



PRODUCT FEATURES

- Universal input voltage: 90-305Vac;
- Constant current design, Efficiency up to 95%;
- 3-in-1 isolated dimming: 0-10Vdc, PWM, Resistor;
- Dim-to-off without afterglow (optional);
- Surge protection: 4KV line-line, 6KV line-earth;
- 12V/0.2A auxiliary power supply;
- Multiple protection: SCP, OVP, OTP;
- IP65 design for indoor and outdoor applications;
- 5 years warranty.

APPLICATION

- Suitable for industrial lighting.

DESCRIPTION

G6-096W series is specially designed for industrial lighting applications. It is constant current LED driver that operates from 90-305Vac with 0-10V and PWM dimming function. This round integrated structure enables it to have a better heat dissipation cooler, significantly improving reliability and extending product life. To ensure trouble free operation, protection is provided against input surge, output over voltage, short circuit, and over temperature.

MODELS

Model Number [1]	Max Output Power (W)	Output Voltage Range (Vdc)	Output Current Adjustable Range (A)	Full Power Current Adjustable Range (A) [2]	Default Output	Typical Efficiency [3]	Power Factor	
							120Vac	230Vac
G6-096M260A12	96	180-260	0.315-0.450	0.370-0.450	180-213V/0.450A	94%	0.99	0.96
G6-096M260A12H	96	180-260	0.315-0.450	0.370-0.450	180-213V/0.450A	94%	0.99	0.96

Notes:

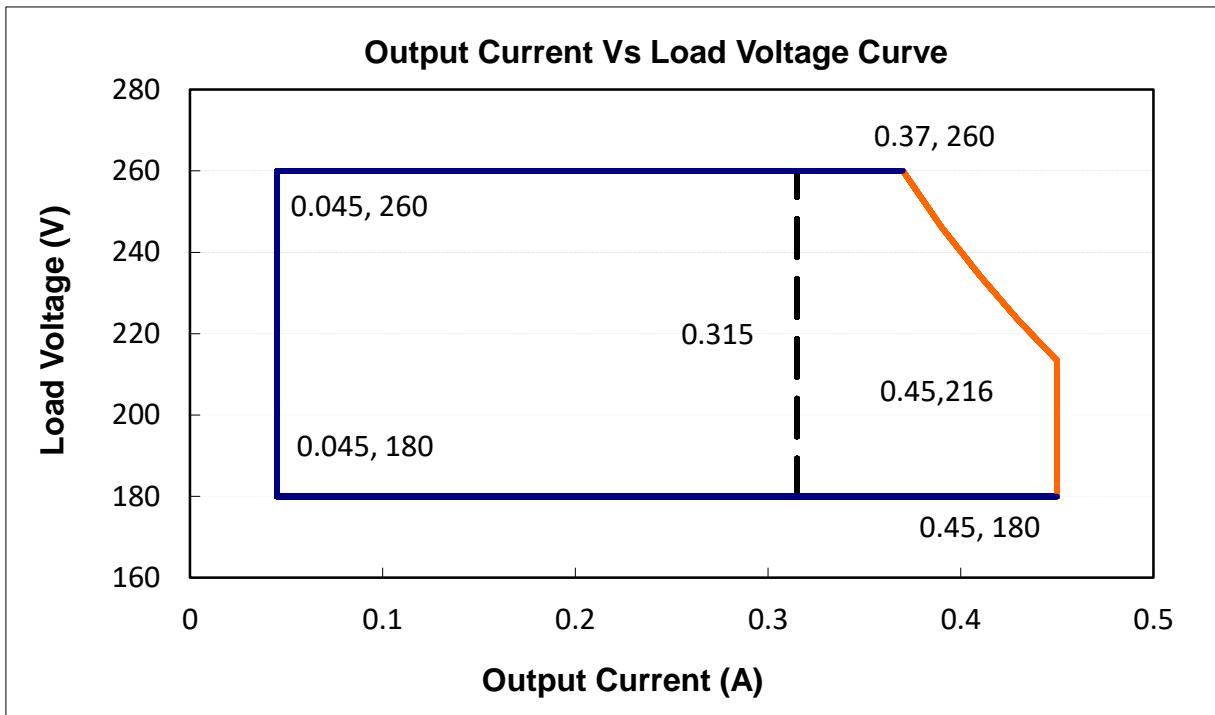
[1]. H Version: Hard cut off after Dim-to-off, No glimmer with LEDs;

No H Version: Maybe weak current flowing through LEDs and generating weak light after Dim-to-off;

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

[3]. All specifications are measured at 25°C ambient temperature, input voltage 230Vac, and the typical value tested by full load, if no specific note.

OPERATING AREA I-V



Notes: Adjustable range of resistance is suitable for the right area of the dotted line.

The drivers are not allowed to work in over-load condition, otherwise warranty will expire.

