



**Feature:**

- ◆ Input voltage: 90~305Vac;
- ◆ Isolated constant current design;
- ◆ Dimming control: RS485 communication;
- ◆ Output current can be adjusted by software;
- ◆ Support dual color temperature control, realize color temperature adjustment and dimming;
- ◆ output is isolated from the dimming signal, dim to off;
- ◆ Surge protection: DM 6KV, CM 10KV;
- ◆ Protection: OVP, OTP, input OVP;
- ◆ IP67;
- ◆ 5 year warranty.

**Application**

- ◆ tunnel light, road lighting, industry lighting

**Description**

X7-CW 150W is a 150W constant current LED driver with an input voltage range of 90-305Vac, support for dimming and color temperature optional, with high power factor and low THD, lightning protection, output overvoltage protection, and over temperature protection to ensure high product reliability. This series has a compact structure and is designed for tunnel lights mainly.

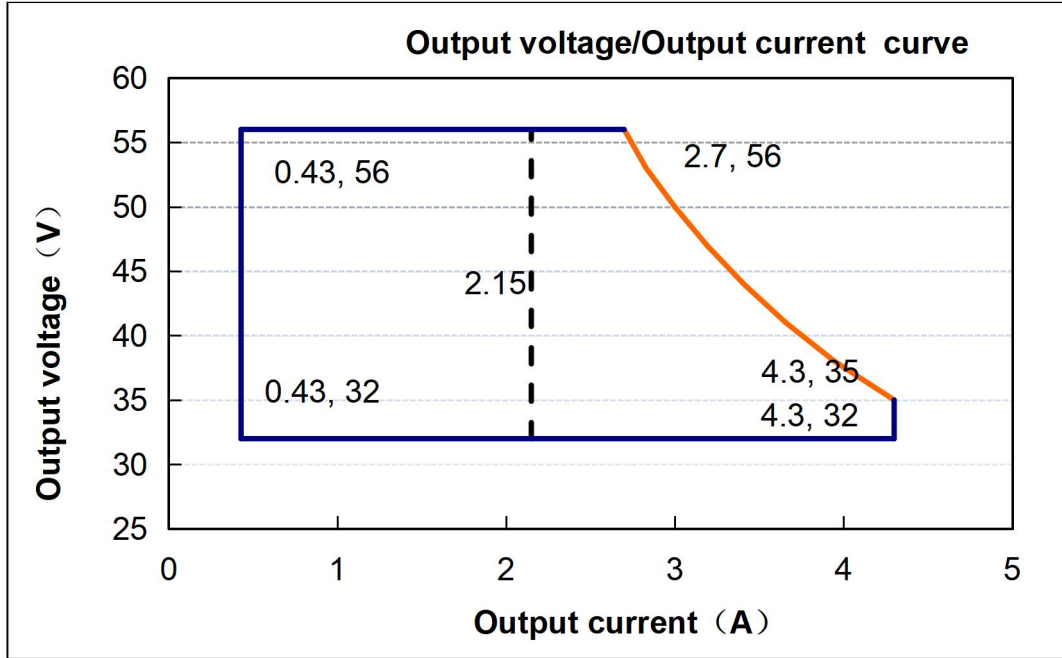
**Model**

Model	Vin (Vac)	Pout(W)	Vout(V)	Iout(A)	Efficiency	Typ THD	Typ PF
X7-150S056-CW	90-305	150	32-56	Max.4.30 2 total outputs	90%	10%	0.96

**Note:**

All parameters are measured at ambient temperature 25° C, 230Vac input, and the typical values measured under full load conditions, unless otherwise specified.

Output voltage—output current curve



Note: The area on the right side of the dotted line is the recommended setting range for the output current

Input Specifications

Parameter	Min	Typ.	Max	Notes
Input Voltage Range	90Vac	120/230Vac	305Vac	
Input Frequency AC	47Hz	50/60	63Hz	
Leakage current	-	-	0.70mA	IEC 60598-1; 264Vac/60Hz
Input current	-	-	2.10A	120-264Vac & full load
Inrush current	-	-	75A	230Vac, 100% load
Power Factor (PF)	0.97	0.98	-	120Vac, 50Hz, 100% load
Power Factor (PF)	0.95	0.96	-	230Vac, 50Hz, 100% load
Total Harmonic Distortion (THD)	-	5%	10%	120-240Vac, 50Hz, 100% load
Total Harmonic Distortion (THD)	-	-	15%	240Vac, 50Hz, 70%-100% load

