



### 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

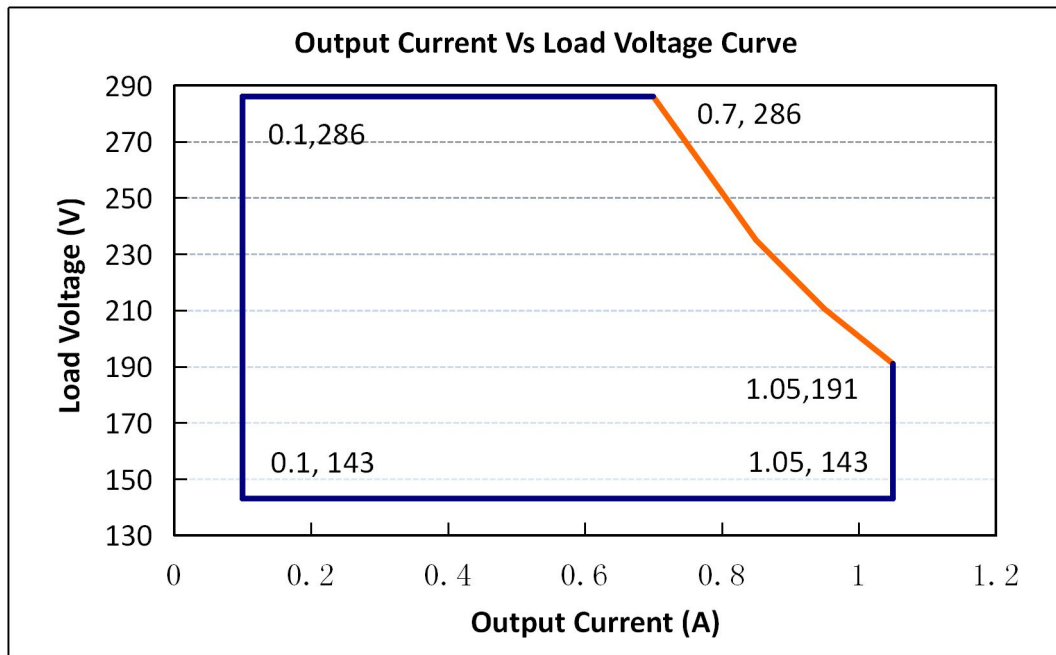
Model Number [1]	Max Output Power (W)	Output Voltage Range (Vdc)	Full Power Output Voltage Range (Vdc)	Full Power Current Adjustable Range (A) [2]	Default Output Current Setting(A)	Typical Efficiency [3]	PF
U6-200D286	200	143-286	191-286	0.7-1.05	0.7	94%	0.98

### 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.

### 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	-	-	1.6A	200-240Vac & full load			
Inrush Current	-	-	75A	230Vac & full load			
Standby Power Consumption			1.0W	230Vac/50Hz			
Power Factor	0.96	0.98		240Vac, 50-60Hz, & full load			
	0.90	0.91		200-240Vac, 50-60Hz, 60%-100% load			
THD	-	5%	15%	200-240Vac, 50-60Hz, 60%-100% load			
Max. NO. of PSUs on Circuit Breaker	B10	2	B16	3	B25	5	230Vac 100% load
	C10	4	C16	6	C25	9	

**OUTPUT SPECIFICATIONS**

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-5%Iset	-	5%Iset	
Output Current Setting Range (A) U6-200D286	10%	-	100%	
Output Current Setting Range with Constant Power U6-200D286	0.7	-	1.05	
Total Output Current Ripple(pk-pk)	-	10%	15%	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) U6-200D286	-	-	310V	
Auxiliary Power Supply			24V	176-264Vac
			250MA	
Line Regulation	-1%	-	1%	25°C±10°C ambient temperature, input voltage changes from 200Vac to264Vac.
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 U6-200D286 Io=0.7A Io=1.05A	91% 90.5%	94% 93%		Measured at full load and 25°C ambient temperature
Dielectric Strength	Input-Output	-	3750Vac	Max 5mA/60S
	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	170L*100W*40H			
Net Weight	880±50g/PCS			
Package	L555mm*W375mm*H235mm; 18PCS/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	U6-200D286	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	√
		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	/