INPUT SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Notes
Input Voltage	90Vac	100-277Vac	305Vac	
Input Frequency	47Hz	50/60Hz	63Hz	
Leakage Current	-	-	0.75mA	277Vac/60Hz
Input AC Current	-	-	1.3A	100-277Vac & full load
Inrush Current(I ² T)	-	-	1.0A ² S	230Vac, full load
Power Factor	0.98	0.99	-	120Vac, full load
	0.95	0.96	-	230Vac, full load
	0.91	0.92	-	277Vac, full load
THD	-	5%	15%	120Vac-240Vac, 80%-100% load
	-	10%	15%	277Vac, 80%-100% load

OUTPUT SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-8%	-	+8%	
Output Current Range (A)	0.315	-	0.450	
Total Output Current Ripple (pk-pk)	-	5%	10%	20MHz BW, 100% Load & load is LED, ripple is different with difference LED load
Startup Overshoot Current	-	-	10%	100-277Vac & 100% Load, load is LED
No Load Output Voltage(V)	-	290V	320V	
Standby Power G6-096M260A12H			1.0W	Dim-to-off completely
Standby Power G6-096M260A12			0.5W	Dim-to-off
Line Regulation	-1%	-	+1%	25°C±10°C ambient, temperature, input voltage changes from 100Vac to 277Vac
Load Regulation	-3%	-	+3%	25°C±10°C ambient, temperature, 230Vac input, load changes from 80% to 100%
Turn-on Delay Time	-	-	1.0S	120Vac, 100% load
	-	-	0.5S	230Vac, 100% load
12V auxiliary output voltage	10.8V	12V	13.2V	25°C±10°C ambient temperature, 230Vac, 100% load
12V auxiliary output source current	0mA		200mA	

GENERAL SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Notes
Efficiency @ 120Vac	90%	92%	-	25°C±10°C ambient temperature, 100% load, 12V No load
Efficiency @ 230Vac	92%	94%	-	25°C±10°C ambient temperature, 100% load, 12V No load
Efficiency @ 277Vac	92%	94%	-	25°C±10°C ambient temperature, 100% load, 12V No load
Dielectric Strength	Input-PE	-	1650Vac	5mA/60S
	Output- PE	-	-	
Grounding Resistance	-	-	0.1Ω	25A/60S
Insulation Resistance	10MΩ	-	-	Input-PE, Output-PE, 500Vdc/60S/25°C/70%RH
MTBF	-	200000Hrs	-	25°C±10°C ambient temperature, 230Vac, 80% load (MIL-HDBK-217F)
Lifetime	-	50000Hrs	-	230Vac & 100% load, 75°C case temperature, refer to lifetime VS Tc curve for details
Operating Case Temperature for Safety Tc_s	-40°C	-	+90°C	
Operating Case Temperature for Warranty Tc_w	-40°C	-	+75°C	5 years warranty Humidity: 10% to 95% RH
Storage Temperature	-40°C	-	+85°C	Humidity: 5% to 100% RH
Dimensions (D×H)mm	Φ130×64.1			
Net Weight	950±150g/PCS			
Package	L490*W370*H185mm; 12PCS/Ctn.			

DIMMING

Parameter		Min.	Typ.	Max.	Parameter
0-10V Absolute Maximum Voltage on the Vdim (+) Pin		-	10V	-	
0-10V Source Current on Vdim(+)Pin		-	1mA	2mA	
Dimming Output Range	G6-096M260A12H G6-096M260A12	0%	-	100%Imax	Imax=0.450A
Recommended Dimming Range for 0-10V		0V	-	10V	Default 0-10V/PWM dimming <0.2V or 4% PWM, Dim to off
PWM_in High Level		9.7V	-	10.3V	
PWM_in Low Level		0V	-	0.3V	
PWM_in Frequency Range		400Hz	-	2KHz	
PWM_in Duty Cycle		0%	-	99%	
Dimming Accuracy		-	-	10%	

SAFETY STANDARDS

Safety Category	Country / Territory	Standards	Whether have Certification
CCC	China	GB19510.1, GB19510.14	√
CE	Europe	EN61347-1, EN61347-2-13	√
		EN62493	√
		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	√

