
Dimensions (L*W*H)	163*68*37mm			
Net Weight	750±50g/PCS			
Package (L*W*H)	466*282*172mm; 16PCS/Ctn, Gross Weight: 13.9Kg			

Safety Specification

Dielectric Strength（Input-Output）	-	3750Vac	-	60s，Current not exceeding 5mA
Dielectric Strength（Input-Ground）	-	1600Vac	-	60s，Current not exceeding 5mA
Dielectric Strength（Output-Ground）	-	1600Vac	-	60s，Current not exceeding 5mA
Grounding Resistance	-	-	0.1Ω	25℃±10℃ Ambient Temperature, pass 25A Current, 60s
Insulation Resistance	10MΩ	-	-	Input-Output, Input-PE, Output-PE, 500Vdc/60s/25℃

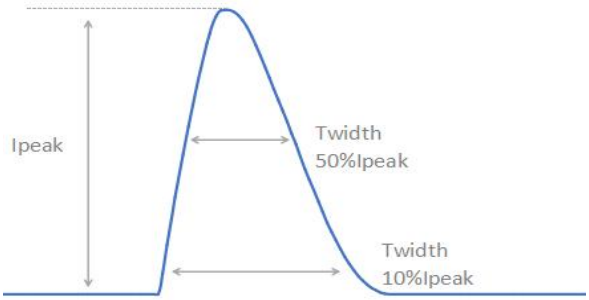
Safety Compliance

Safety Category	Standards	Approved	Notes
CCC	GB19510.1,GB19510.14		
CE	EN61347-1, EN61347-2-13		
CE	EN62493		
ENEC	EN61347-1, EN61347-2-13		
CB	IEC61347-1,IEC61347-2-13		
BIS	IS 15885(PART 2/SEC 13)	√	
UL	UL 8750		
CUL	CSA C22.2 No.250.13		

RoHS

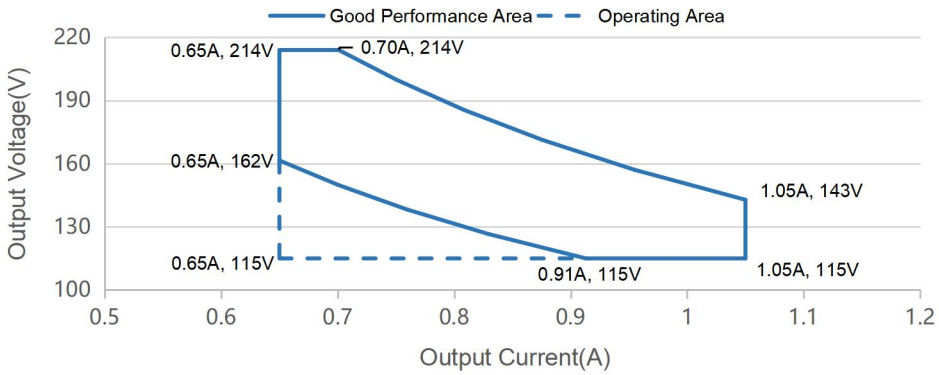
Our products comply with RoHS Directive (EU) 2015/863 amending 2011/65/EU.