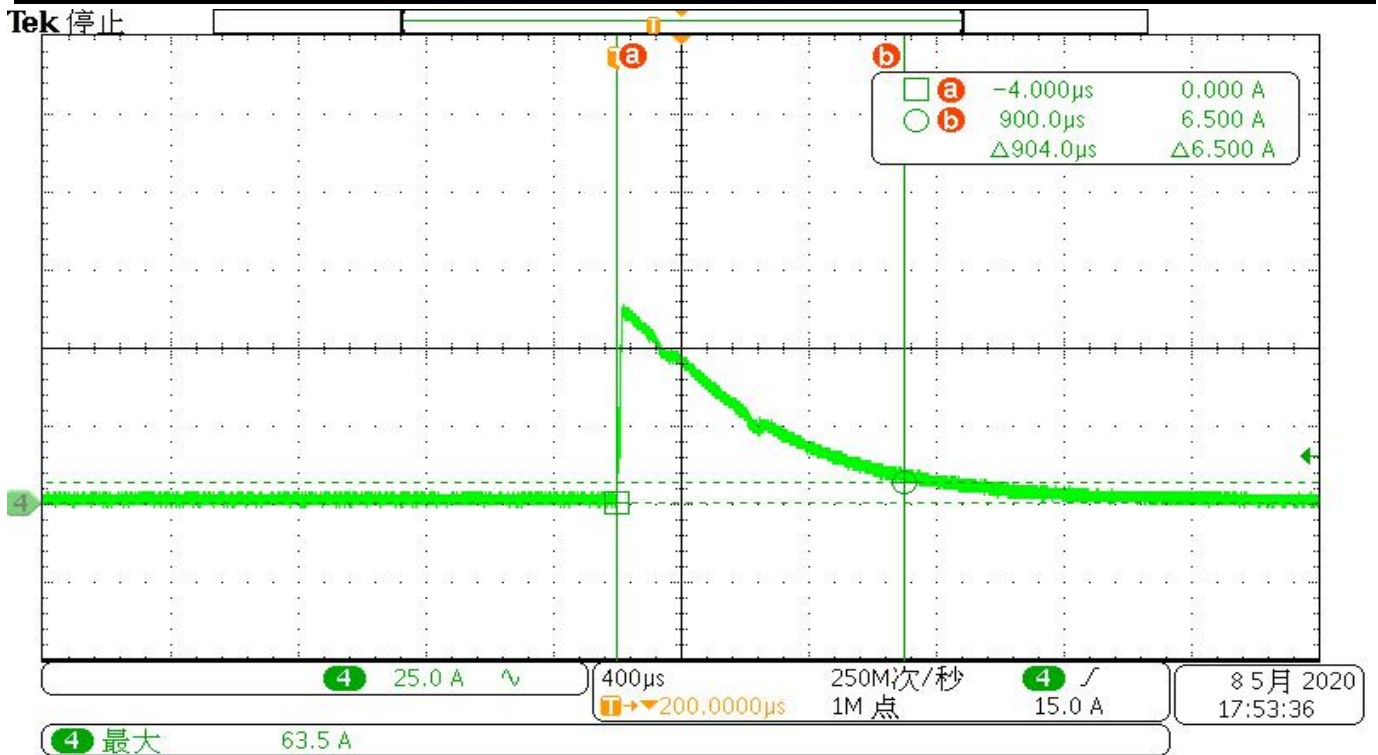
**DALI2 Standards**

IEC62386-101,102,207

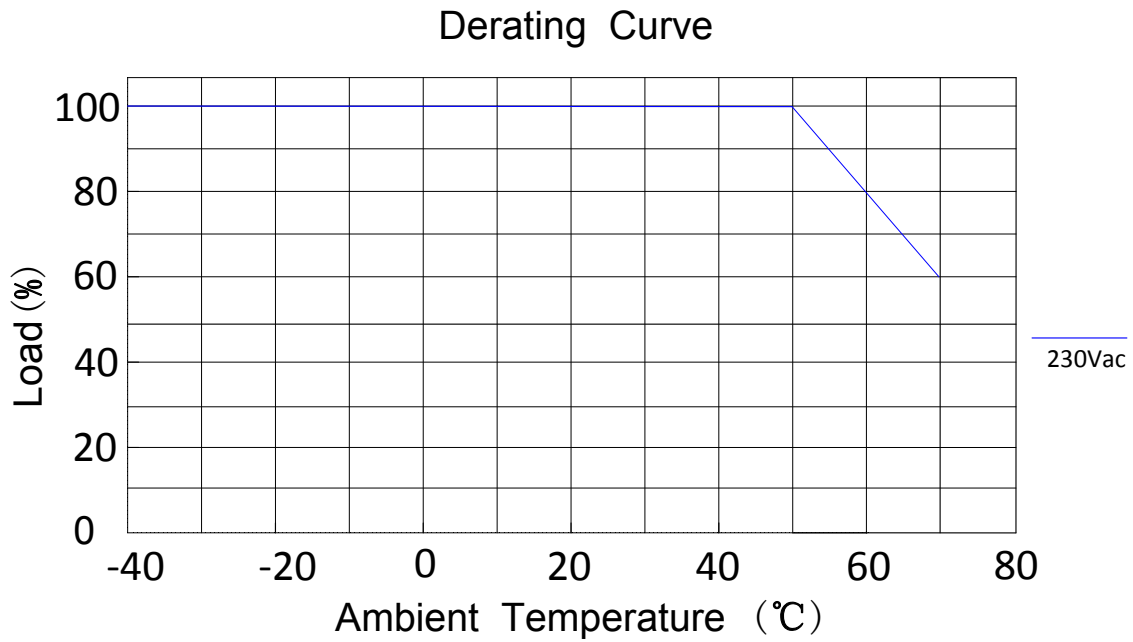
**NOTE:**

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.