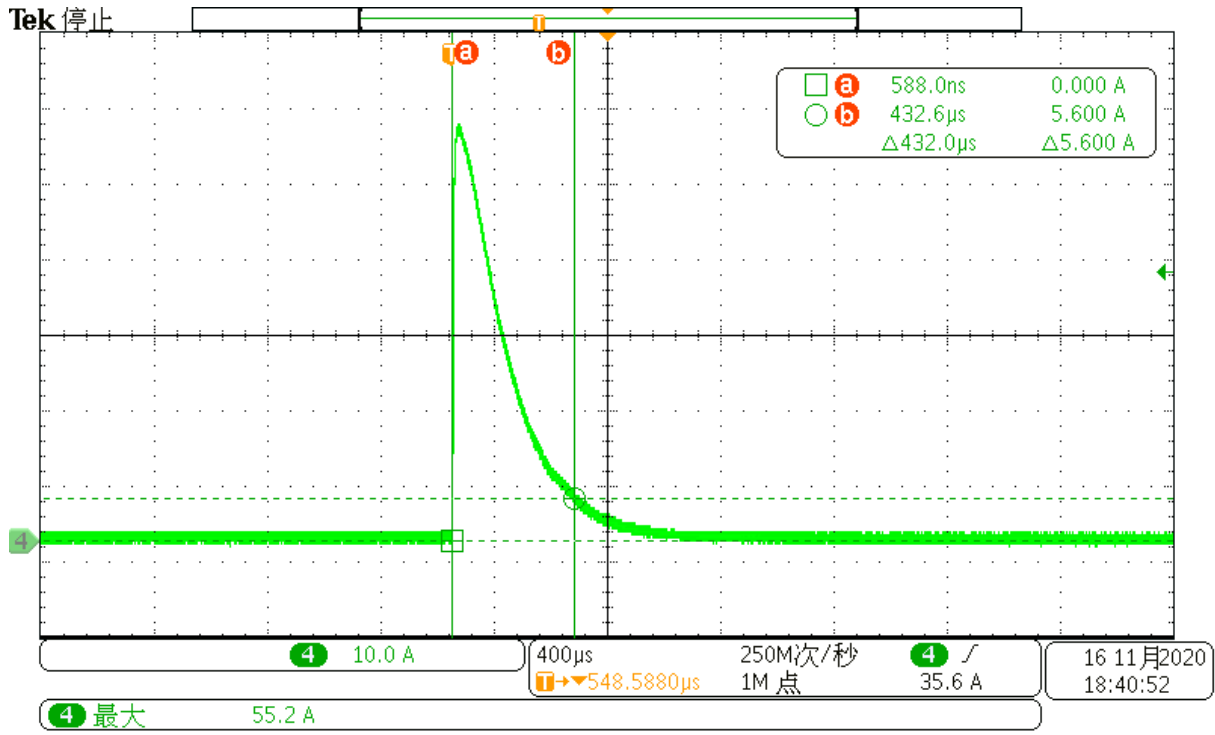
EMC COMPLIANCE

EMC Category	Country / Territory	Standards	Whether have Certification
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	√

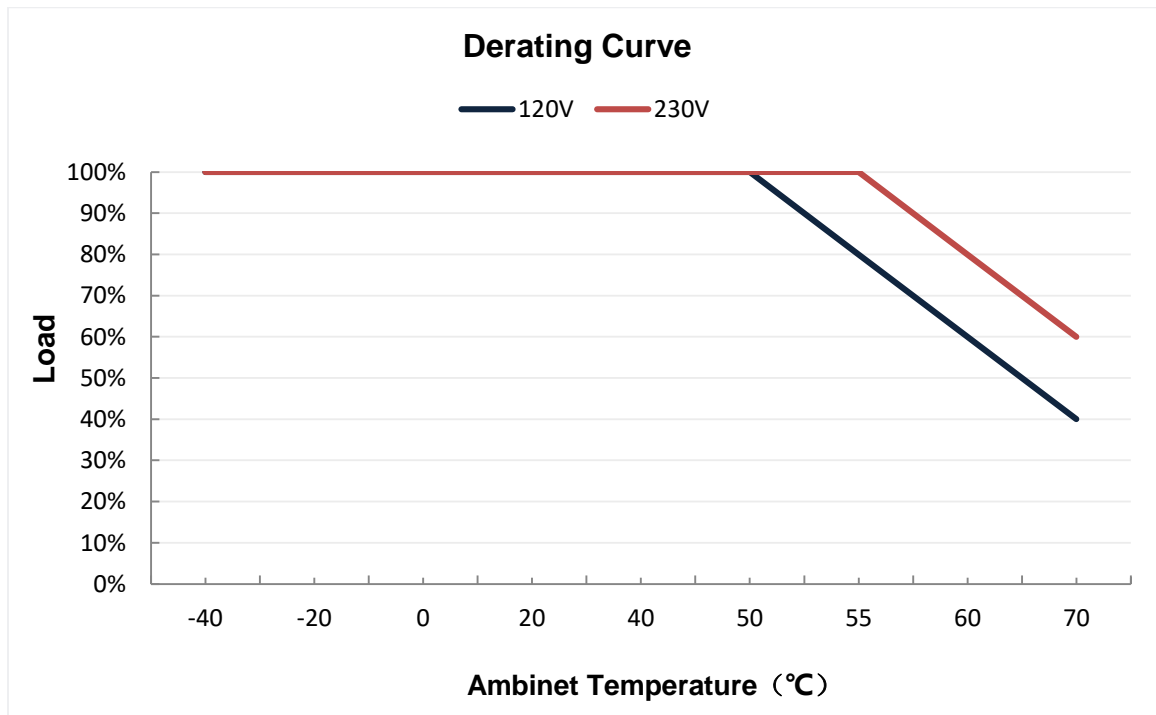
NOTE:

This LED driver meets the EMI specifications above, but EMI performance of a luminaire that contains it depends also on the other devices connected to the driver and on the fixture itself.

