

250W Current Adjustable Constant Current LED Driver

RMX-250-1200 IP67 0-10 L

Features

- Input voltage range:108-305Vac
- High efficiency up to 93%
- Low THD,<10%
- Full Power at Wide Output Current Range
- 3 In 1 Dimming Function(0-10V/0-100kΩ/PWM)
- Protection: OVP,SCP
- Waterproof(IP67)
- Input Surge Protection:6kV line-line,10kV line-earth
- High Reliability & Long Lifetime & 5 Years Warranty



Description

The RMX-250-1200 IP67 0-10 L series is a 250W, constant current IP67 LED driver that operates from 108-305Vac input with excellent power factor and THD feature. It is designed for high bay, tunnel, and streetlights. The high efficiency of these drivers and compact metal case enables them to run cooler, significantly improving reliability and extending product lifetime. To ensure trouble-free operation, protection is provided against input surge, output over voltage, short circuit.

Models

Model	Input Voltage Range	Output Current Range	Full-power Current Range	Output Voltage Range	Full-Output Voltage Range	Max output Power	Max Output Voltage	Power Factor	Typical Efficiency
RMX-250-1200 IP67 0-10 L	120-277Vac	0.5-1.2A	0.7-1.2A	165-357V	210-357V	250W	<400V	0.95	93%

Input Specifications

Parameter	Min.	Typ.	Max	Notes
Rated Input Voltage	120V	-	277V	
Range of input voltage	108V	-	305V	
Nominal Input voltage@ Guarantee Performance, Lifetime	202V		254V	
Input Frequency	47Hz	50/60Hz	63Hz	
Input Current	-	-	1.59A	@120Vac,70% load
Inrush Current	-	-	65A	@230VAC
Protective conductor current through functional earth (Class I)	-	-	<(2mArms/2) acc.to EN 60598:2009(FDIS 2013)	
Touch current: any output to earth and FE to earth	-	-	<0,7 mA/2 peak acc.to EN 60598:2009(FDIS,2013)	
Power Factor(@ Full power) Power Factor(@70% load)	0.95 0.90	--	--	@230Vac
THD @ Full power THD @70% load	-	-	10% 15%	
Surge withstand capability		L-N: 6kV L- PE& N- PE: 10kV		L-N: acc. to IEC 61000-4-5 L/N-PE: acc. to IEC 61547

Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Current	500mA	-	1200mA	
Full Power Output Current range	700mA		1200mA	
Output Current Tolerance	-5%	-	5%	At full load condition
Output LF current ripple (< 120 Hz) ((Imax.- Imin.)/(Imax.+Imin.))--Full dimming range	-	--	5%	
Startup Overshoot Current	-	-	10%	At full load condition
Load Regulation	-5%	-	5%	

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Line Regulation	-5%	-	5%	
Startup times	-	1s	1.5s	

Note:

- 1) All parameters not specially mentioned are measured at 230 Vac input and 25°C of ambient temperature.
- 2) Ripple & Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 µF parallel capacitor.

General Specifications

Parameter	Min.	Typ.	Max.	Notes
Efficiency@default current 100% load	91%	93%		Measured at 240Vac , full load and steady –state temperature in 25 ambient. Efficiency will be about 2% lower if measured immediately after startup.
Efficiency@default current 70% load	90%	92%		
MTBF	-	250,000 Hours	-	
Ambient Temperature	-40°C	-	+60°C	ta:50°C(Input Voltage : 108-190V) ta:60°C(Input Voltage: 190-305V) Refer to derating curve for the details.
Operating Case Temperature for Safety Tc_s	-40°C	-	+90°C	
Operating Case Temperature for Warranty Tc_w	-40°C	-	+75°C	Case temperature for 5 years warranty. Humidity: 5% RH to 85% RH.
Lifetime	-	50,000 Hours	-	See lifetime temperature curve for the details
Storage Temperature	-25°C	-	+80°C	Humidity: 5% RH to 85% RH.
Dimensions	215mm x 68mm x 35mm			With mounting ear, See mechanical outline for the detail
Net Weight	-	1100±100g/PCS	-	

Dimming Specifications

Parameter	Min.	Typ.	Max.	Notes
Absolute dimming voltage range	-2	-	13V	
Source current on 1-10V interface	90uA	100uA	110uA	Resistor dimming
Sink current on 1-10V interface				PWM & 1-10V dimming
Dimming range	10%	-	100%	See dimming curve for the detail.
Recommended dimming voltage range	0	-	10V	10V PWM signal, see dimming curve for the detail.
PWM High Level	-	10V	-	

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PWM Low Level	-0.3V	0V	0.6V	
PWM Frequency Range	200Hz	-	2KHz	
PWM Duty Cycle	1%	-	100%	