**Output Specification**

Parameter	Min	Typ.	Max	Notes
Output Voltage Range	32Vdc	-	56Vdc	
Open Circuit Voltage	-	-	80Vdc	
Current Accuracy	-5%loset	-	+5%loset	
Output Current Range	0.43A	-	4.30A	Dual color temperature 2 channels output
Total Output Current Ripple (pk-pk)	-	-	10%	20MHz BW full load & LED load the LED load ripple is slightly different for different LEDs
Startup Overshoot Current	-	5%	10%	100~277Vac & full load, LEDs
Line Regulation	-3%	-	+3%	25°C±10°C <sub>Ta</sub> , load varies from 100Vac to 277Vac
Load Regulation	-3%	-	+3%	25°C±10°C <sub>Ta</sub> , 230Vac, load varies from 60% to 100%
Turn-on Delay Time	-	0.5S	1.5S	120V/230Vac, 100% load
Over-temperature recovery temperature	-	75°C	-	Temperature ±3°C
Over-temperature protection temperature	-	92°C	-	Temperature ±3°C

**General Specification**

parameter	Min	Typ	Max	Note
Efficiency@120Vac	85%	86%	-	100%load, 25°C Ta
Efficiency@220Vac	88%	90%	-	100% load, 25°C Ta
Dielectric Strength(input-output)	-	3750Vac	-	60s, Current not exceeding 5mA
Dielectric Strength(input-ground)	-	1600Vac	-	
Dielectric Strength (output-ground)	-	1600Vac	-	
Grounding Resistance	-	-	0.1Ω	25°C±10°C Ambient Temperature, pass 25A Current, 60s.
Insulation Resistance	10MΩ	-	-	Input-Output, Input-PE, Output-PE, 500Vdc/60s/25°C
MTBF	-	200000 小时	-	25°C±10°C <sub>Ta</sub> , 220Vac,80%load (MIL-HDBK-217F/RS-332)
Lifetime	-	50000 小时	-	220Vac&100%load, 75°C <sub>Tc</sub> , refer to life curve
Working temperature	-40°C		+55°C	Refer to derate curve
	-40°C		+90°C	
Operating Tc for Safety Tc_s	-40°C		+75°C	5years Tc, humidity:10% to 95% RH
Storage Temperature	-40°C		+85°C	Humidity: 5% to 100% RH
Dimension(L*W*H)mm	L190*W68*H37			
Net weight	870±50g/PCS			
Package	L502*W372*H222mm; 9PCS/CTN,G.W.: 7.8kg			

**Dimming 调**

Parameter	Min	Typ	Max	Note
RS485 -A	2V	-	6V	
RS485 -B	2V	-	6V	Phase difference 180°
RS485-GND	-	0V	-	
Dimming and color tem. Adjustable range	10% I <sub>max</sub>	-	100% I <sub>max</sub>	I <sub>max</sub> =4.30A(2 channels total current)
220Vac Vin	48Hrs	-	-	Dimming line connect 220Vac 48H unbroken

**Safety standards**

Safety Category	国家地区	Standards	Approved
CCC	China	GB19510.1, GB19510.14	√
CE	EU	EN61347-1, EN61347-2-13	
		EN62493	
		EN62384	
ENEC			
CB	CB member	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 Korean	K61347-1, K61347-2-13	
PSE	Janpan	J61347-1, J61347-2-13	