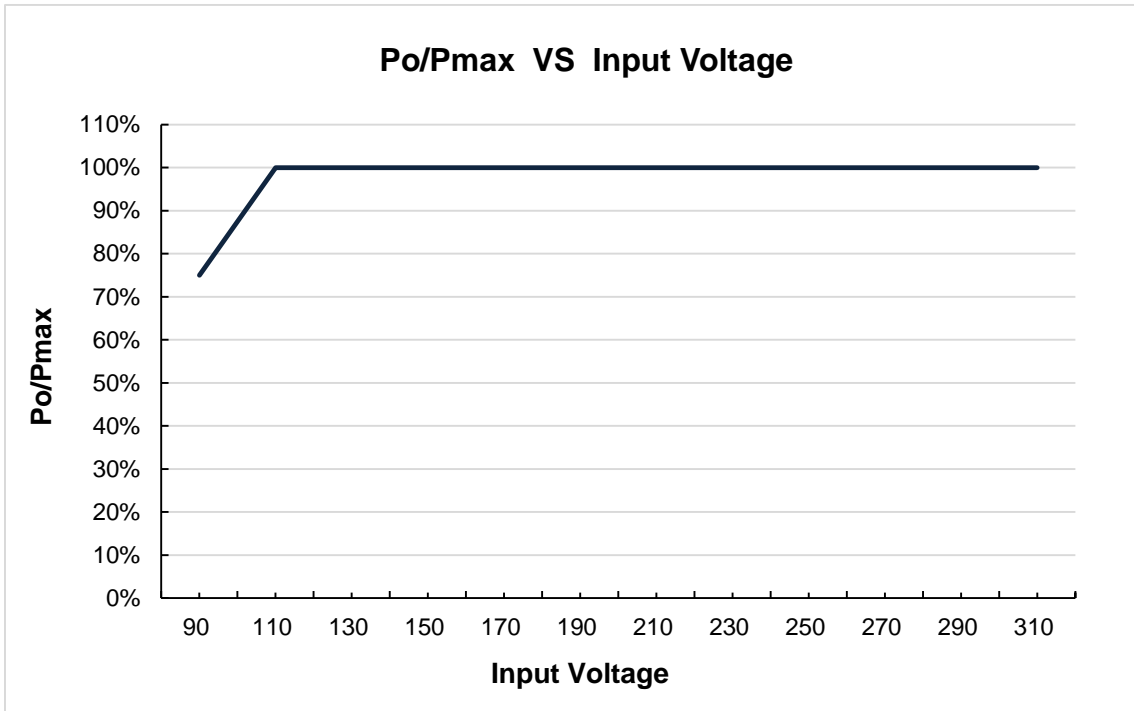
INRUSH CURRENT WAVEFORM



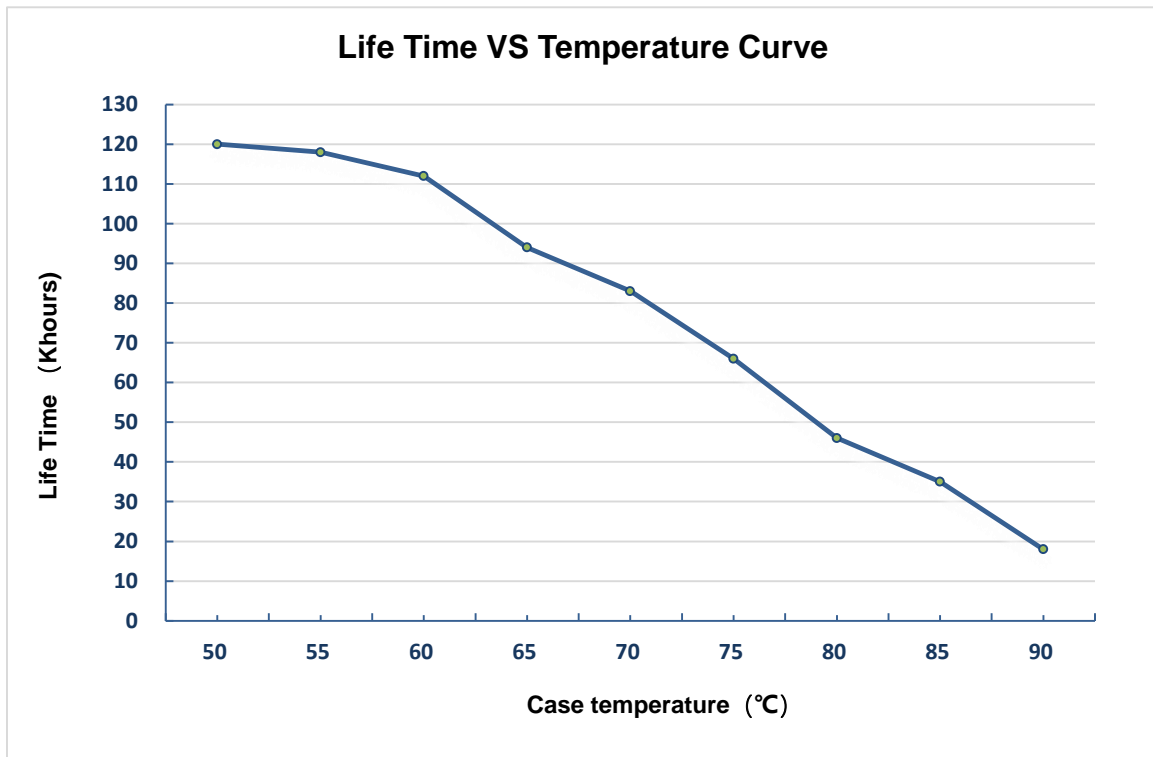
DERATING CURVE



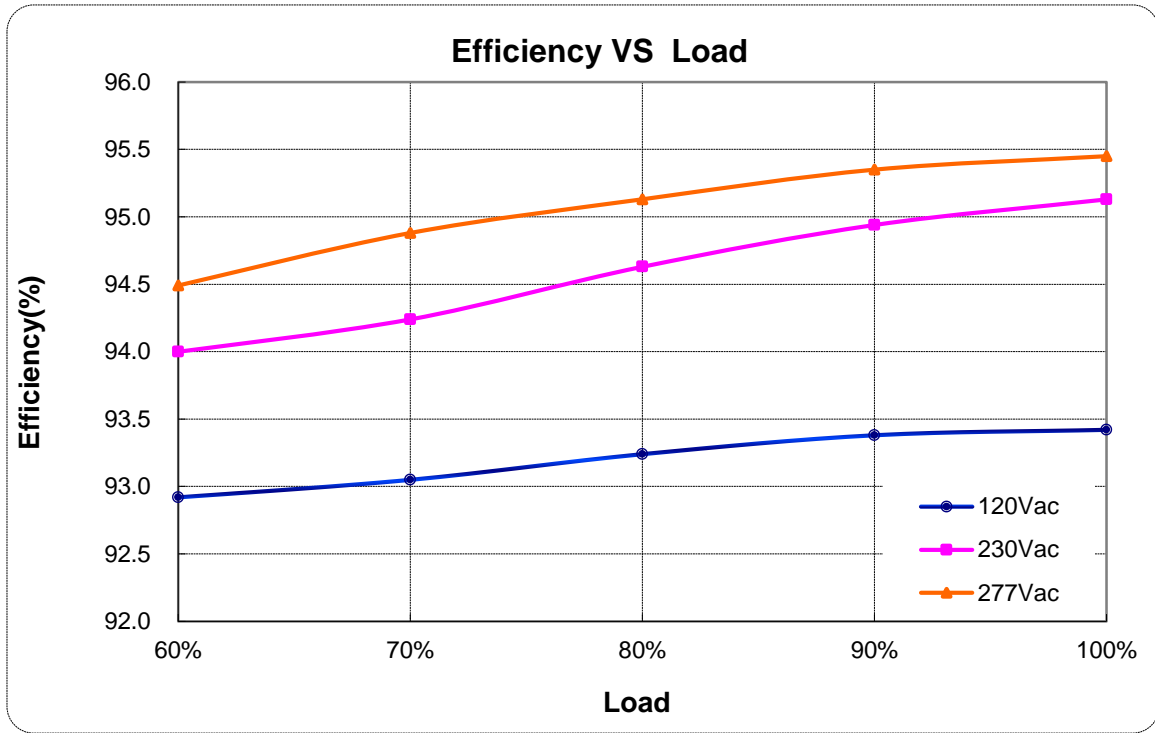
OUTPUT POWER VS INPUT VOLTAGE



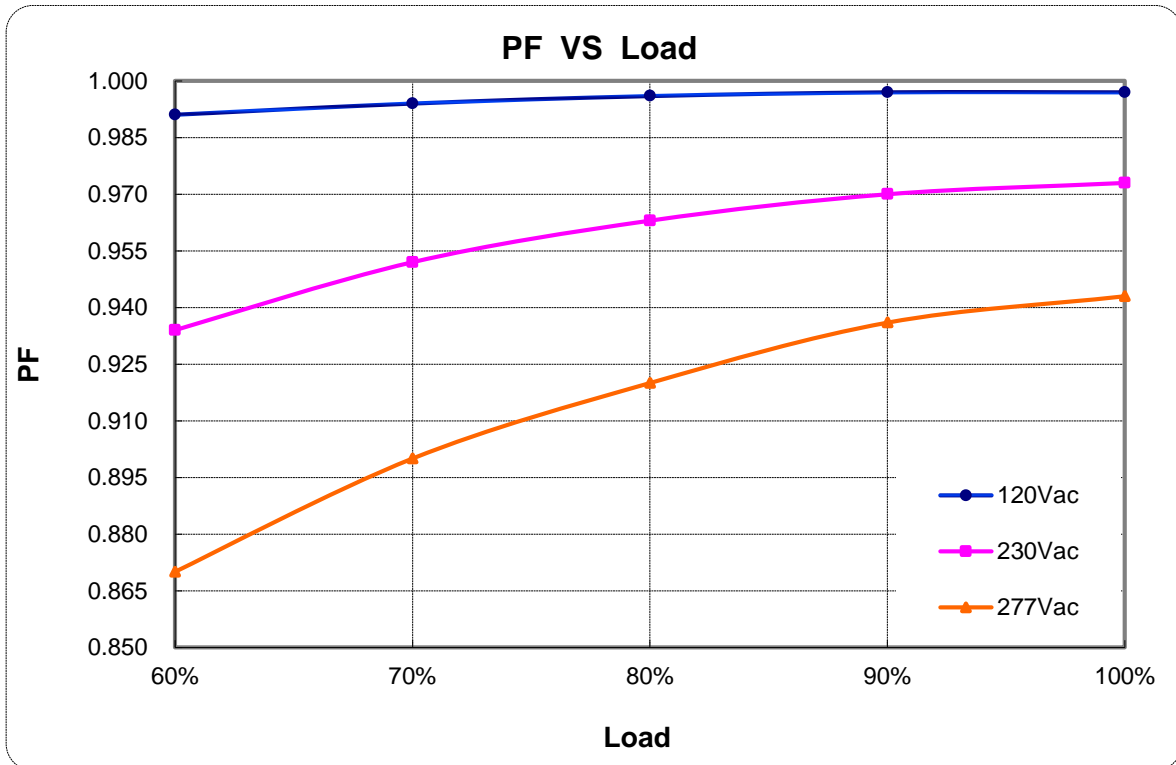
LIFETIME VS CASE TEMPERATURE



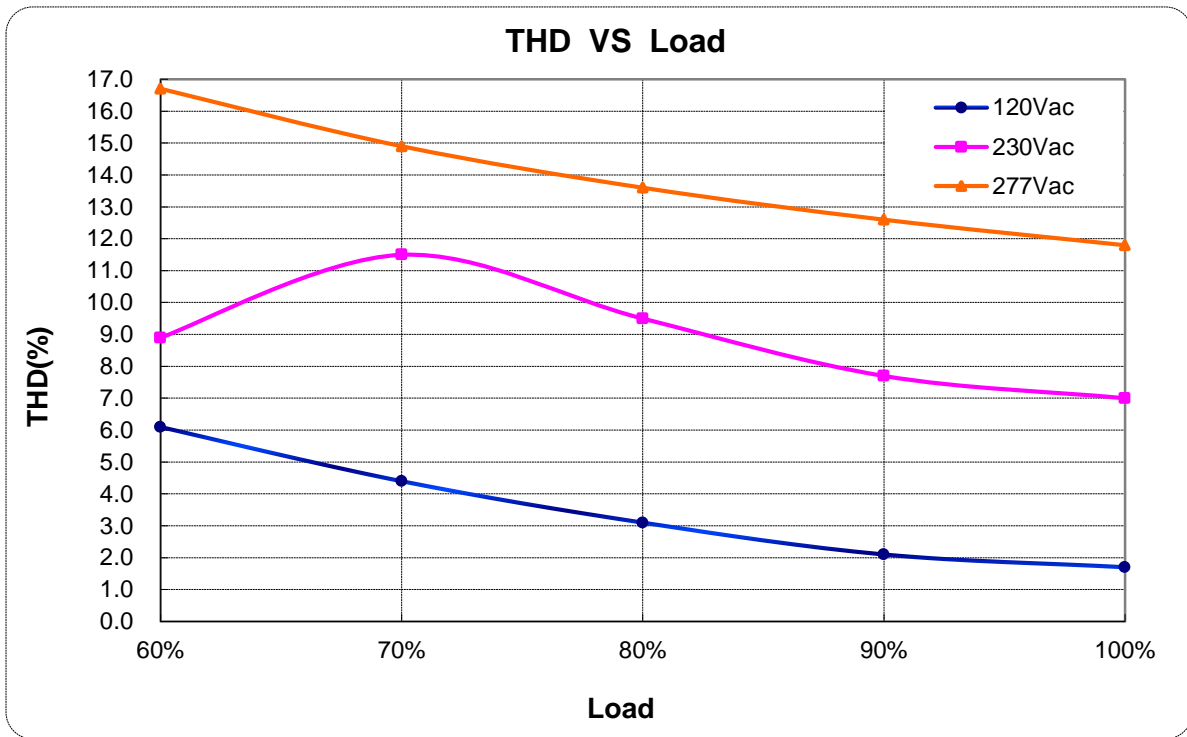
EFFICIENCY VS LOAD



POWER FACTOR VS LOAD



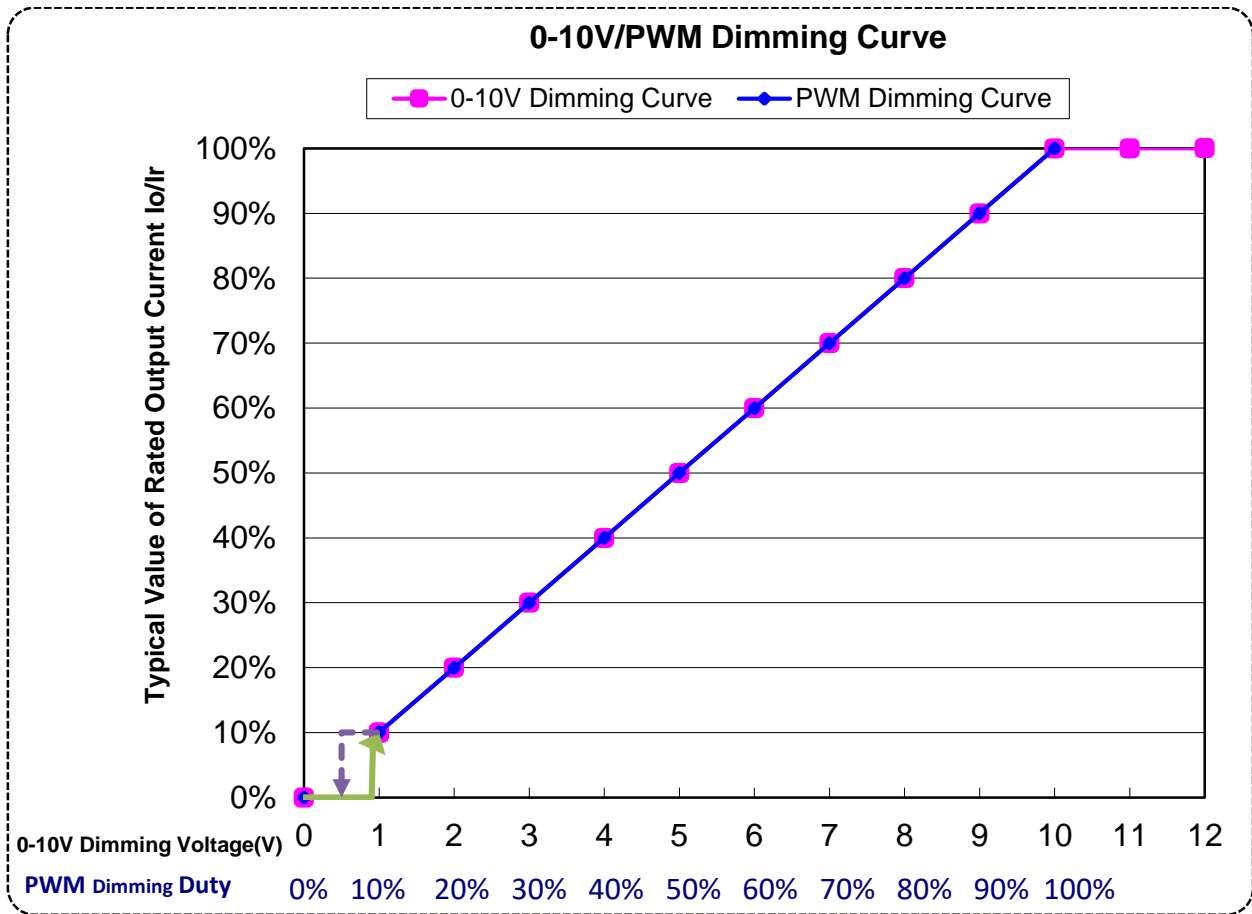