Note:

Dimming Specifications only for RMX-250-1200 IP67 0-10 L

Safety Standards

Safety Category	Country / Territory	Standards
CE	Europe	EN61347-1, EN61347-2-13
CCC	China	GB19510.1, GB19510.14

EMC Compliance

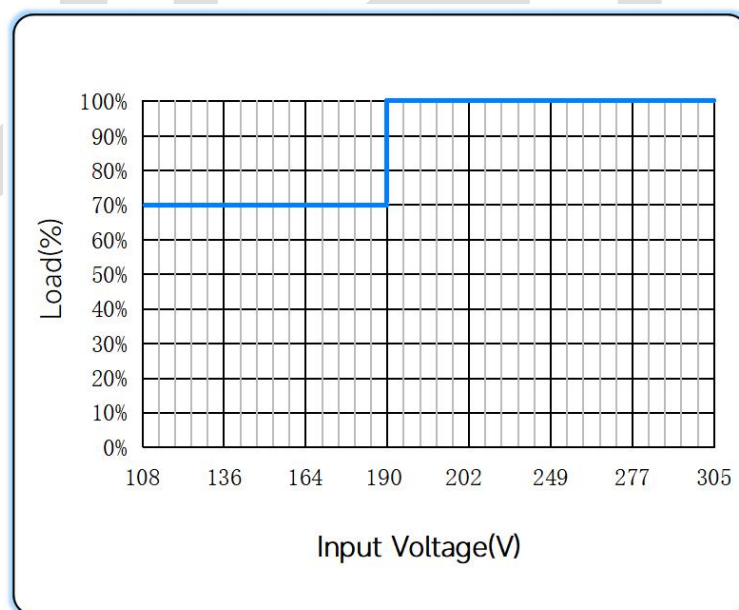
EMC Category	Country / Territory	Standards
CE	Europe	EN 55015, EN 61000-3-2, EN 61000-3-3
		EN61000-4-2,3,4,5,6,11
		EN 61547
CCC	China	GB 17743, GB 17625.1

Note:

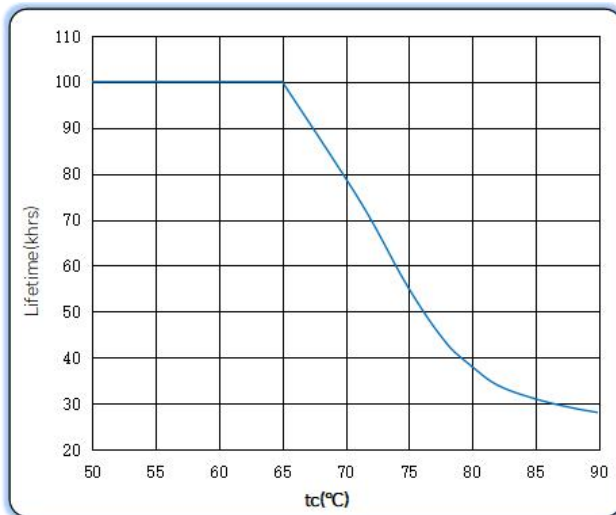
This LED driver meets the EMI specifications above, but EMI performance of a lighting fixture also depends on the other devices on the fixture.