**EMC Standards**

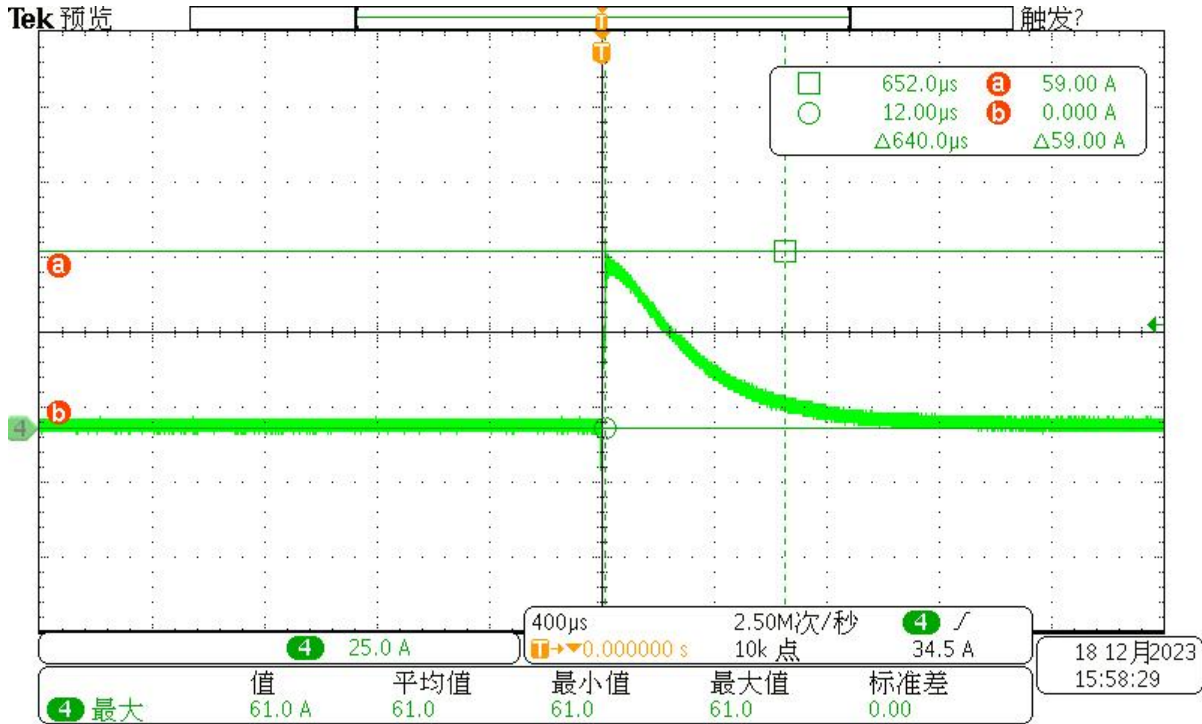
EMC Category	Countries	Standards	Approved
CCC	China	GB/T 17743, GB 17625.1	√
CE	EU	EN 55015	
		EN 61000-3-2, EN 61000-3-3	
		EN61000-4-2,3,4,5,6,11	
		EN 61547	
KC	Korean	K61547	
		K00015	
PSE	Japan	J55015	
FCC	USA	FCC part 15	

Note: The power supply meets the EMI standard. As part of the lighting system, the terminal manufacturer needs to confirm the EMI of the entire device.

