



### Product Features:

- Input voltage range: 176~264Vac;
- Constant power design;
- External NTC;
- Dimming: DALI-2 & VMF, Dim to off;
- NFC programmable;
- Constant Lumen Output (CLO);
- End-of-life warning;
- Suitable for Class I and Class II;
- Auxiliary power supply: 24V/250mA;
- Surge protection: 6KV line-line, 10KV line-earth;
- Multiple protection: SCP, OVP(Output), OTP;
- Meet the zhaga Book 13;
- IP20;
- 7 Years Warranty

### Application

- Suitable for LED roadway lighting, plant lighting, industrial lighting, landscape lighting, etc.

### DESCRIPTION

U6 series is an ultra-high efficiency DALI programmable IP20 outdoor constant current drive power, input voltage range 176-264 Vac. Designed for European street lamps, compatible Class I & Class II. U6 series has lightning protection, input over-voltage protection, output over-voltage protection, short-circuit protection and over-temperature protection.

### MODELS

Model Number [1]	Max Output Power (W)	Output Voltage Range (Vdc)	Full Power Output Voltage Range (Vdc)	Full Power Current Adjustable Range (A) [2]	Default Output Current Setting(A)	Typical Efficiency [3]	PF
U6-040D057	40	20-57	38-57	0.7-1.05	0.7	87%	0.97

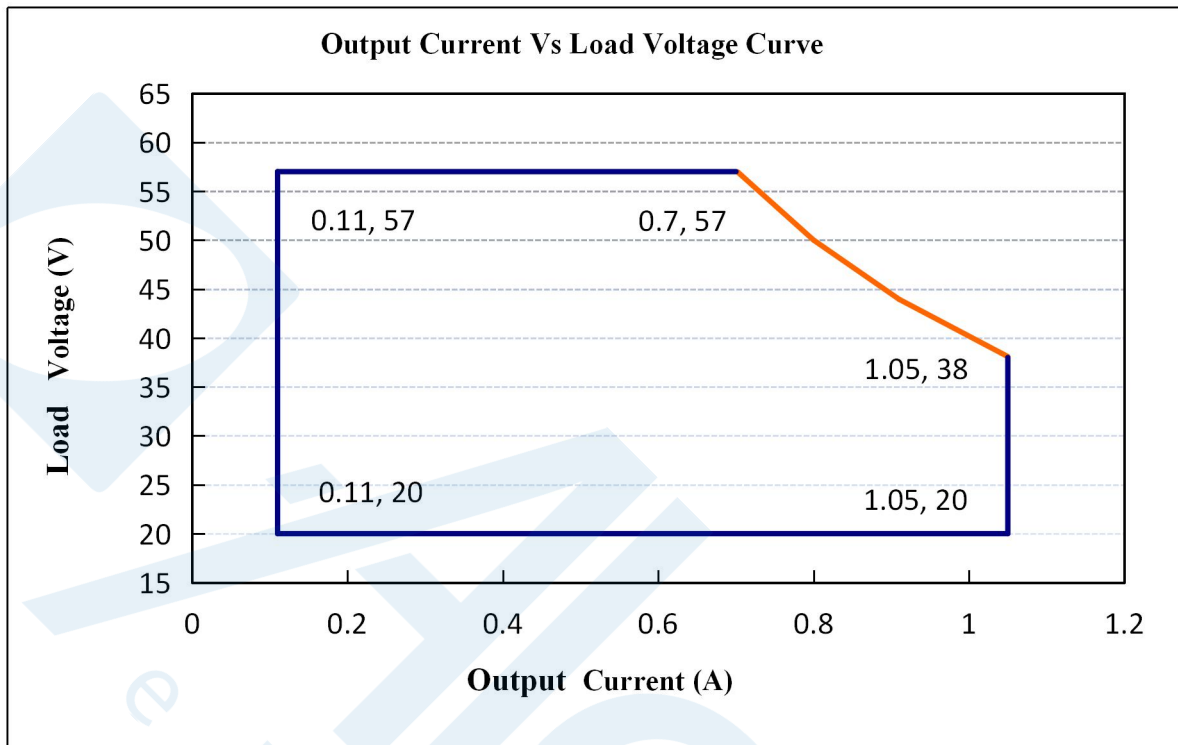
### Notes:

[1]. All performance parameters are at 25 degrees ambient temperature 230 Vac input, full load conditions measured typical values, except specified

[2]. When the power supply reaches the set life(example 70000H), when the power supply is restarted, The output current remains constant 10%Io, Or output flashing warning to indicate that the power supply needs to be replaced.

Specification subject to change without notice

### OPERATING AREA



### INPUT SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Notes			
Input Voltage	176Vac	200-240Vac	264Vac				
Input Frequency	47Hz	50/60	63Hz				
Leakage Current	-	-	0.7mA	240Vac/60Hz			
Input AC Current	-	-	0.3A	200-240Vac & full load			
Inrush Current	-	-	75A	230Vac & full load			
Standby Power Consumption			1W	230Vac/50Hz			
Power Factor	0.96	0.97		240Vac, 50-60Hz, & full load			
	0.93	0.95		200-240Vac, 50-60Hz, 60%-100% load			
THD	-	5%	10%	200-240Vac, 50-60Hz, 60%-100% load			
Max. NO. of PSUs on Circuit Breaker	B10	8	B16	13	B25	20	230Vac 100% load
	C10	13	C16	22	C25	34	