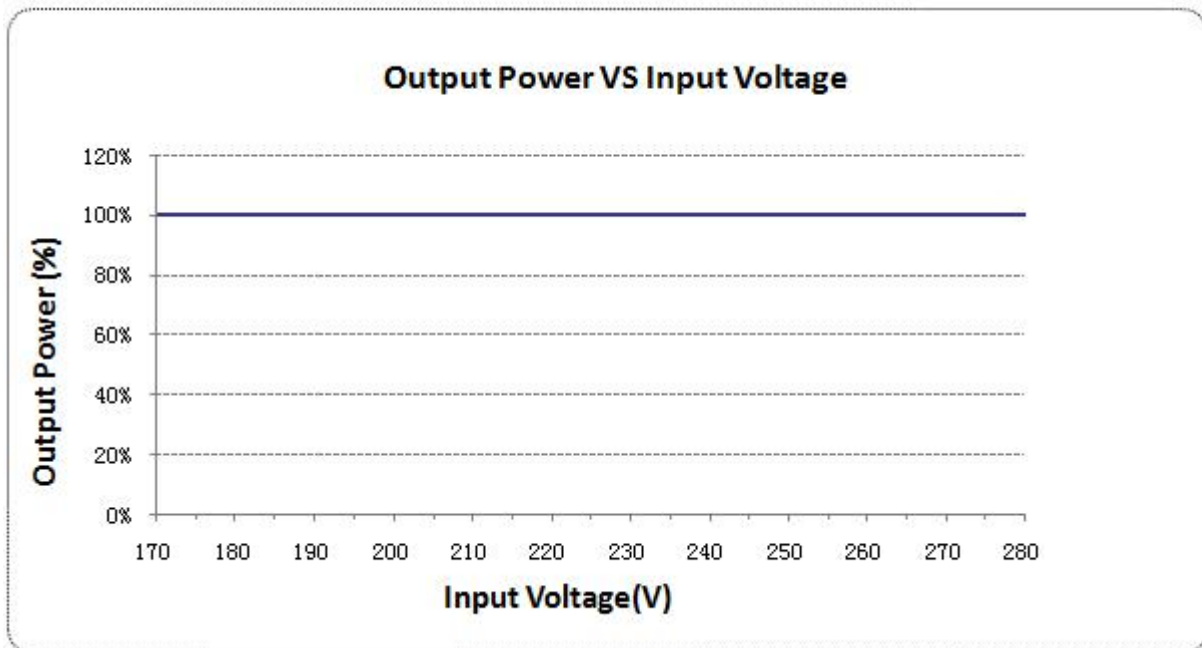
**INRUSH CURRENT WAVEFORM**



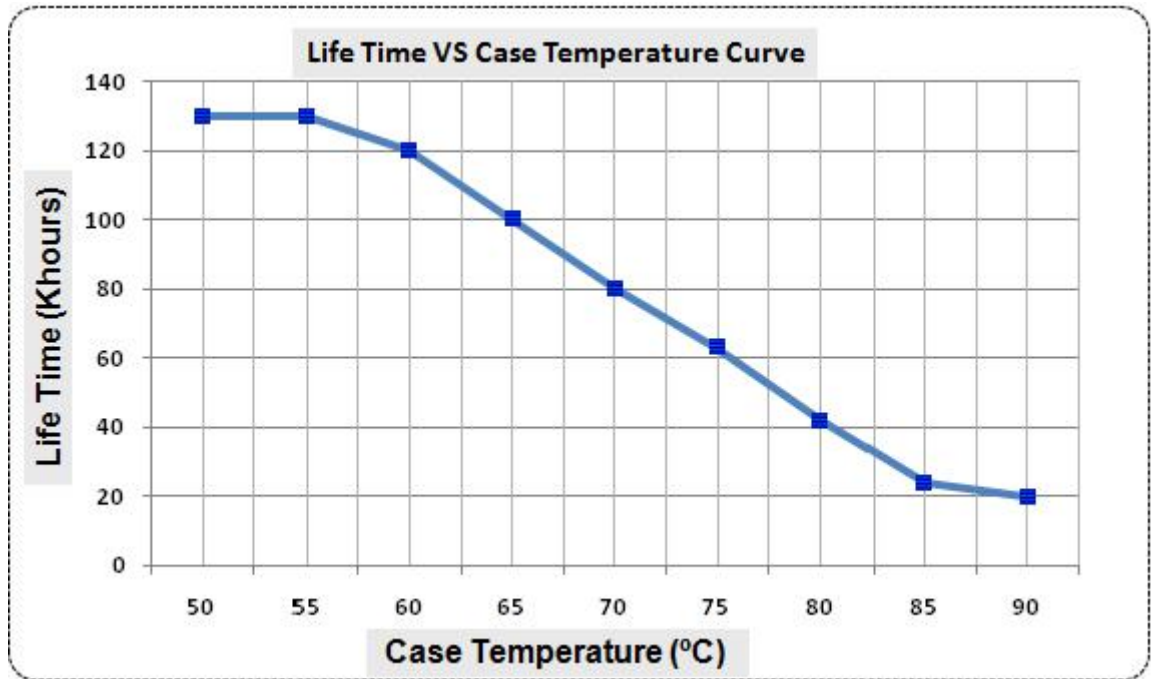
### DERATING CURVE



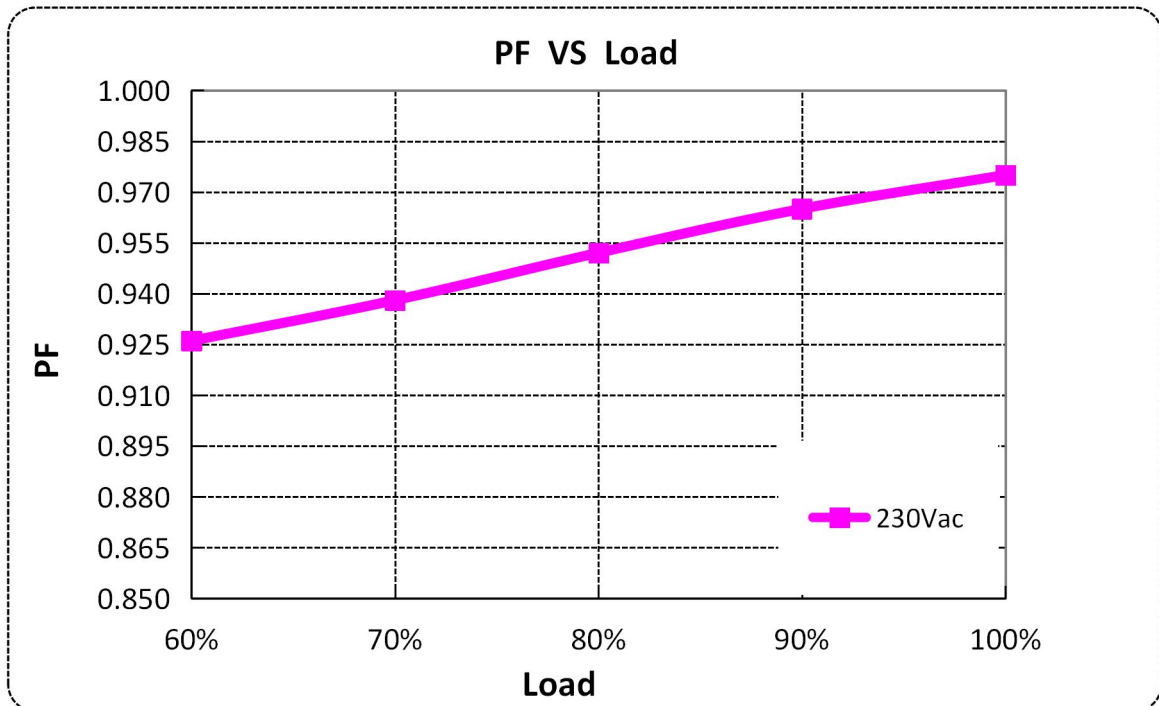