Electrical characteristics

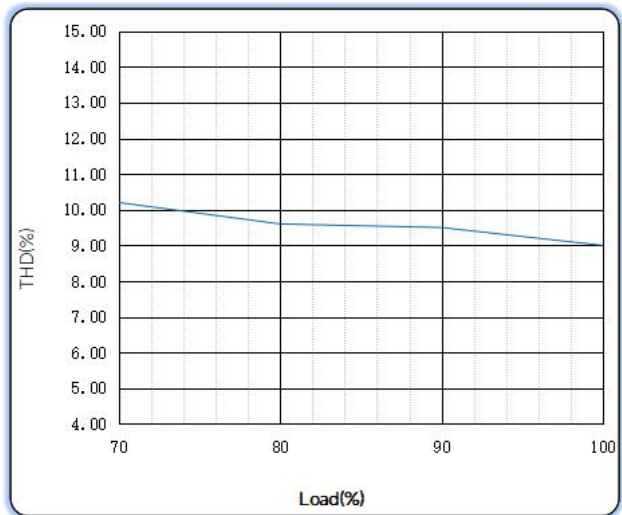
Input Voltage VS Load



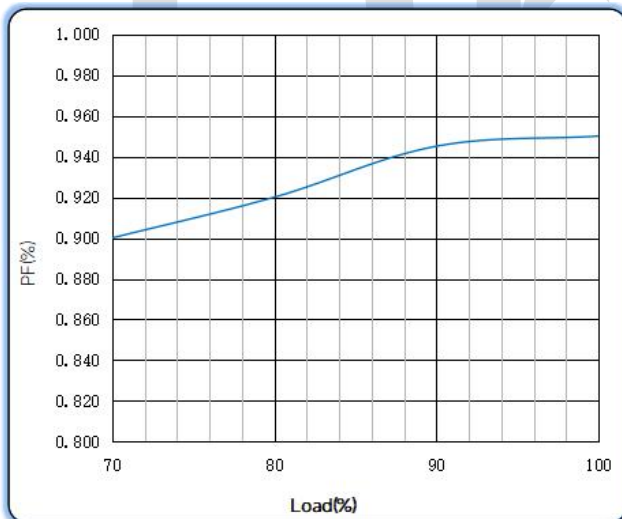
▲ Lifetime VS Tc



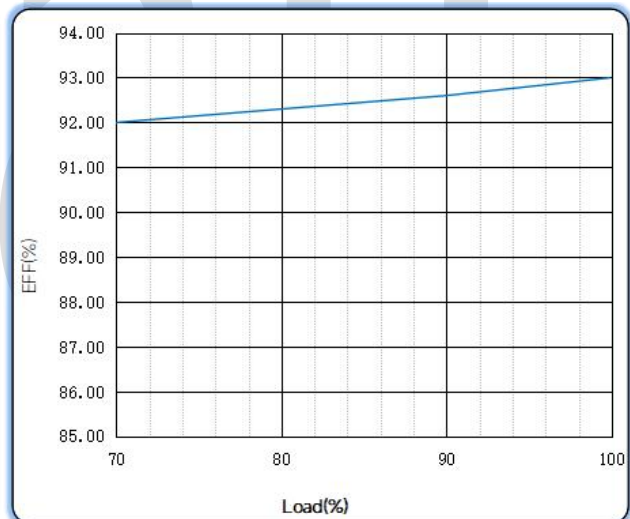
▲ Total Harmonic Distortion VS Load



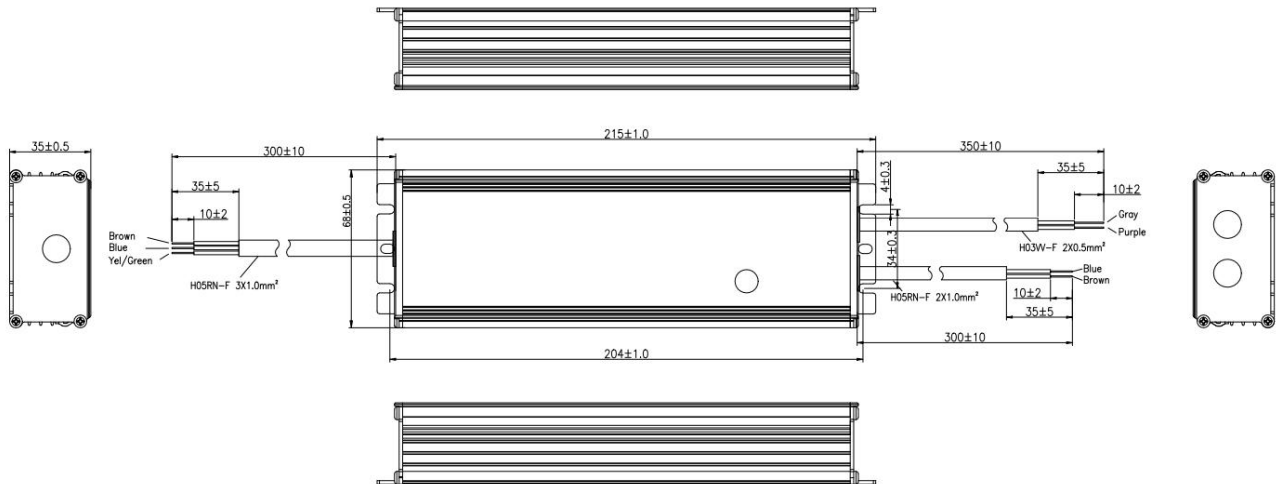
▲ Power Factor VS Load



▲ Efficiency VS Load



Mechanical Outline



Note:

Wire length of input and output can be changed as customer's requirement

Specification item	Value	Unit	Value	Unit	Type
Input wire	300	mm	1	mm ²	3x 1.0mm ² stranded wires, waterproof cable
Output wire	300	mm	1	mm ²	2x 1.0mm ² stranded wires, waterproof cable
Dimming wire	350	mm	0.5	mm ²	2x 0.5mm ² stranded wires, waterproof cable

Revision History

Change	Before	Now	Version	Data	Note
Initial			A	2023-03-22	