**OUTPUT SPECIFICATIONS**

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-5%Iset	-	5%Iset	
Output Current Setting Range (A) U6-040D057	10%	-	100%	
Output Current Setting Range with Constant Power U6-040D057	0.7	-	1.05	
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%	200~240Vac & 100% Load, load is LED
No Load Output Voltage(V) U6-040D057	-	-	70V	
Auxiliary Power Supply			24V	176-264Vac
			250MA	
Line Regulation	-1%	-	1%	25°C±10°C ambient temperature, input voltage changes from 200Vac to 264Vac.
Load Regulation	-3%	-	3%	25°C±10°C ambient temperature, Input Voltage 230Vac, load changes from 60% to 100%.
Turn-on Delay Time	-	-	1.5S	230Vac, 100% load

**GENERAL SPECIFICATIONS**

Parameter	Min.	Typ.	Max.	Notes
Efficiency @230Vac U6-040D057 Io=0.7A Io=1.05A	86% 86%	86.5% 86.5%		Measured at full load and 25°C ambient temperature
Dielectric Strength	Input-Output	-	3750Vac	-
	Input-PE	-	1600Vac	-
	Output-PE	-	1600Vac	-
Grounding Resistance	-	-	0.1Ω	25A/60S, under 25°C±10°C ambient temperature
Insulation Resistance	50MΩ	-	-	Input-Output, Input-PE, Output-PE, 500Vdc/60S/25°C /70%RH
MTBF	-	300000Hrs	-	25°C±10°C ambient temperature, 230Vac, 80% load (MIL-HDBK-217F)
Lifetime	-	60000Hrs	-	230Vac&100% load, 75°C case temperature, refer to lifetime curve for details
Ambient Temperature	-40°C		+50°C	230Vac&100% load
Operating Case Temperature for Safety Tc_s	-40°C	-	+90°C	
Operating Case Temperature for Warranty Tc_s	-40°C	-	+75°C	7 years warranty case

Specification subject to change without notice

				temperature Humidity: 10% to 95% RH No condensation
Storage Temperature	-40°C	-	+85°C	Humidity: 5% to 85% RH No condensation
Dimensions (L*W*H)mm	123L*79W*31H			
Net Weight	/PCS			
Package	L mm*W mm*H mm; PCS/Ctn			

### DIMMING

Parameter		Min.	Typ.	Max.	Notes
DALI 2	DA,DA High Voltage Level	9.5	16	22.5	
	DA,DA Low Voltage Level	-6.5	0	6.5	
Dimming Output Range	U6-040D057	10%Iset	-	100%Iset	I <sub>max</sub> =1.05A

### 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)	

### 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	√

### INSULATION

Insulation	Input/Mains	DALI	LED Output	Case	Auxiliary Power Supply
Input/Mains	/	Double	Double	Basic	Double
DALI	Double	/	Basic	Basic	Basic
LED Output	Double	Basic	/	Basic	Basic
Case	Basic	Basic	Basic	/	Basic
Auxiliary Power Supply	Double	Basic	Basic	Basic	/