Inrush Current

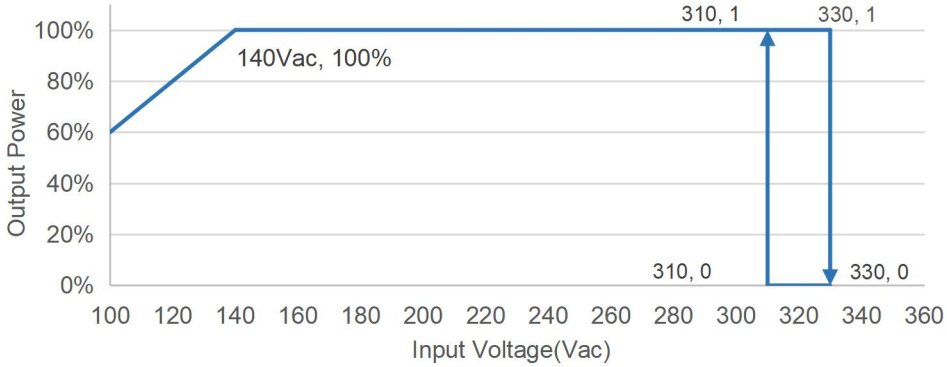


Vin	Ipeak	T(@10% of Ipeak)	T(@50% of Ipeak)
240Vac	52.6A	620us	208us

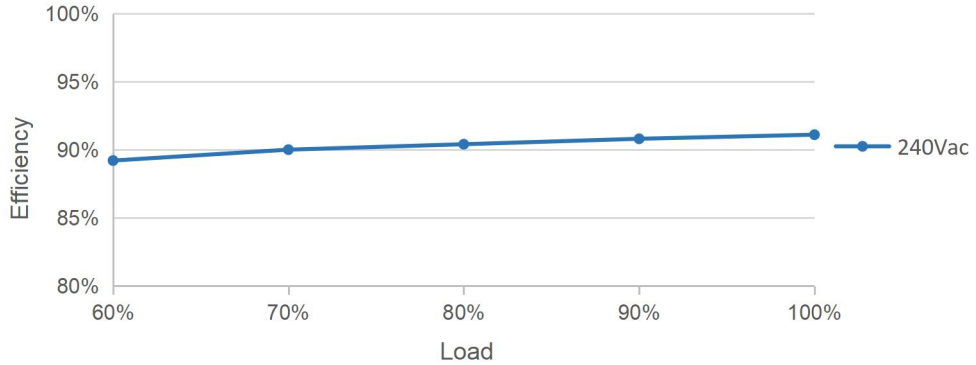
Output Voltage vs. Output Current



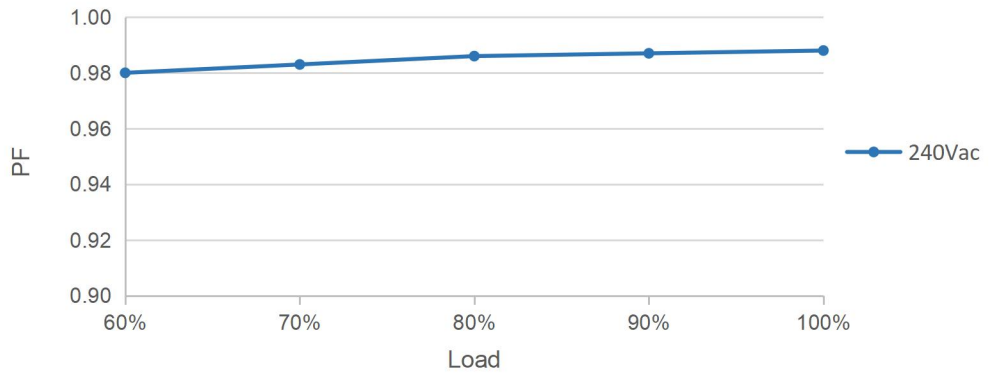
Output Power vs. Input Voltage



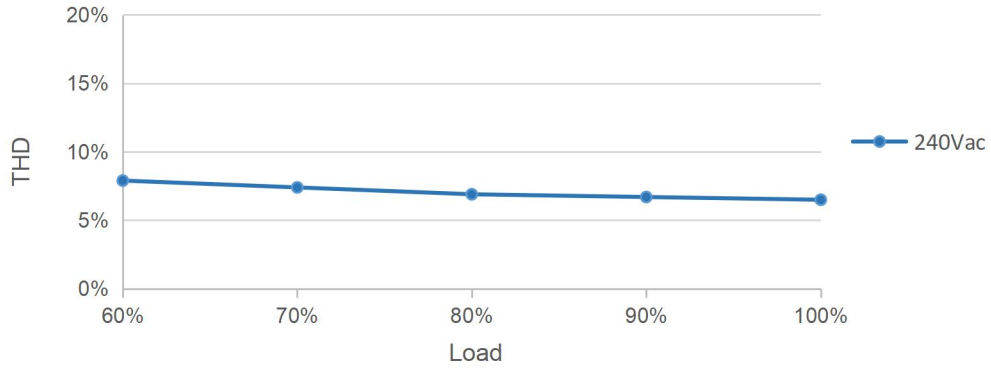
Efficiency vs. Load



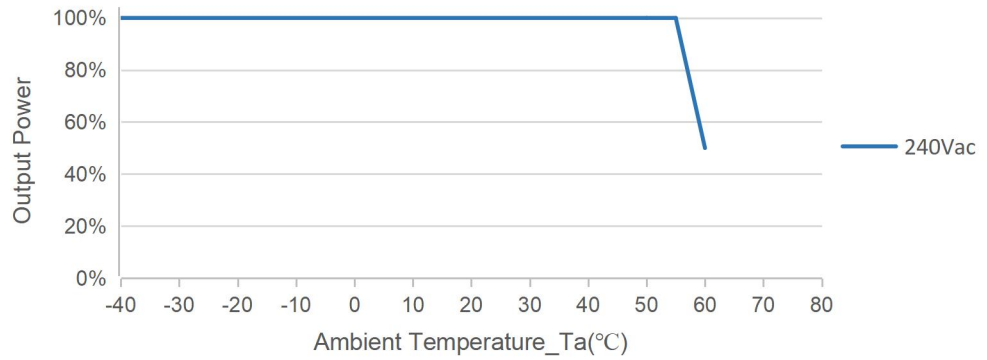
PF vs. Load



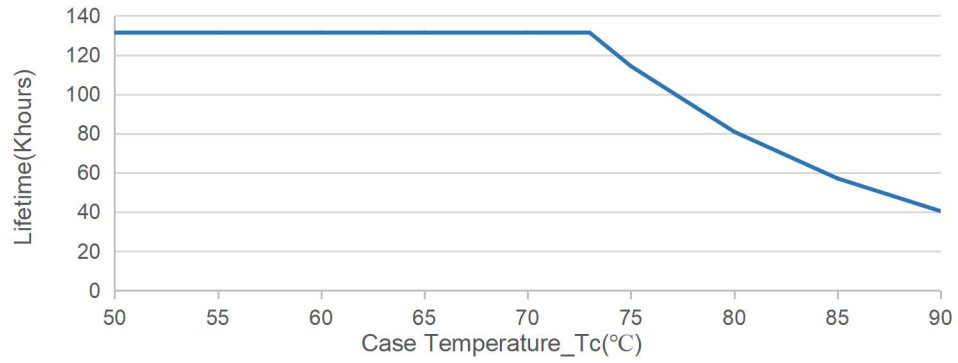
THD vs. Load