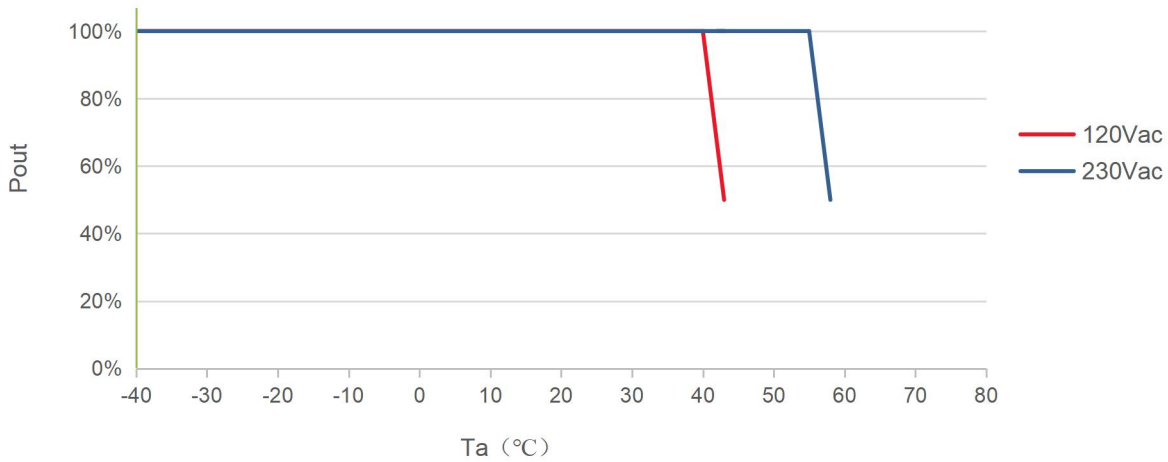
**RoHS**

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

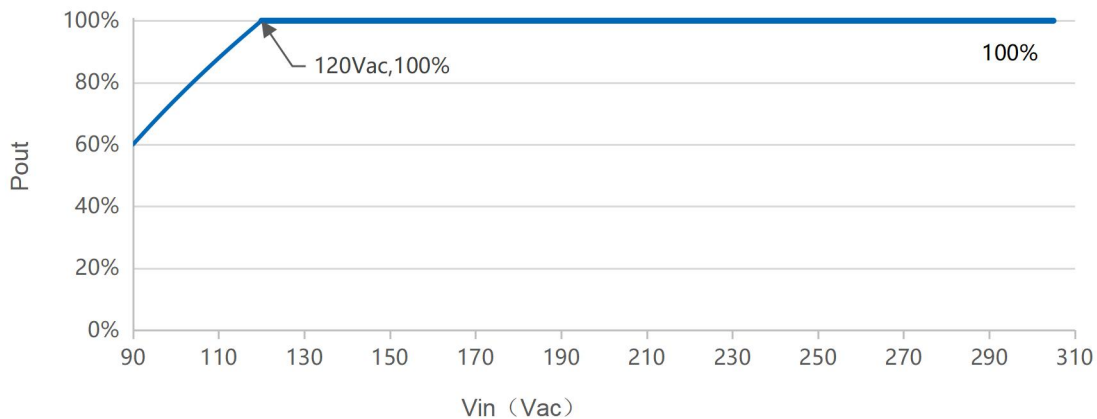
**Inrush curve**



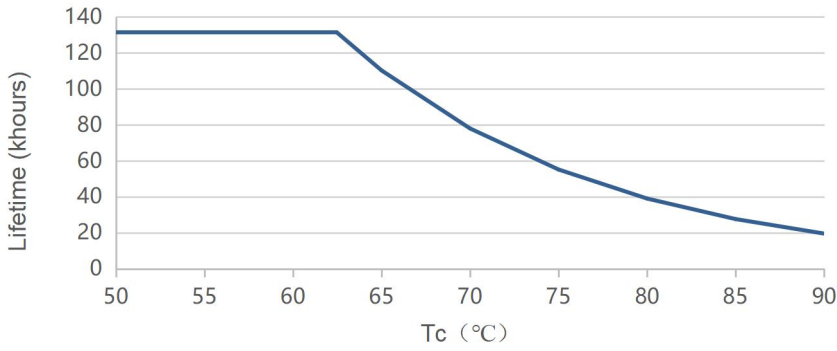
**Derate curve**



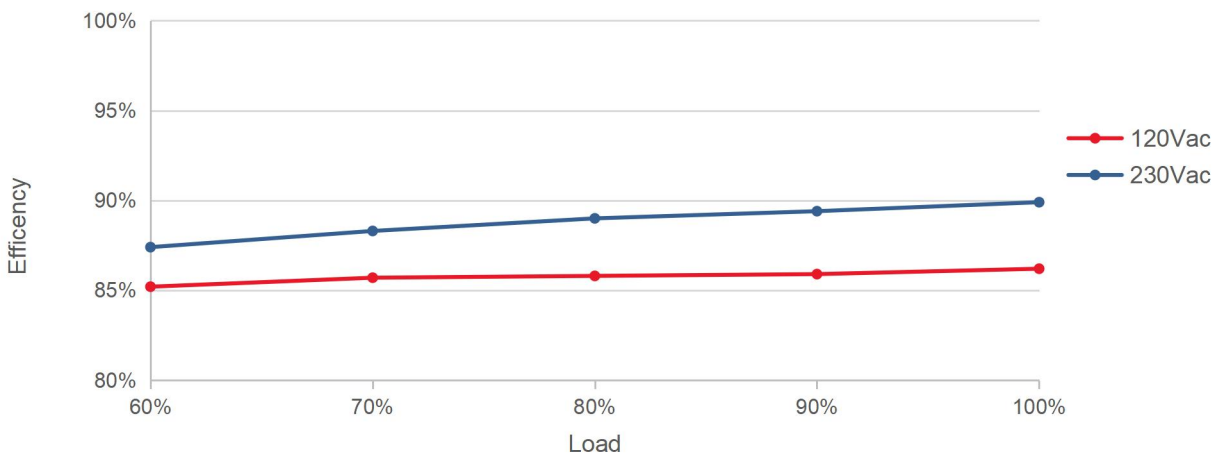
**Pout-Vin curve**



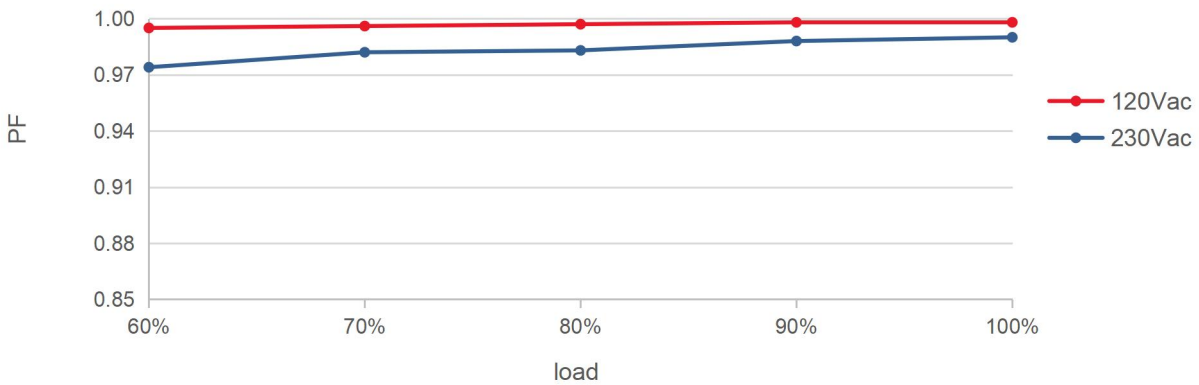
**Lifetime-Tc curve**



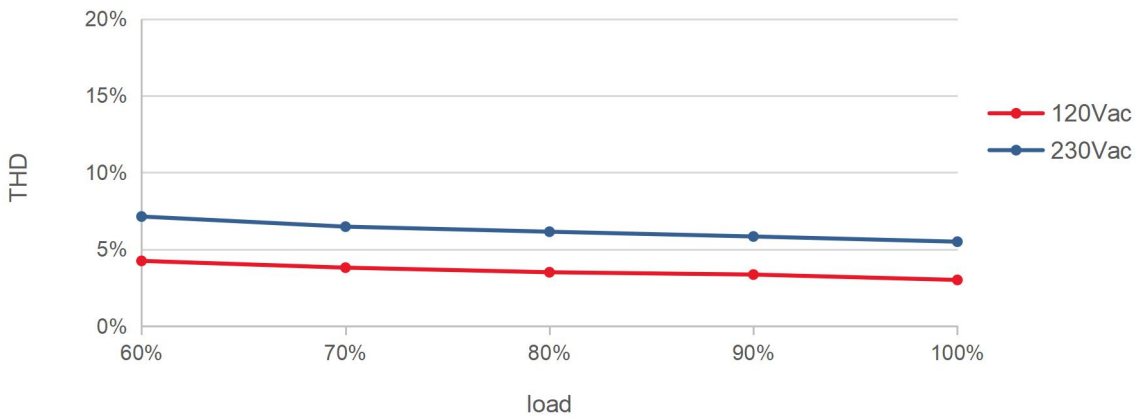
**Efficiency**



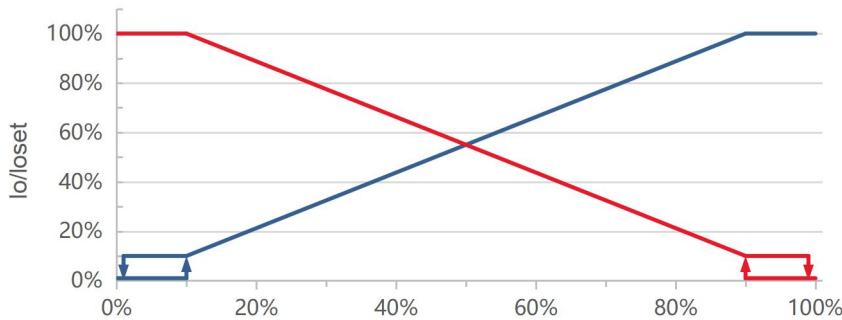
