U6 Series NFC 80W Programmable Driver

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 luminaires of protection class I and 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

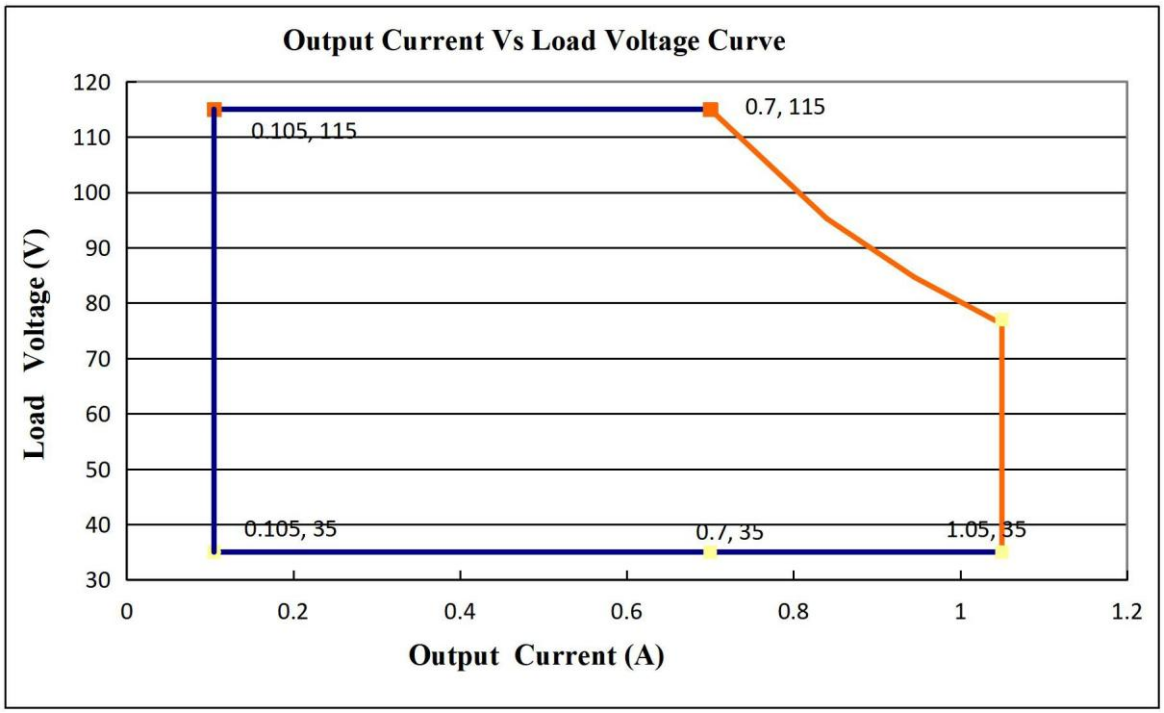
Model Number [1]	Max Output Power (W)	Output Voltage Range (Vdc)	Full Power Output Voltage Range (Vdc)	Full Power Current Adjustable Range (A) [2]	Default Output Current Setting(A)	Typical Efficiency [3]	PF
U6-080D115	80	35-115	77-115	0.7-1.05	0.7	93%	0.97

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.

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	-	-	0.65A	200-240Vac & full load
Inrush Current	-	-	75A	230Vac & full load
Standby Power Consumption			0.5W	230Vac/50Hz
Power Factor	0.95	0.96		240Vac, 50-60Hz, & full load
	0.90	0.92		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 6	B16 10	B25 15	230Vac 100% load
	C10 10	C16 16	C25 25	

OUTPUT SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-5%	-	5%	Iset>0.35A
Output Current Setting Range (A) U6-080D115	10%	-	100%	
Output Current Setting Range with Constant Power U6-080D115	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) U6-080D115	-	-	130V	
Auxiliary Power Supply	22.8V	24V	25.2V	176-264Vac
			250MA	
Line Regulation	-1%	-	1%	25℃±10℃ ambient temperature, input voltage changes from 200Vac to264Vac.
Load Regulation	-3%	-	3%	25℃±10℃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 U6-080D115 Io=0.7A Io=1.05A		91% 91%	92% 92%		Measured at full load and 25℃ambient temperature
Dielectric Strength	Input-Output	-	3750Vac	-	Max 5mA/60S
	Input-PE	-	3000Vac	-	
	Output-PE	-	1600Vac	-	
Insulation Resistance		10MΩ	-	-	Input-Output, 500Vdc/60S/25℃ /70%RH
MTBF		-	200000Hrs	-	25℃±10℃ambient temperature, 230Vac,80% load (MIL-HDBK-217F)
Lifetime		-	100000Hrs	-	230Vac&100% load,75℃ case temperature, refer to lifetime curve for details
Ambient Temperature		-40℃		+55℃	230Vac&100% load
Operating Case Temperature for Safety Tc_s		-40℃	-	+85℃	
Operating Case Temperature for Warranty Tc_s		-40℃	-	+75℃	7 years warranty case temperature Humidity: 10% to 95% RH No