TOTAL HARMONIC DISTORTION



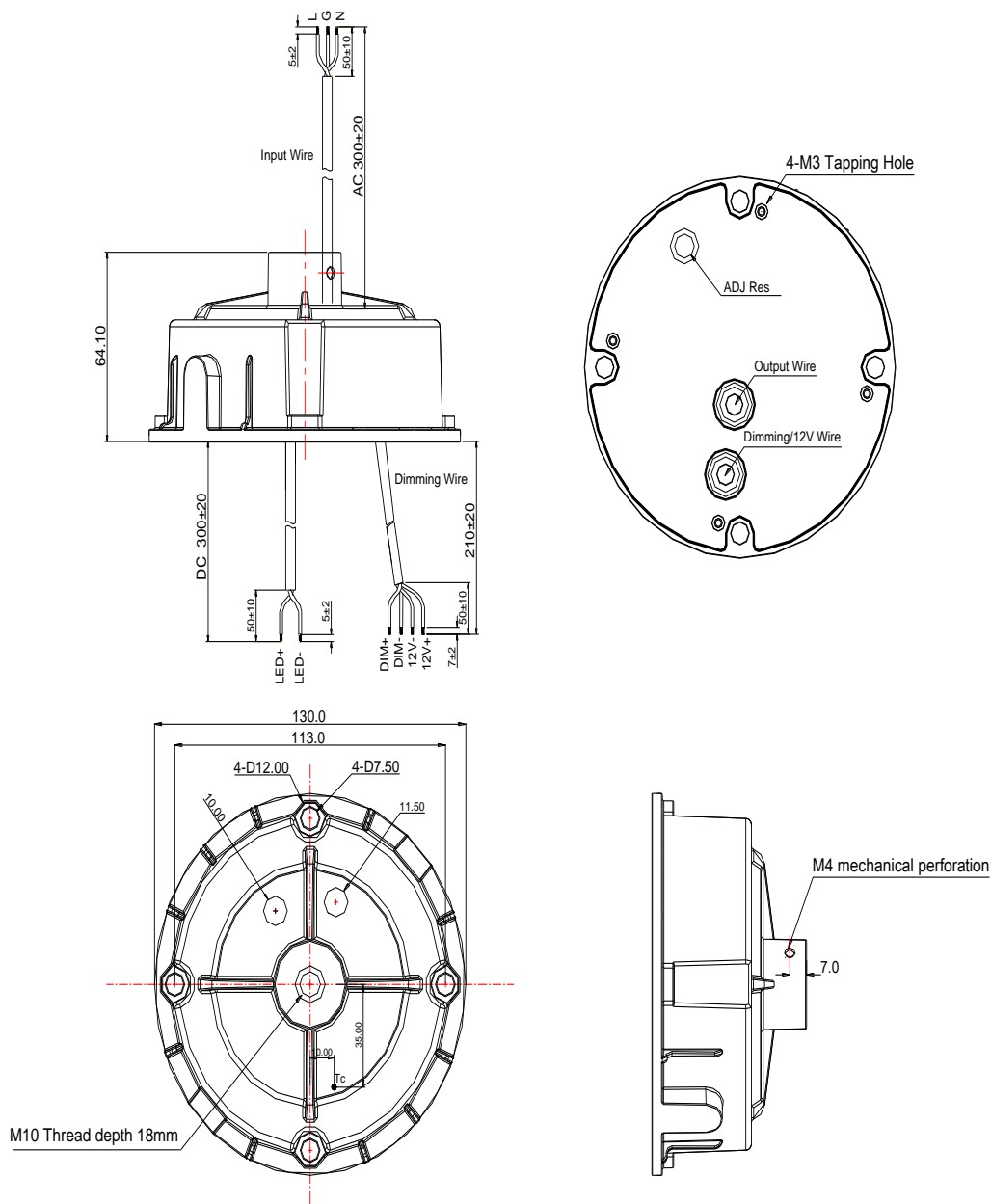
PROTECTIONS

Parameter	Notes
Over Temperature Protection	Decreases output current, returning to normal after over temperature is removed, exclude auxiliary power supply.
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.
Over Voltage Protection	Run into protection model when output voltage exceeds limit, and return to normal when the fault.