### OUTPUT POWER VS INPUT VOLTAGE



### LIFETIME VS CASE TEMPERATURE

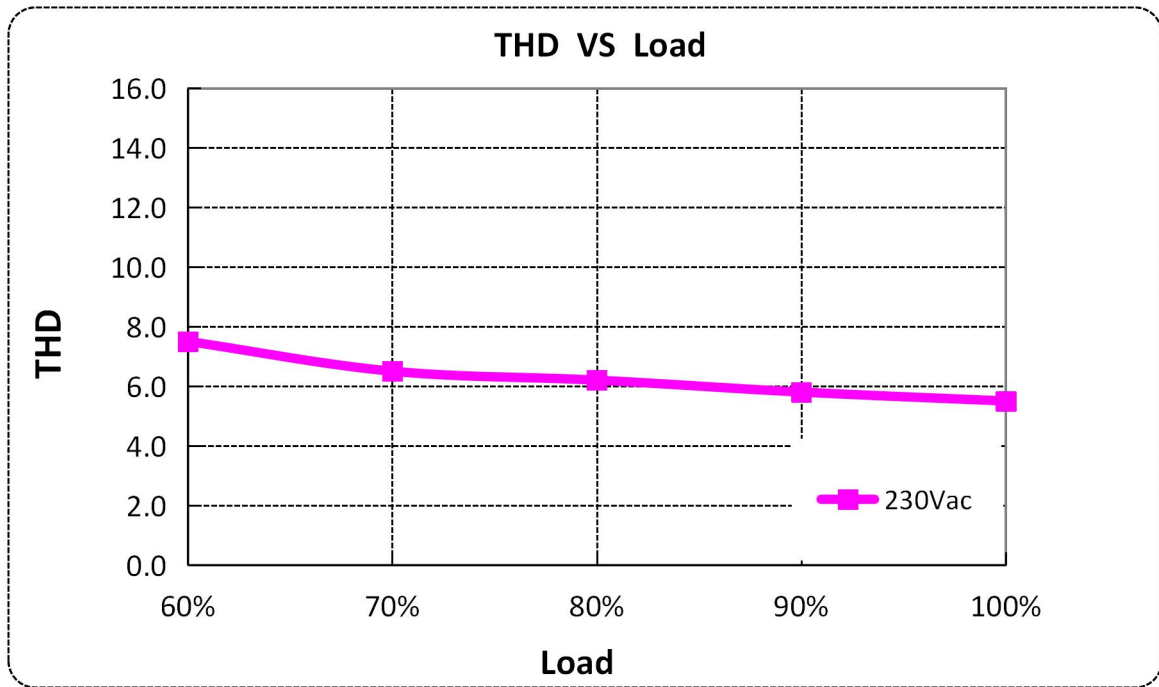


### POWER FACTOR VS LOAD



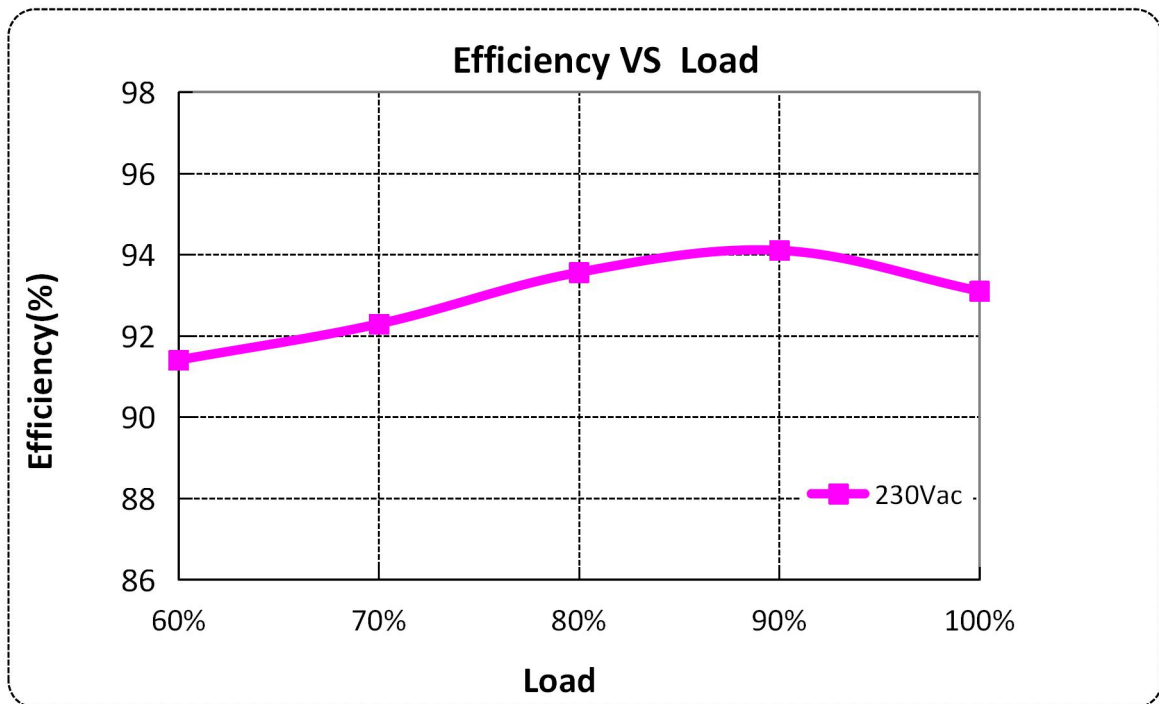