				condensation
Storage Temperature	-40℃	-	+85℃	Humidity: 5% to 85% RH No condensation
Dimensions (L*W*H)mm	133L*77W*40H			
Net Weight	500±50g/PCS			
Package	L555mm*W375mm*H235mm; 30PCS/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	U6-080D115	10%Iset	-	100%Iset	Imax=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	Supporting Surface	Auxiliary Power Supply
Input/Mains	/	Double	Double	Double	Double
DALI	Double	/	Basic/Supplementary	Double	Basic/Supplementary
LED Output	Double	Basic/Supplementary	/	Double	Basic/Supplementary
Supporting Surface	Double	Double	Double	/	Double
Auxiliary Power Supply	Double	Basic/Supplementary	Basic/Supplementary	Double	/

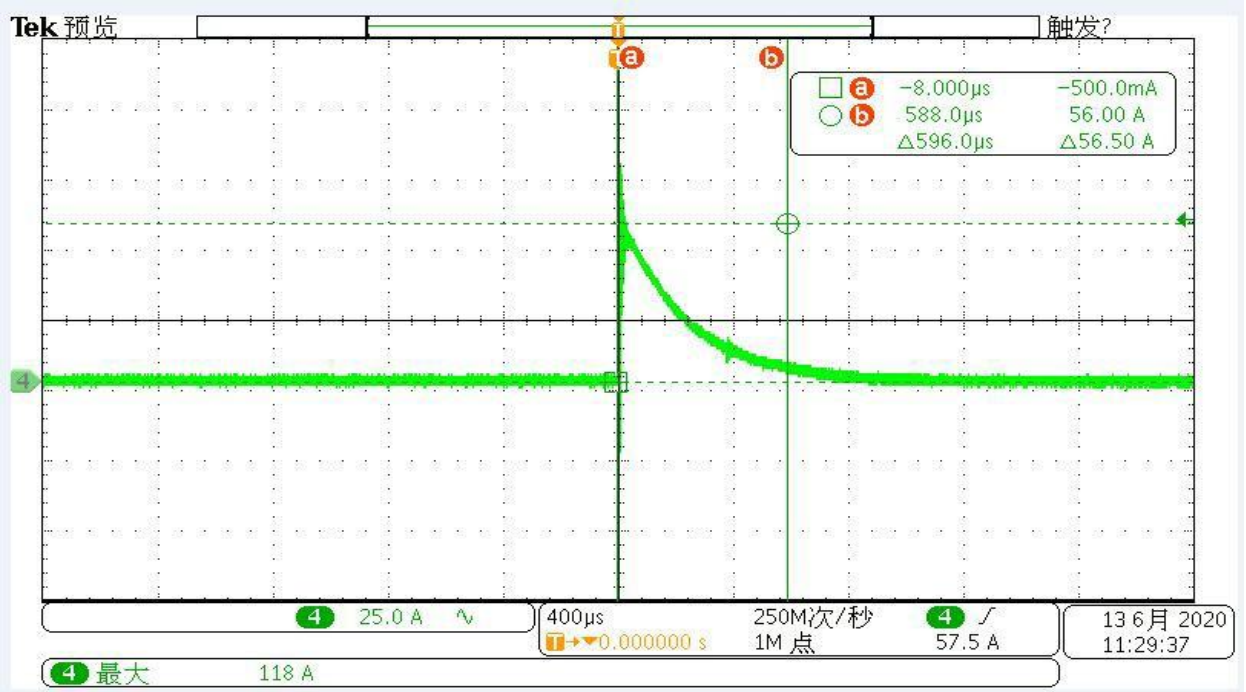
DALI2 Standards

IEC62386-101,102,207

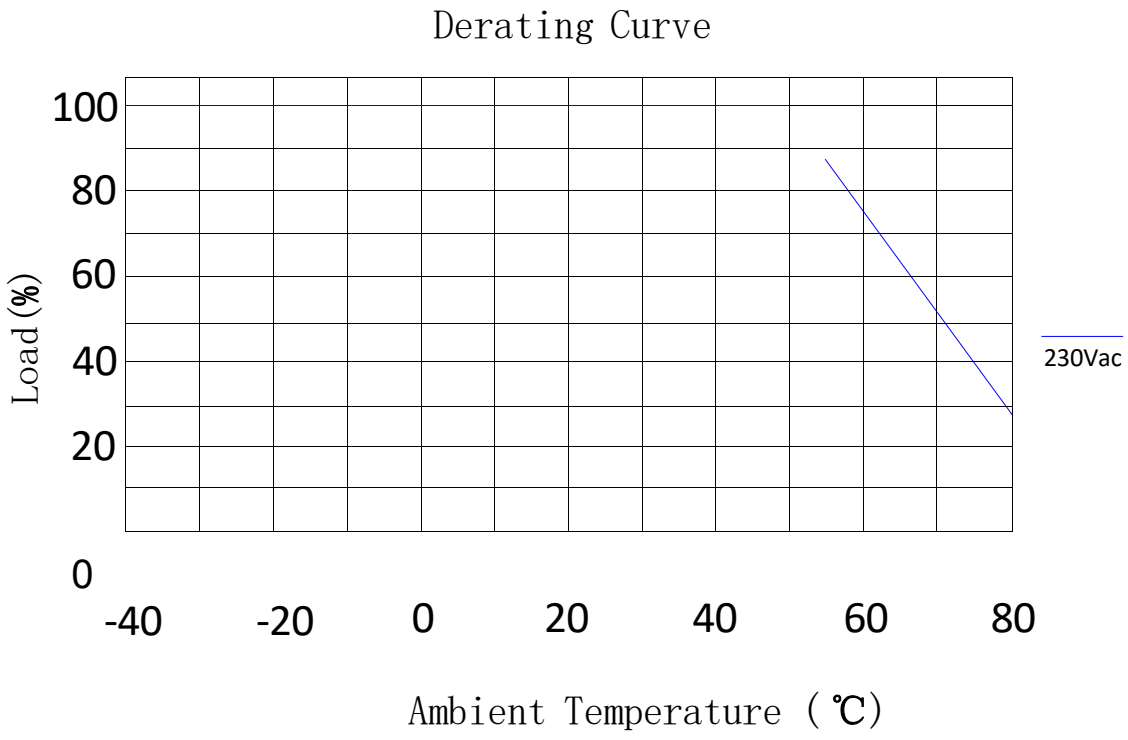
NOTE:

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.