0-10V/PWM DIMMING CURVE



MECHANICAL OUTLINE



Note: Case color: RAL 9017 matte black.

Wire	Specification	Note
Input	CCC+VDE 3x1.0mm ² L=300±20mm L:Brown, N:Blue, G:Yellow/Green	CCC/CE
	UL SJOW 3C*18AWG L=300±20mm L:Black, N:White, G:Green	UL
Output	CCC+VDE 2x1.0mm ² L=300±20mm LED+:Brown, LED-:Blue	CCC/CE
	UL SJOW 2C*18AWG L=300±20mm LED+:Red, LED-: Black	UL
Dimming	22AWG*4C L=210±20mm DIM+:Purple, DIM-:Gray, 12V+: Pink, 12V-:Black/White	G6-096M260A12
	22AWG*4C L=210±20mm DIM+:Purple, DIM-:Pink, 12V+:Black/White, 12V-:Blue/White	G6-096M260A12H



REVISION HISTORY

Version	Description of Change		Date	Notes
	Before	Now		
A.1		Original Release	2021.03.25	
B.2		ECL202106039	2021.06.15	
C.2		ECL202106108	2021.06.24	

Product Specification

Product Name: 96W Non-isolated LED driver

G6-096M260A12H

Product Model:

G6-096M260A12

Rev. C.2

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Prepared By	Checked By	Approved By

Specification for Approval

Product Name: 96W Non-isolated LED driver
Product Model: G6-096M260A12H
 G6-096M260A12
 Rev. C.2

CUSTOMER AUTHORIZED SIGNATURE		
Tested By	Checked By	Approved By
(Company seal)Return one copy to MOSO with approved signature and company seal.		

Prepared By	Checked By	Approved By