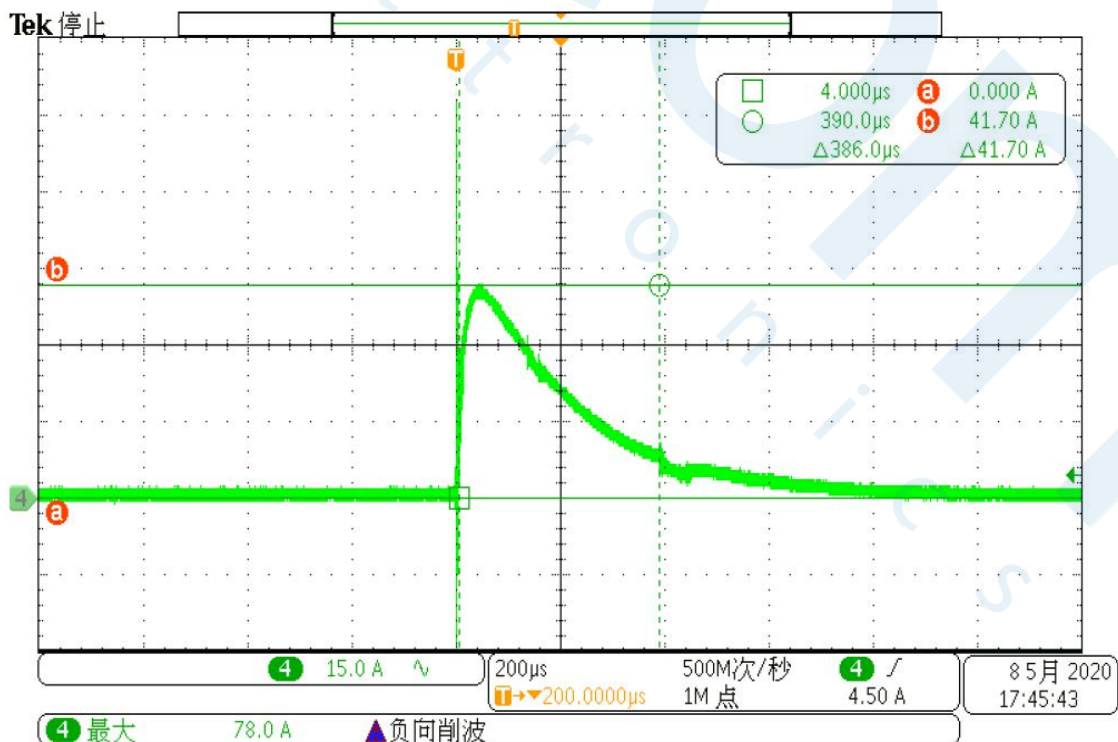
### DALI2 Standards

IEC62386-101,102,207

#### NOTE:

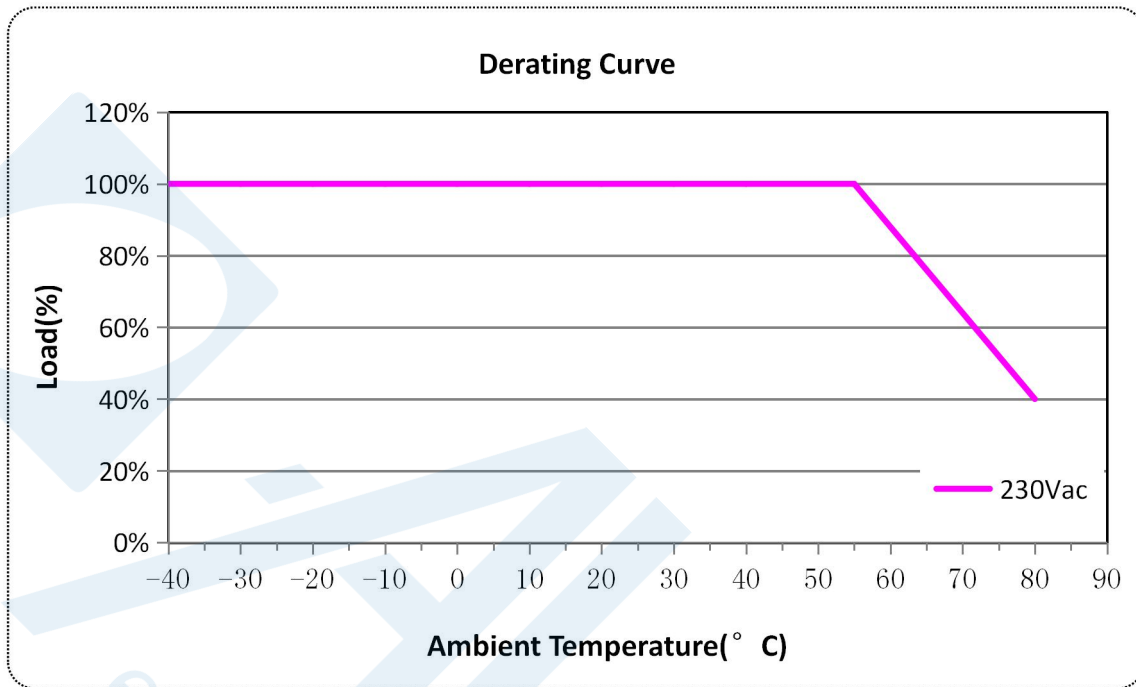
This LED driver meets the EMI specifications above, but as a component of a luminaire, end customer need to identify the EMI performance of a luminaire including LED driver, other devices connected to the driver and on the luminaire itself.