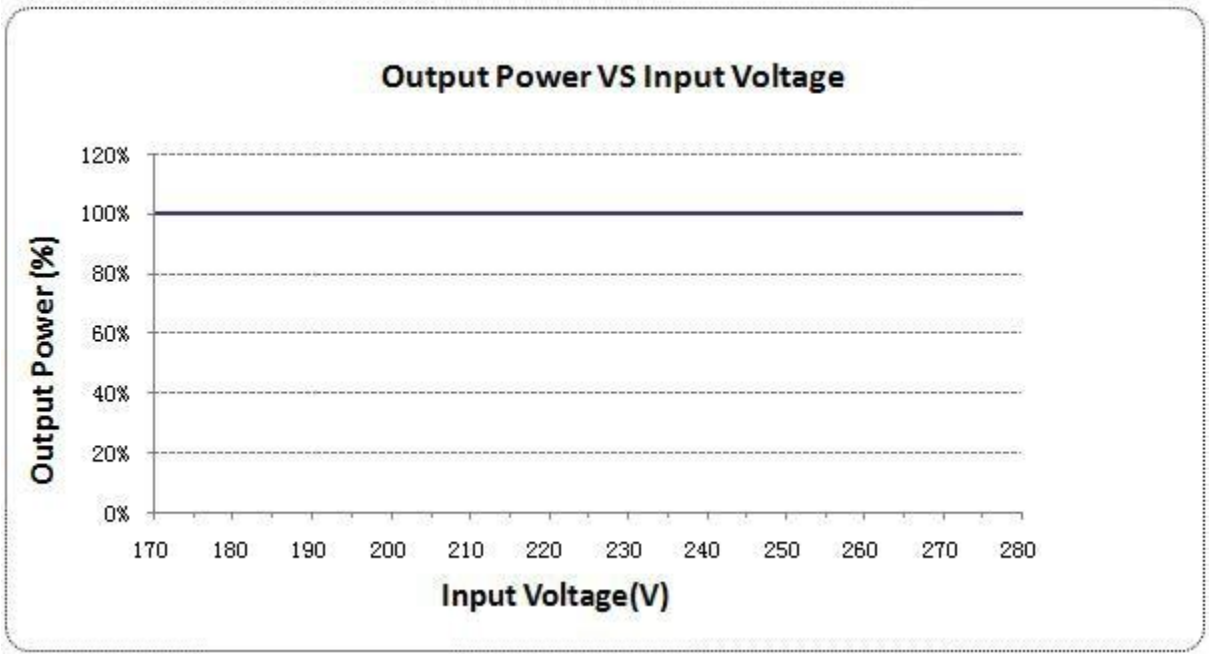
INRUSH CURRENT WAVEFORM



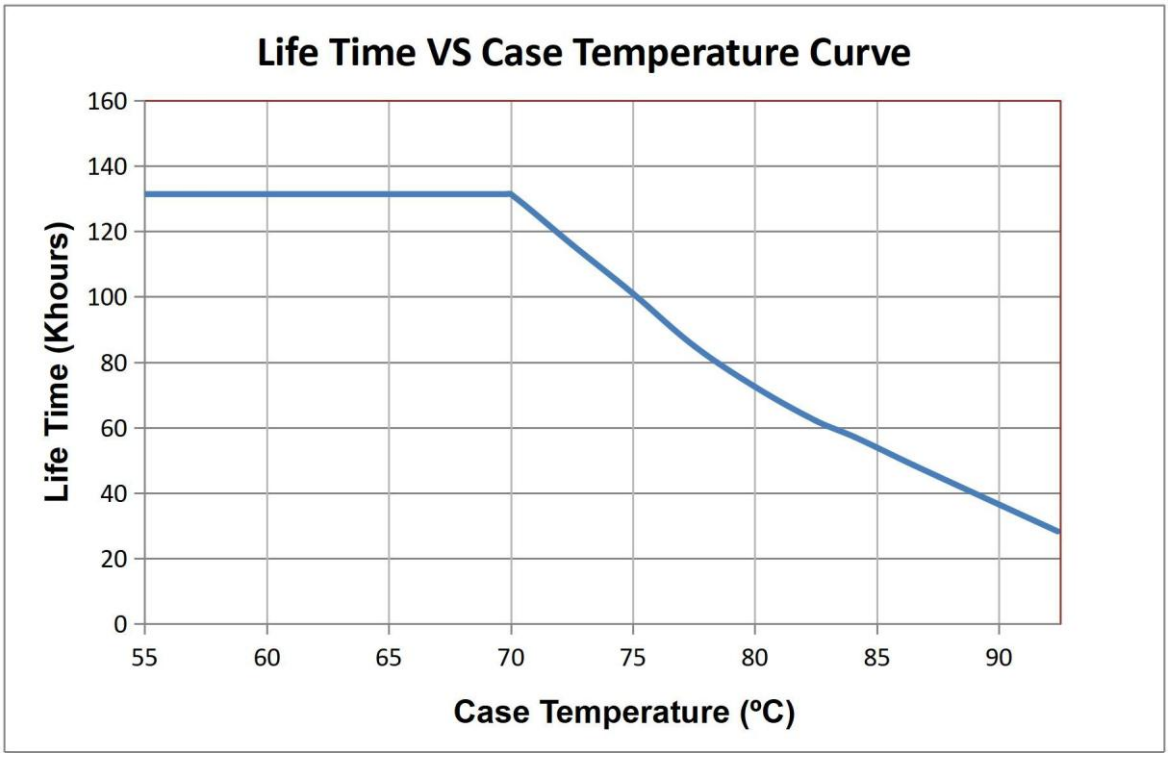
DERATING CURVE



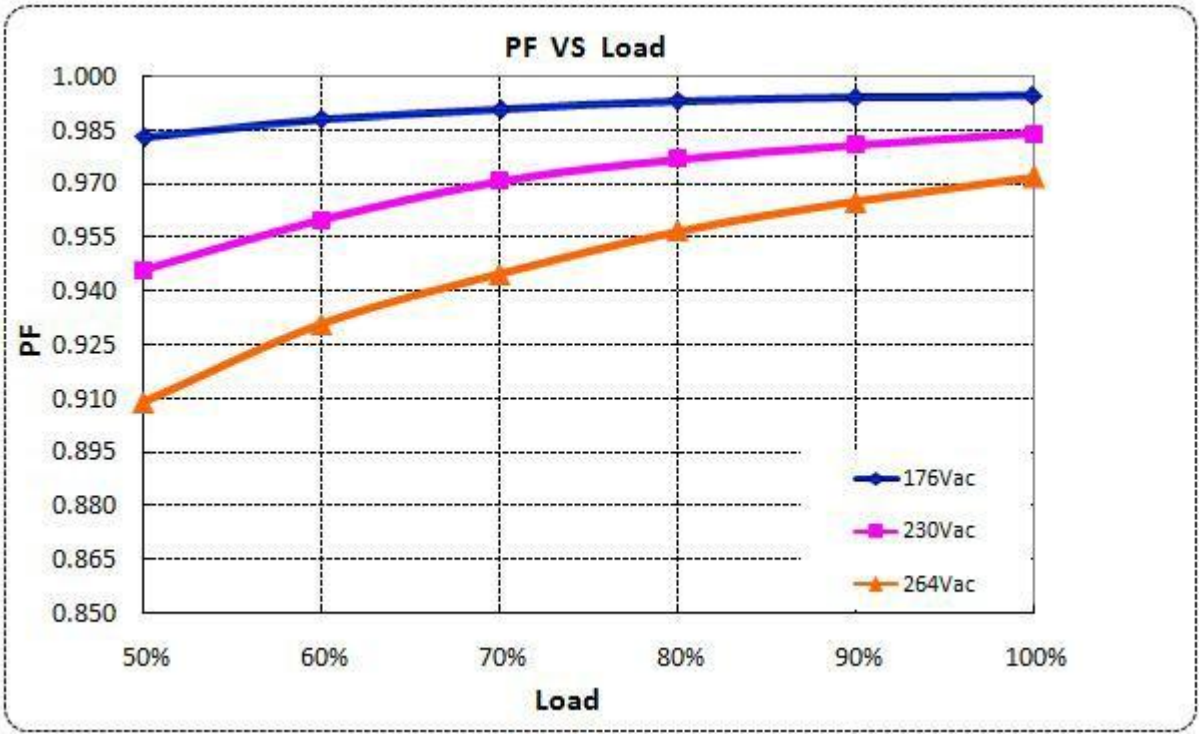
OUTPUT POWER VS INPUT VOLTAGE



LIFETIME VS CASE TEMPERATURE



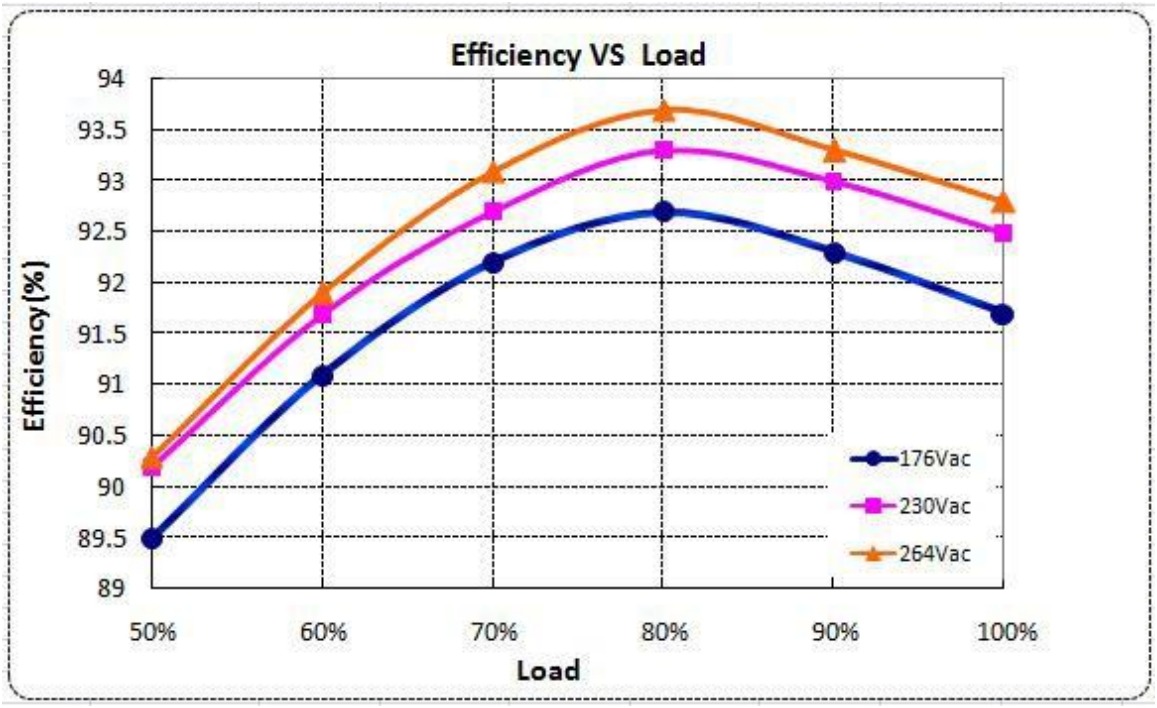