### TOTAL HARMONIC DISTORTION

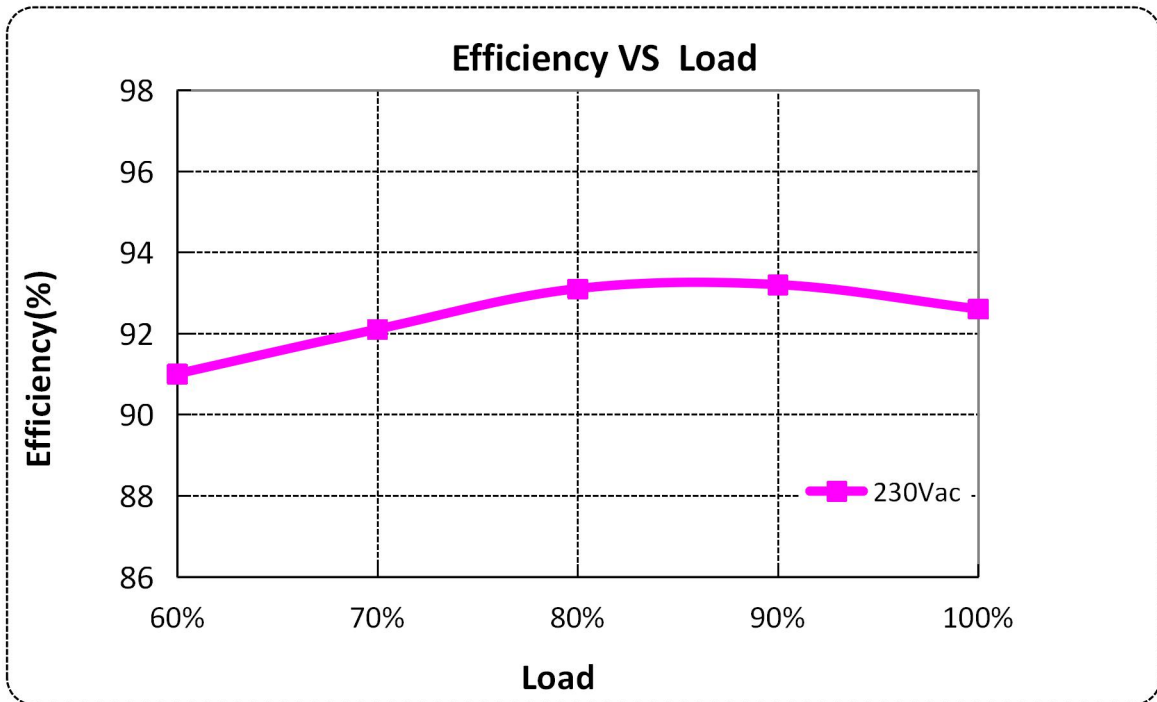


### EFFICIENCY VS LOAD

$I_o=0.7A$



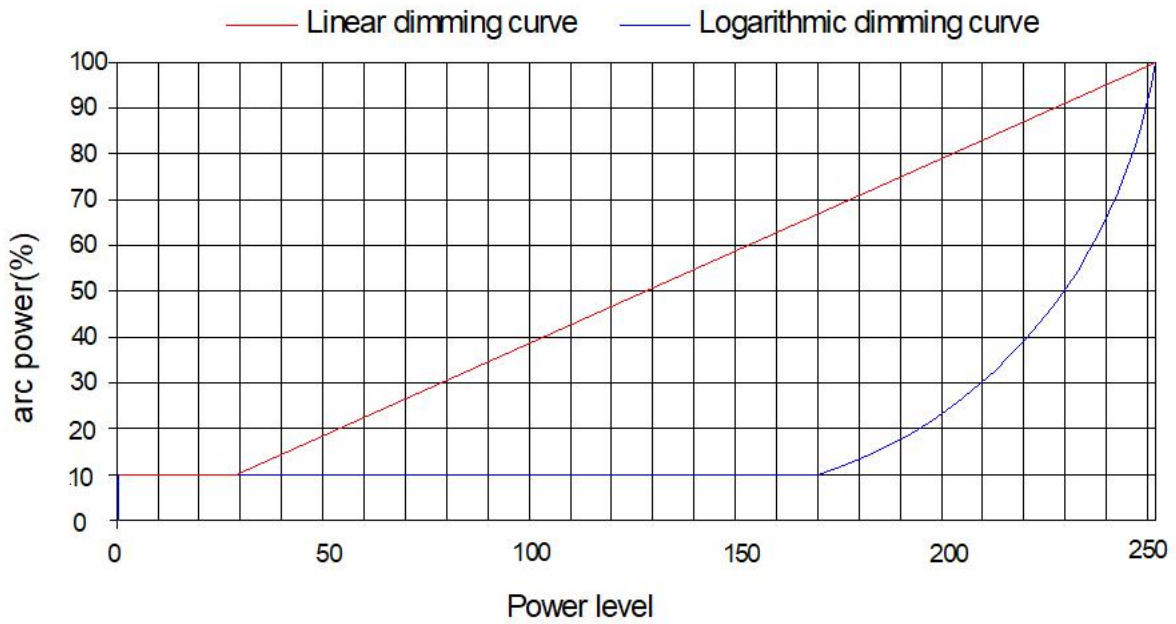
Io=1.05A



### PROTECTIONS

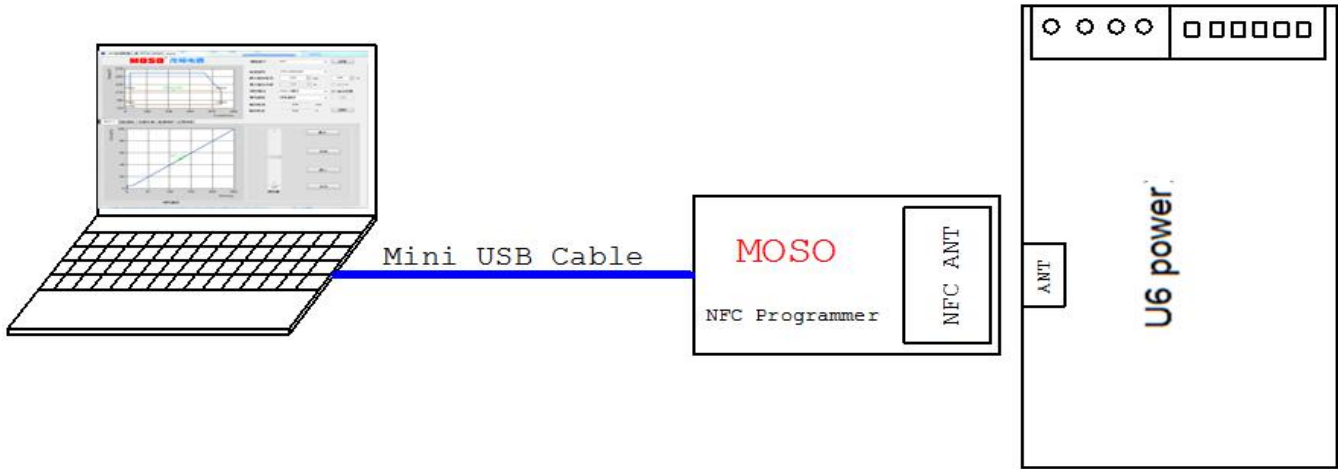
Parameter		Min.	Typ.	Max.	Notes
External NTC	R1	-	7.81kOhm (For reference, subject to actual)	-	When the R-NTC is reduced to R1, the external thermal protection is triggered and the output current gradually decreases
	R2	-	4.16kOhm (For reference, subject to actual)	-	When the R-NTC is reduced to R2, 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			