### INRUSH CURRENT WAVEFORM

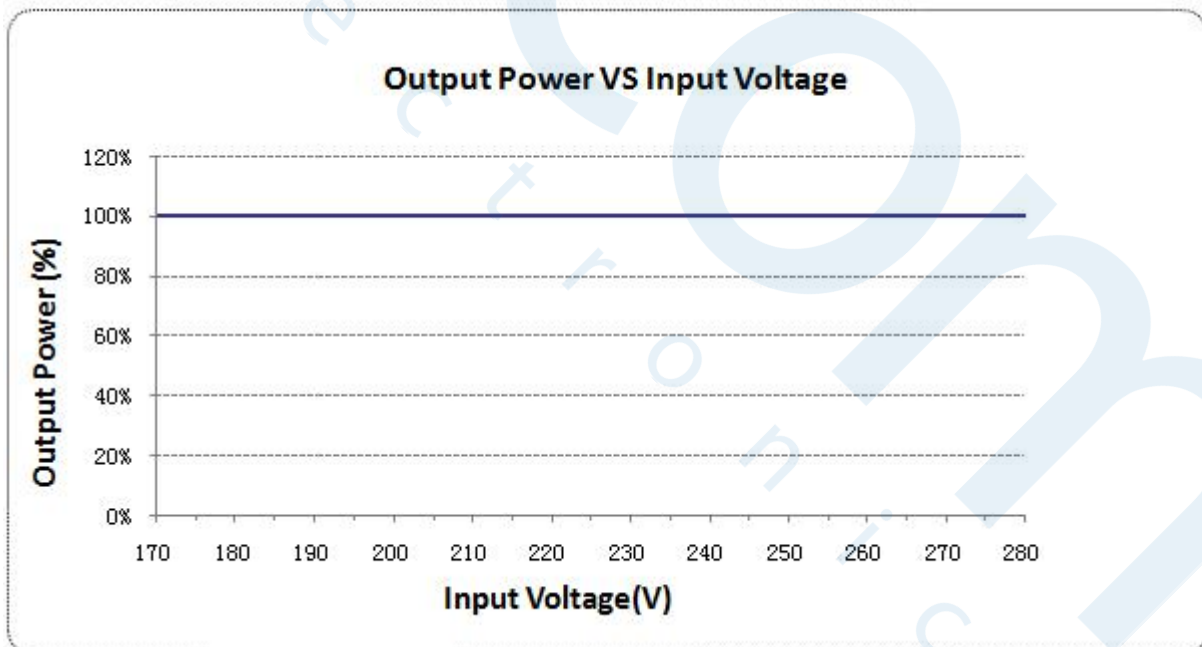


Specification subject to change without notice

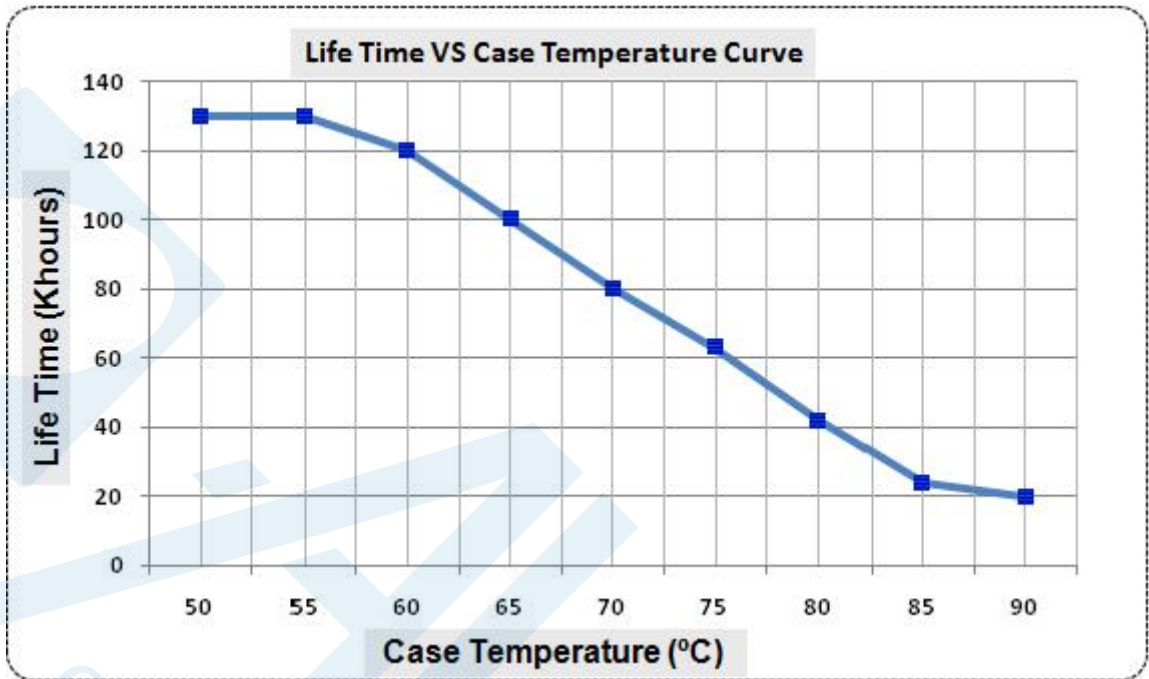
### DERATING CURVE



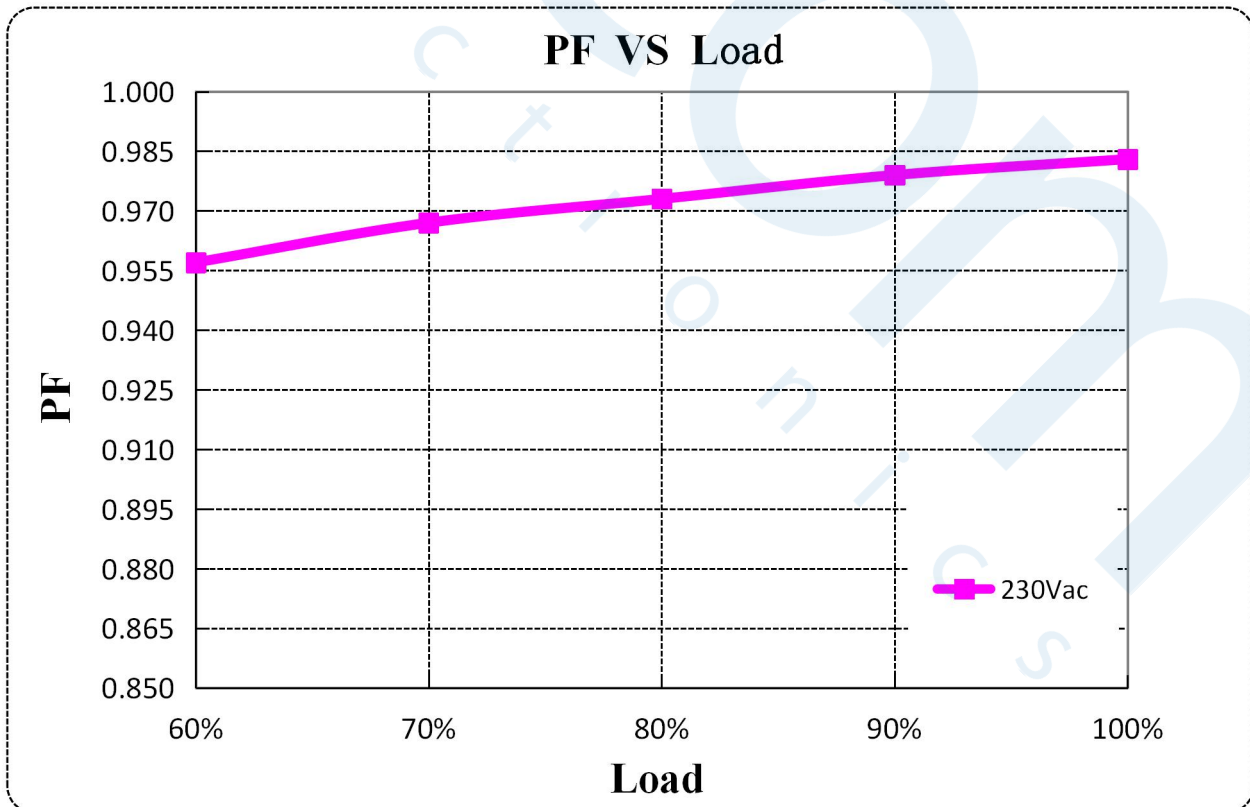
### OUTPUT POWER VS INPUT VOLTAGE



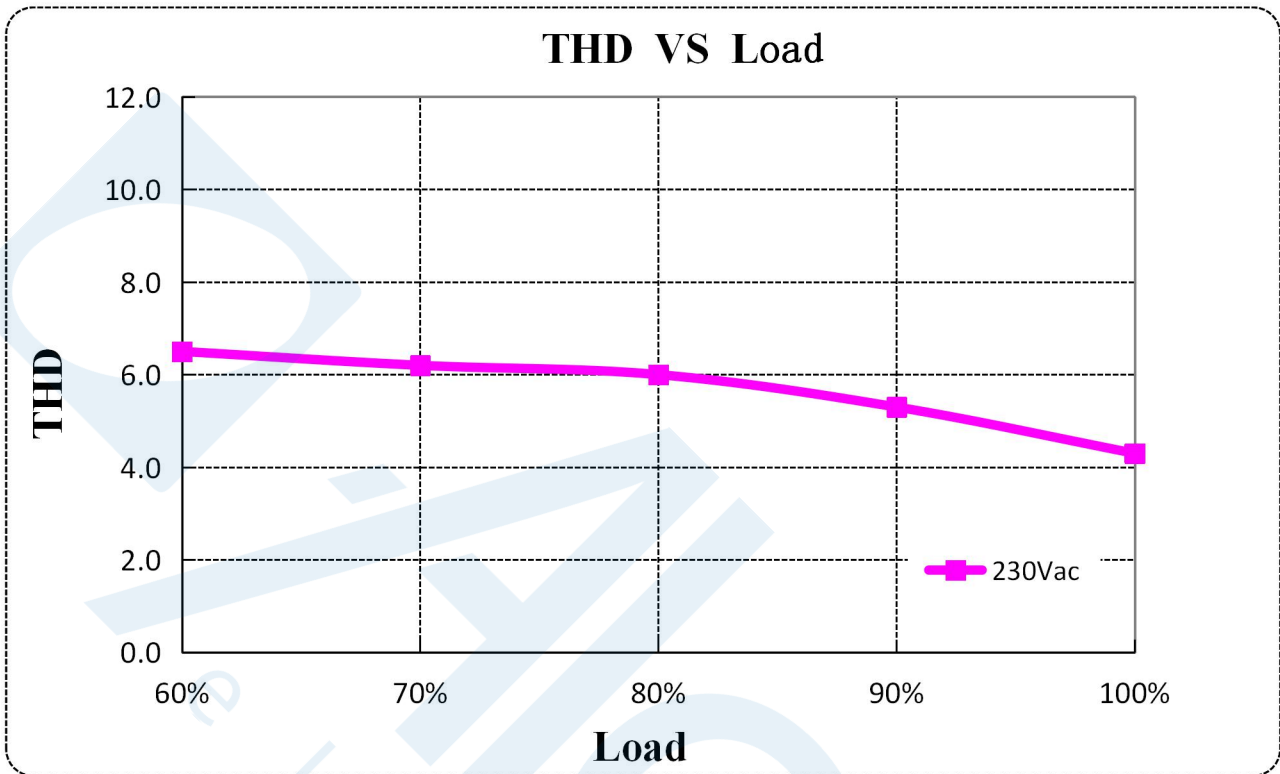
### LIFETIME VS CASE TEMPERATURE



### POWER FACTOR VS LOAD

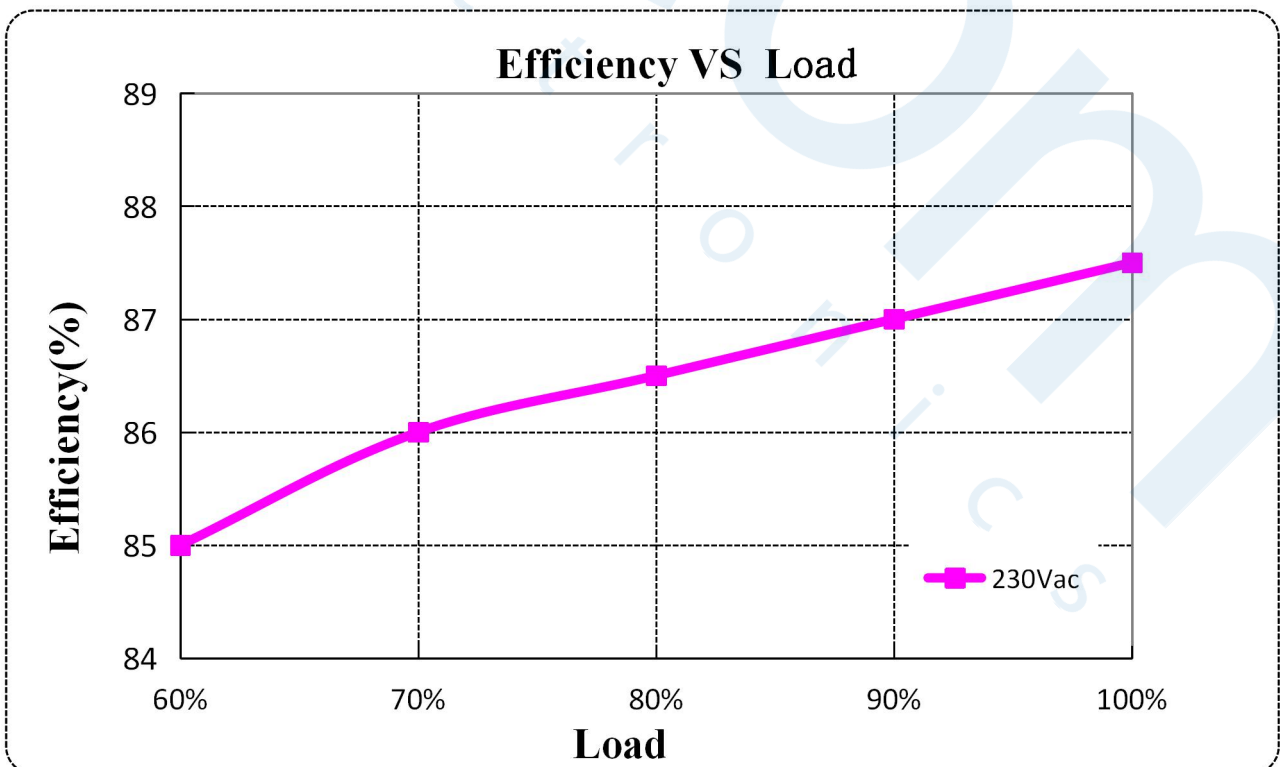