POWER FACTOR VS LOAD



TOTAL HARMONIC DISTORTION

EFFICIENCY VS LOAD

Io=0.7A

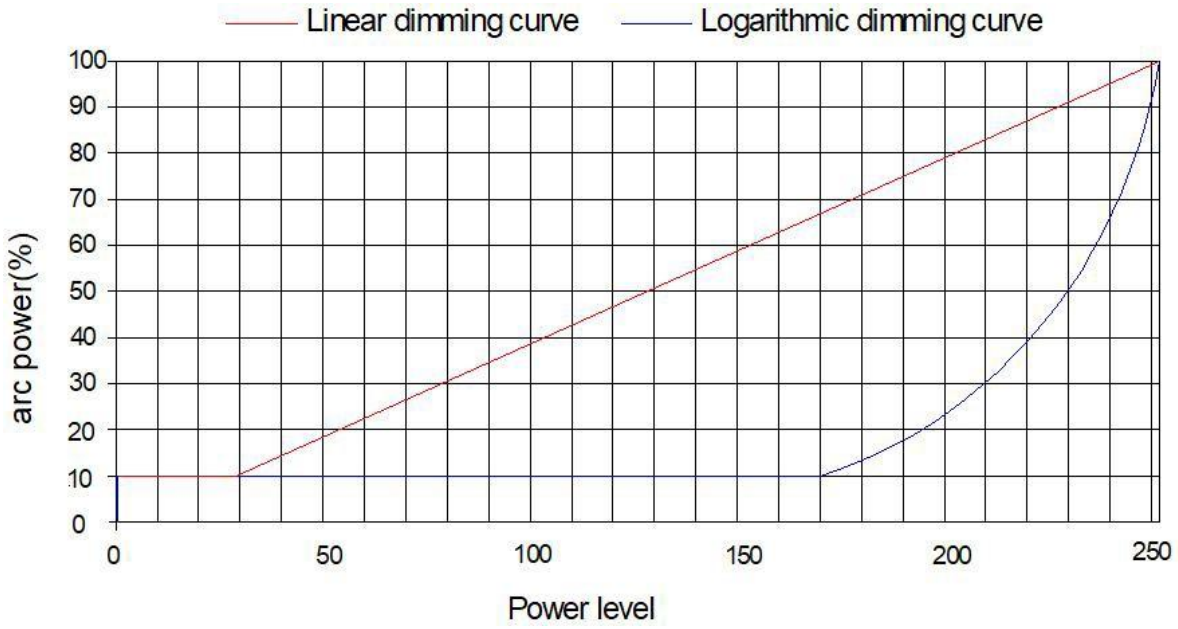


Io=1.05A

PROTECTIONS

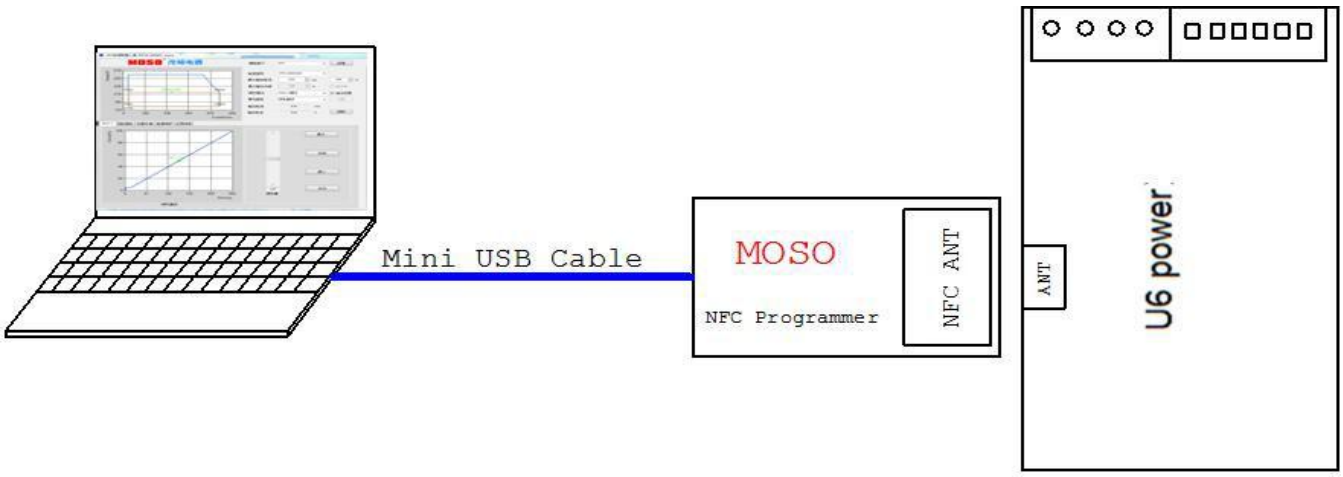
Parameter		Min.	Typ.	Max.	Notes
External NTC	R1	-	7.81kOhm (For reference, subject to actual)	-	When the R-NTC is reduced to R1, the external thermal protection is triggered and the output current gradually decreases
	R2	-	4.16kOhm (For reference, subject to actual)	-	When the R-NTC is reduced to R2, the output current is reduced to the programmed protection current value
	Protection Circuit	10% Ioset	60%Ioset	100%Io set	10%Ioset>Iomin(Default setting 60%)
		Iomin	60%Ioset	100%Io set	10%Ioset≤Iomin(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