### DALI2 DIMMING CURVE



**Note: Factory Default Output Logarithmic Curve**

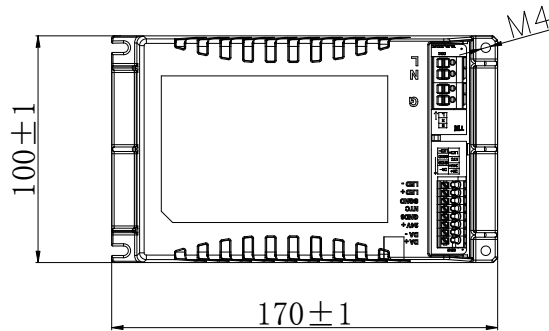
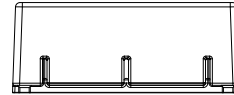
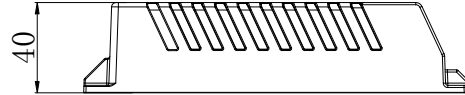
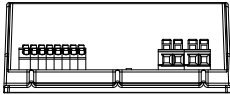
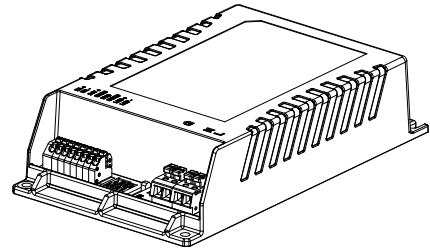
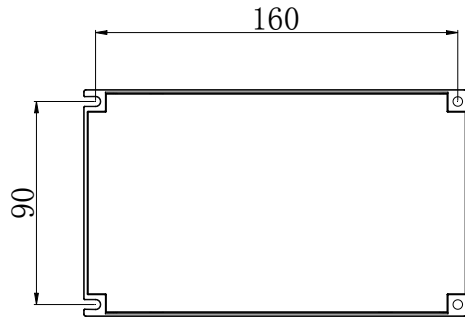
### DIAGRAM OF UPPER COMPUTER CONNECTION:



### Software programming interface

The screenshot shows the "LED Driver Configurer Tool V0.36 DEMO" software interface. The main window displays the MOSO logo and a graph of Voltage (V) vs Current (mA). The graph shows a constant voltage of 286V up to 700mA, followed by a linear drop to 133V at 1050mA. The current is set to 700mA and the voltage to 286V. The software also features a "Dimming" section with a graph of Current (%) vs Dimming and a vertical slider set to 127. The control panel includes settings for 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 and software version information.

### MECHANICAL OUTLINE



**REVISION HISTORY**

Version	Description of Change		Changed Date	Notes
	Before	Now		
A.1		Datasheets Release	2020-06-29	

Specification subject to change without notice

## Specification for Approval

Product Name: 200W NFC Programmable Driver

Product Model: U6-200D286

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.		

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: <a href="http://www.mosopower.com">http://www.mosopower.com</a>

Prepared By	Checked By	Approved By

Specification subject to change without notice

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## Product Specification

Product Name:      200W NFC Programmable Driver

Product Model:      U6-200D286

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>

<b>Prepared By</b>	<b>Checked By</b>	<b>Approved By</b>