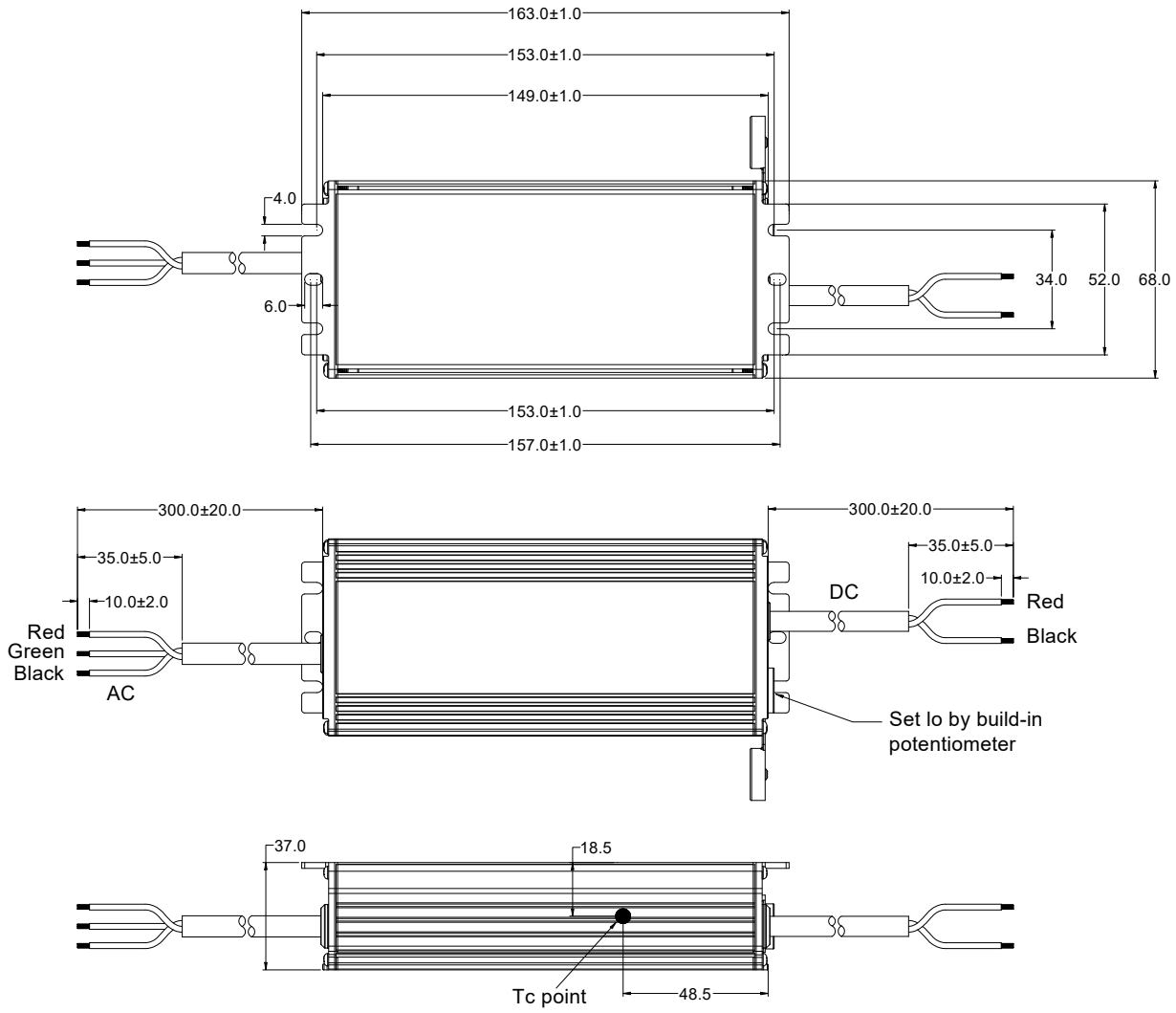
Output Power vs. Ambient Temperature



Lifetime vs. Case Temperature



Mechanical Outline

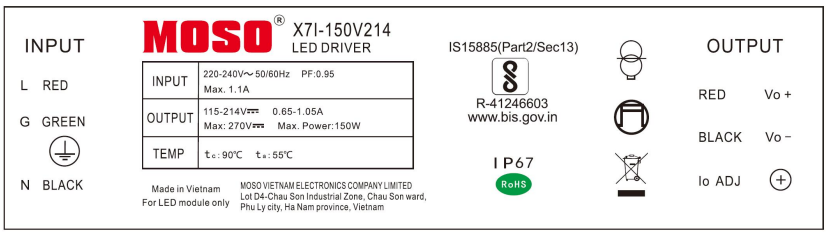


Note: All dimension units are millimeters(mm).

Connections

Input wire	BIS 3*1.0 mm² L=300±20mm	BIS
Output wire	BIS 2*1.0 mm² L=300±20mm	BIS

LABEL



Version

A.0	First release	2022-11-08
A.1	Revised	2023-2-10
B.2	ERL202307020	2023-07-07

Specification for Approval

Product Name: 150W LED Driver

Product Model: X7I-150V214

Rev: B.2

Address: XiLi Songbai Road 1061, Nanshan District, Shenzhen City, Guangdong, China
Tel: 0755-27657000
FAX: 755-27657908
E-mail: info@mosopower.com
Web Site: http://www.mosopower.com

Prepared By	Checked By	Approved By

Specification for Approval

Product Name: 150W LED Driver

Product Model: X7I-150V214

Rev: B.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, China
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Prepared By	Checked By	Approved By