### TOTAL HARMONIC DISTORTION



### EFFICIENCY VS LOAD

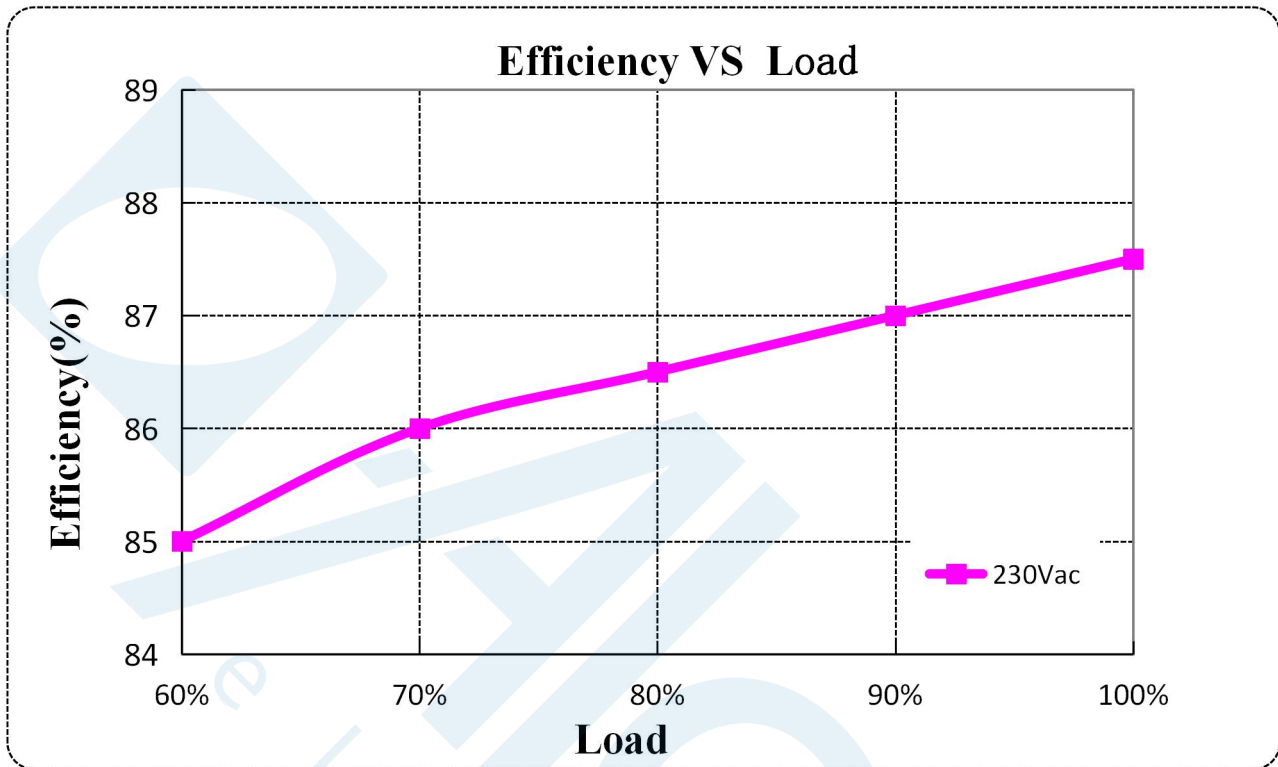
$I_o=0.7A$



Specification subject to change without notice



Io=1.05A

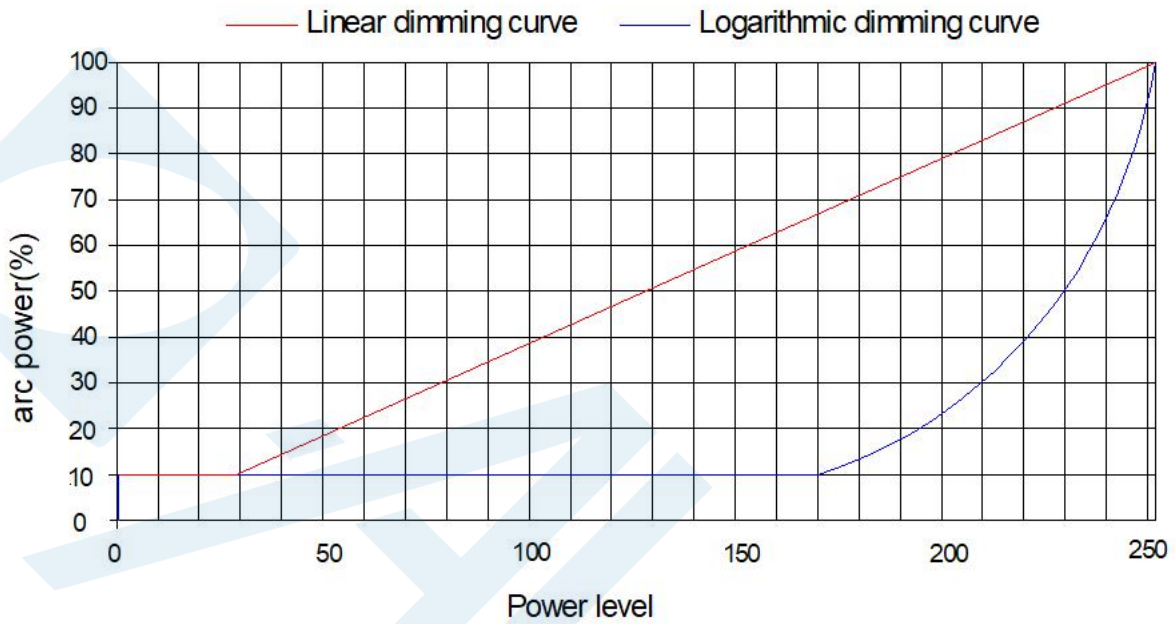


### PROTECTIONS

Parameter		Min.	Typ.	Max.	Notes
External NTC	R1	-	7.81kOhm (For reference, subject to actual)	-	When the R-NTC is reduced to R1, the external thermal protection is triggered and the output current gradually decreases