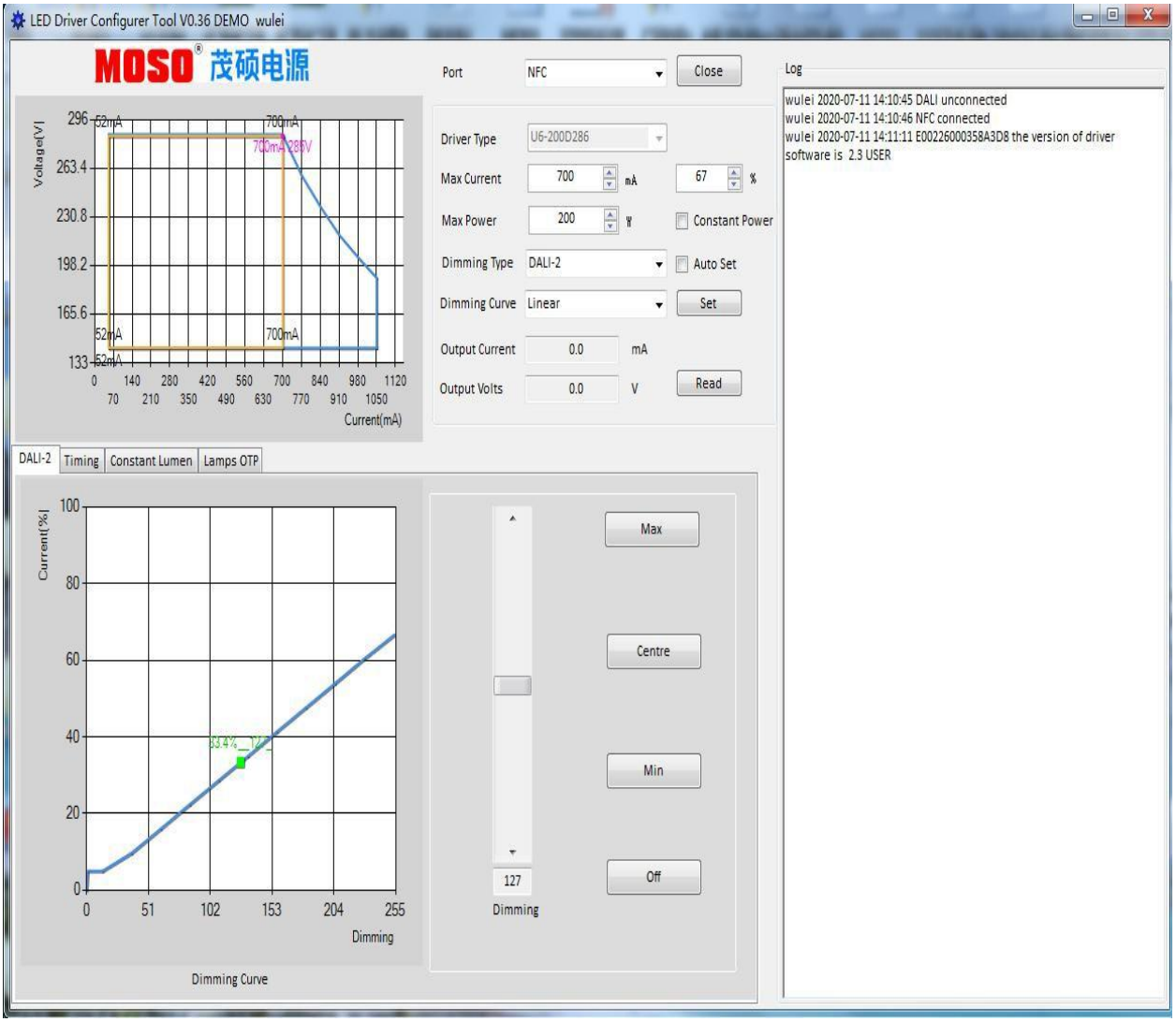


Note: Factory Default Output Logarithmic Curve

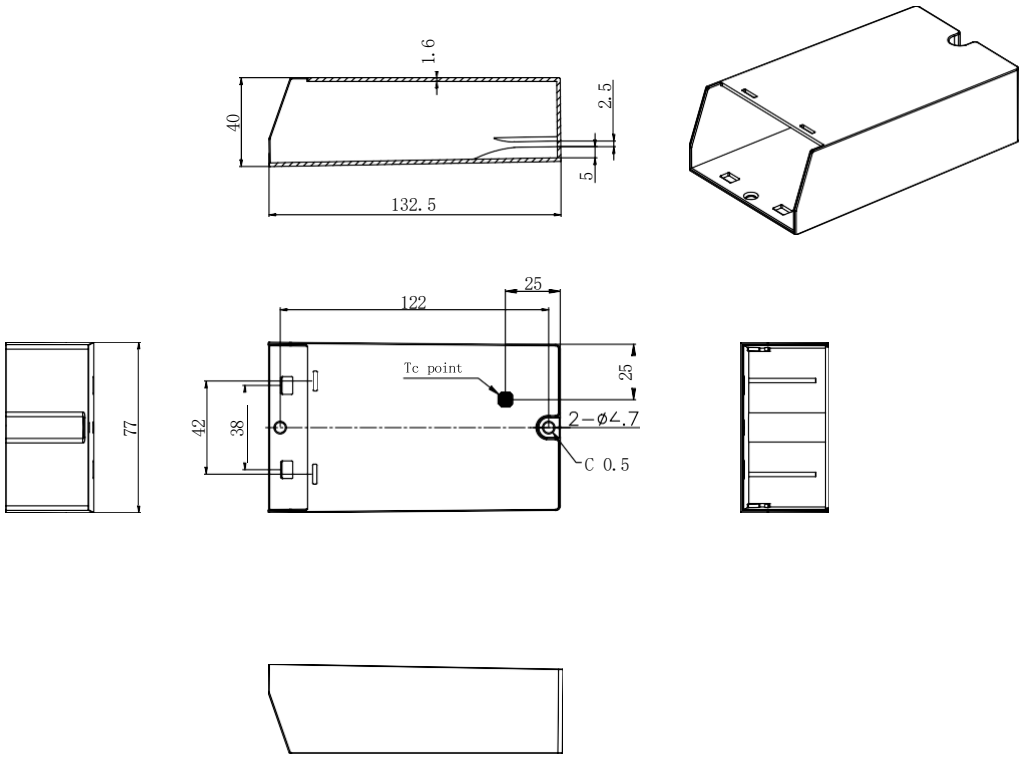
DIAGRAM OF UPPER COMPUTER CONNECTION：



Software programming interface



MECHANICAL OUTLINE



LABEL