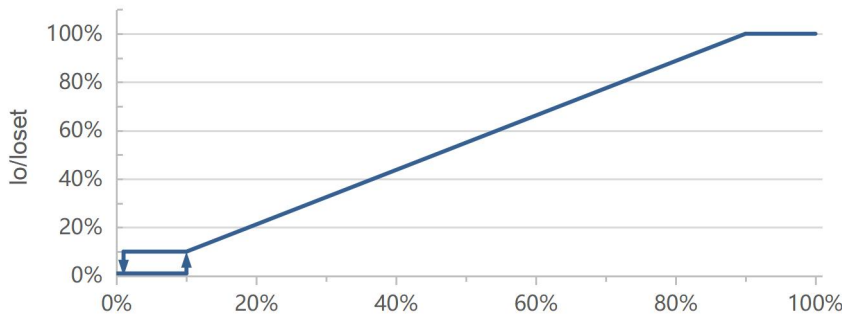
**PF curve**



**THD curve**



**RS485 dimming curve dual color temperatures**

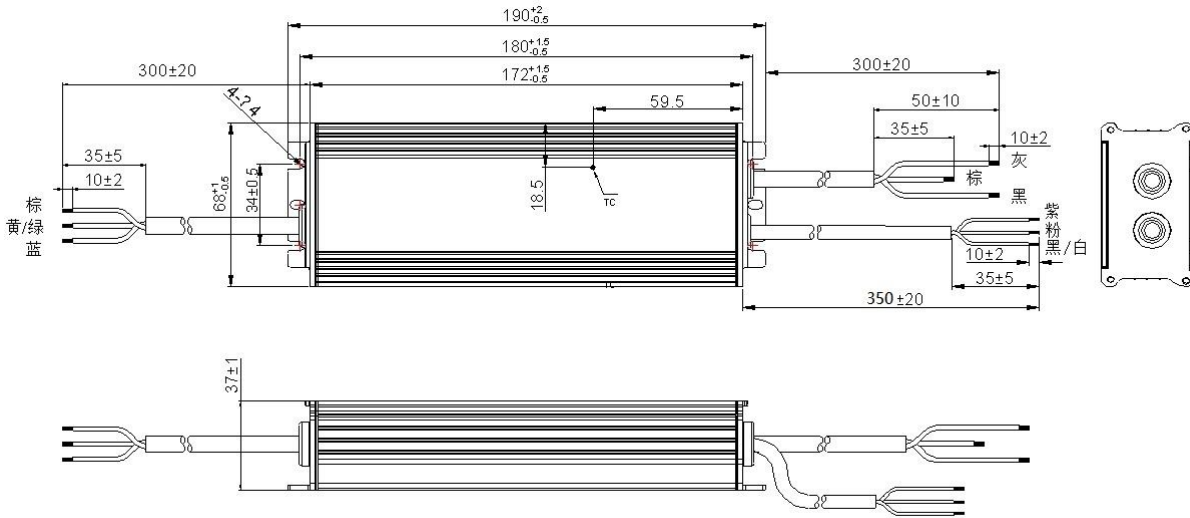


Note: support dimming and color temperature adjustment at the same time

**Protection**

Parameter	Note
Over temperature protection	Decreases output current, returning to normal after over temperature is removed.
Output over voltage protection	Run into protection mode when output voltage exceeds limit, and return to normal when the fault is eliminated

**Mechanical dimensiona**



cable	Specification	note
input	HO5RN-F 1.0MM <sup>2</sup> Three-core wire; exposed 300mm, peeled 35mm, tinned 10mm	
output	CCC+VDE 1.0MM <sup>2</sup> Three-core wire; exposed 300mm, peeled 35mm, tinned 10mm; two-color temperature	
dimming	UL21996 22AWG*3C: exposed 350mm, peeled 35mm, tinned 10mm	purple:RS485-A pink:RS485-B Black/white: RS485-GND