	R2	-	4.16kOhm (For reference, subject to actual)	-	When the R-NTC is reduced to R2, the output current is reduced to the programmed protection current value
	Protection Circuit	10% lo set	60% lo set	100% lo set	10% lo set > lo min (Default setting 60%)
lo min		60% lo set	100% lo set	10% lo set ≤ lo min (Default setting 60%)	
Input Over Voltage Protection		When the input exceeds the rated defined voltage range and enters the protection state, the failure relief will automatically recover.			
Over Temperature Protection		Decreases output current, returning to normal after over temperature is removed.			
Short Circuit Protection		Constant current 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			

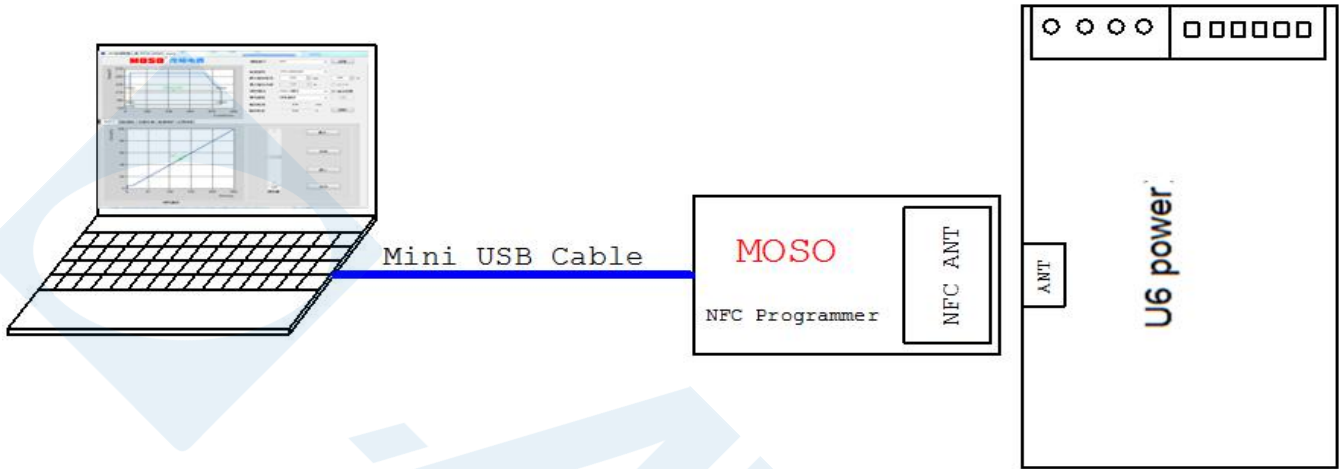
Specification subject to change without notice

### DALI2 DIMMING CURVE



**Note: Factory Default Output Logarithmic Curve**

### DIAGRAM OF UPPER COMPUTER CONNECTION:



### Software programming interface

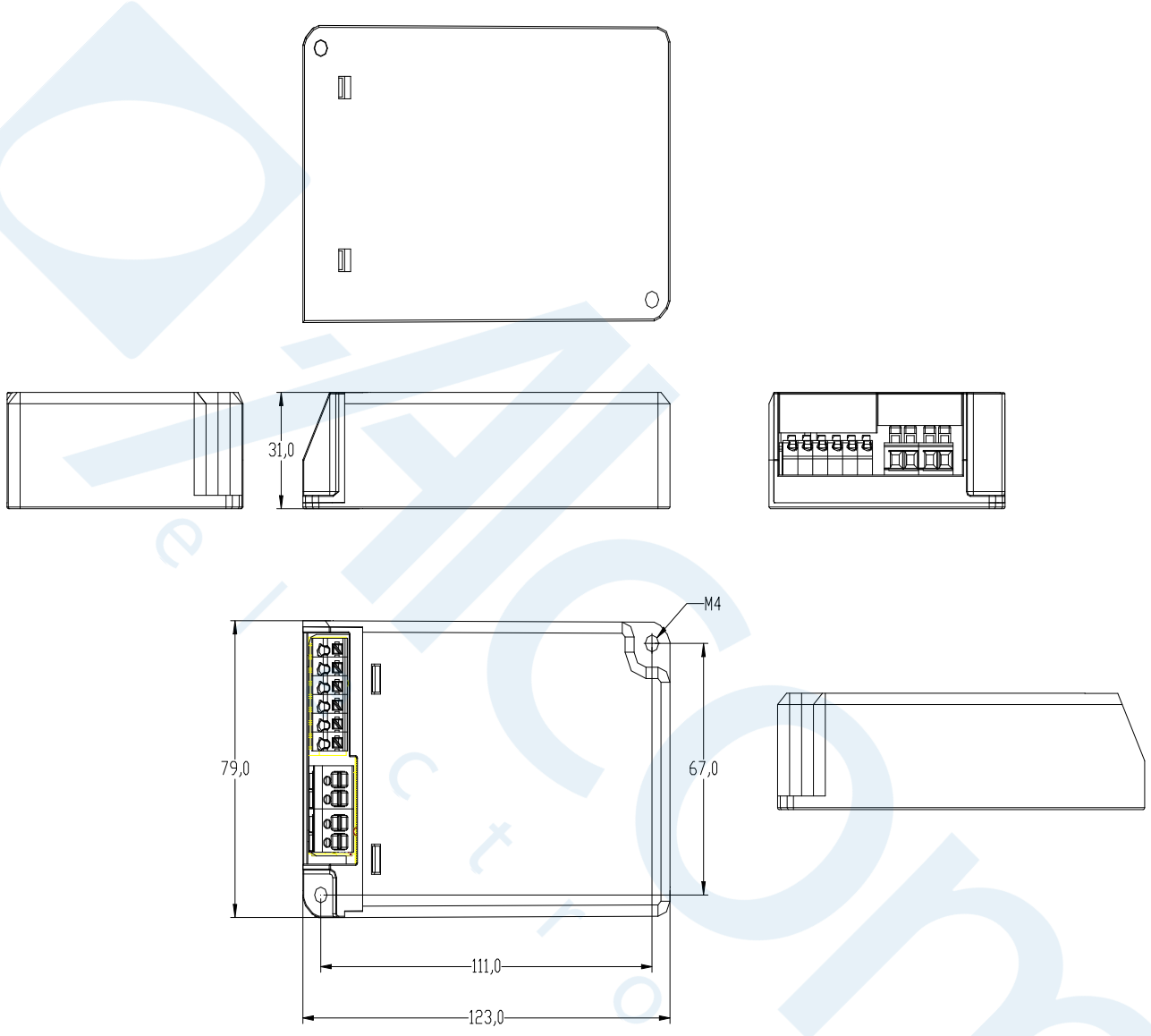
The screenshot shows the MOSO LED Driver Configurer Tool V0.36 DEMO software interface. The main window displays a graph of Voltage (V) versus Current (mA) and a control panel for configuring the driver. The control panel includes settings for Port (NFC), Driver Type (U6-200D286), Max Current (700 mA), Max Power (200 W), Dimming Type (DALI-2), and Dimming Curve (Linear). A Log window on the right shows connection status messages.

**Log Window Content:**

```

wulei 2020-07-11 14:10:45 DALI unconnected
wulei 2020-07-11 14:10:46 NFC connected
wulei 2020-07-11 14:11:11 E00226000358A3D8 the version of driver software is 2.3 USER
    
```

### MECHANICAL OUTLINE





# Specification for Approval

Product Name: 40W NFC Programmable Driver

Product Model: U6-040D057

Rev.

Sample Date: -

-

-

## 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  
Province, P.R.China

TEL: 0755-27657000

E-mail: info@mosopower.com

Post Code: 518108

FAX: 0755-27657908

Web site: <http://www.mosopower.com>

Prepared By	Checked By	Approved By

# Product Specification

Product Name: 40W NFC Programmable Driver

Product Model: U6-040D057

Rev.

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: info@mosopower.com

Web site: <http://www.mosopower.com>

Prepared By	Checked By	Approved By

Specification subject to change without notice