

PXS SERIES LED DRIVERS

DL-1200V-X-PXS SPEC V1.3

Features

- Class I structure
- Input voltage: 200-480V ~ 50/60Hz
- Efficiency: 96% (Typ.)
- Constant power drive and constant current output control mode
- Metal shell structure, protection grade: IP67
- Lightning protection level: differential mode 6kV, common mode 10kV
- Function selection:

Isolated auxiliary power supply : 12V 300mA. Isolated dimming function: offline programming current regulation, programmable, compatible with analog three-in-one dimming circuit

- Lifetime design: 5 years



Applications

Road lighting, Industrial lighting, Venue lighting
Floodlight lighting, Landscape lighting, Plant lighting



Model list

Model NO.	Input voltage	Output power	Output voltage	The default current	Eff.(TYP.)	THD	PF
DL-1200V-400X-PXS	200-480V 50/60Hz	1200W	200-400Vdc	3A	>96%	≤10%	0.96

Note:

1. Test conditions of the above parameters: Ta=25°C, 380Vac input, full load operation for 30 minutes;
2. When the input is less than 200Vac, the user should take the initiative to reduce the output power to 600W and below; When the input is 200-480Vac, the rated power is 1200W, and special attention should be paid to the application; For details, see input voltage VS output power diagram.



Input characteristics

Parameter	Min	Typ.	Max	Note
Rated input voltage	200Vac	380Vac	480Vac	-
Input voltage range	180Vac	380Vac	528Vac	-
Rated frequency	47Hz	50/60Hz	63Hz	-
Power factor	-	0.96	-	Full load, rated input voltage
T.H.D.	-	7%	15%	100% load,380Vac Input
	-	-	20%	100% load,480Vac Input
Input current	-	-	7.5A	Full load,200Vac Input
Inrush current	-	-	120A	380Vac Input, cold start (25°C)

Output characteristic

Parameter	Min	Typ.	Max	Note
Rated current DL-1200V-400X-PXS	-	3A	-	-
Current regulation range DL-1200V-400X-PXS	2.4A	-	4.2A	-
Output voltage range DL-1200V-400X-PXS	200V	-	400V	-
Constant power voltage range(200-480Vac)	300V	-	400V	output voltage
Rated power(200-480Vac)	-	1200W	-	input voltage <200Vac, output power< 600W
No-load voltage DL-1200V-400X-PXS	-	-	470V	-
Efficiency@380Vac DL-1200V-400X-PXS	95.5%	96%	-	100% load@380Vac current output 3A(400V), 1200W
Output ripple current (Imax-Imin)/(Imax+Imin)	-	<5%	-	-
Current accuracy	-5%	-	+5%	100% load
Linear adjustment rate	-3%	-	+3%	100% load
Load adjustment rate	-5%	-	+5%	100% load
Starting time	-	<1000ms	-	Full load@380Vac

Note: The output current range be limited by the input and output voltage, please refer to "I-V WORKING AREA" for details.

Dimming characteristic

Dimming function		Min	Typ.	Max	Instructions
0-10V Dimming (Optional)	Safe applied voltage range	0V	-	12V	When the external voltage is $\geq$ 12V, the dimming will fail
	Dimming output range	0%	-	100%	-
	Rated dimming voltage range	0V	-	10V	-
PWM Dimming (Optional)	PWM high level	9.5V	-	10.5V	-
	PWM low level	0V	-	0.3V	-
	PWM frequency band	300Hz	-	2000Hz	-
	PWM duty cycle	0%	-	100%	Full power output at 100% duty cycle
Resistor Dimming (Optional)	External resistance value	0K Ω	-	100K Ω	-
	Dimming output range	0%	-	100%	-

Note:

1. dimming port output current: 100uA(typical value);
2. The maximum voltage of the dimming port is 12V. If the voltage of the external power supply exceeds 12V or the signal cable is reversed, the power supply may be damaged.
3. The dimming default setting of this product is 3-in-1 positive logic dimming (it can be set to timing dimming, 0-5V or other voltage dimming by programming software);
4. Set to positive/negative logic dimming function, applications in the constant power load voltage range can achieve 0V dimming off.
5. When setting dimming, the default output is 100% when the dimming light is suspended. Negative logic dimming can be turned off;
6. Negative logic dimmer for PWM dimming, including 0-10V dimming and resistance dimming mode.

Protection

Function	Function instructions
Input Overvoltage Protection	Off mode,when the input voltage is higher than 600AC, the power supply turns off the output. When the AC voltage returns to the normal voltage of 380VAC, the power supply returns to normal operation.
Over Load Protection	Hiccup restart mode,after abnormal load conditions are removed, the system automatically recovers
Over Voltage Protection	Hiccup mode, automatically recovered after abnormal conditions are removed
Over temperature protection	Self-restorable type,when the casing temperature is greater than 95°C, the output power decreases with the casing temperature increasing.

Note:

1. Unless otherwise specified, all specifications are measured at 380Vac (50Hz) input, rated load and ambient temperature of 25°C;
2. Including setting error, linear adjustment rate and load adjustment rate.

Environmental

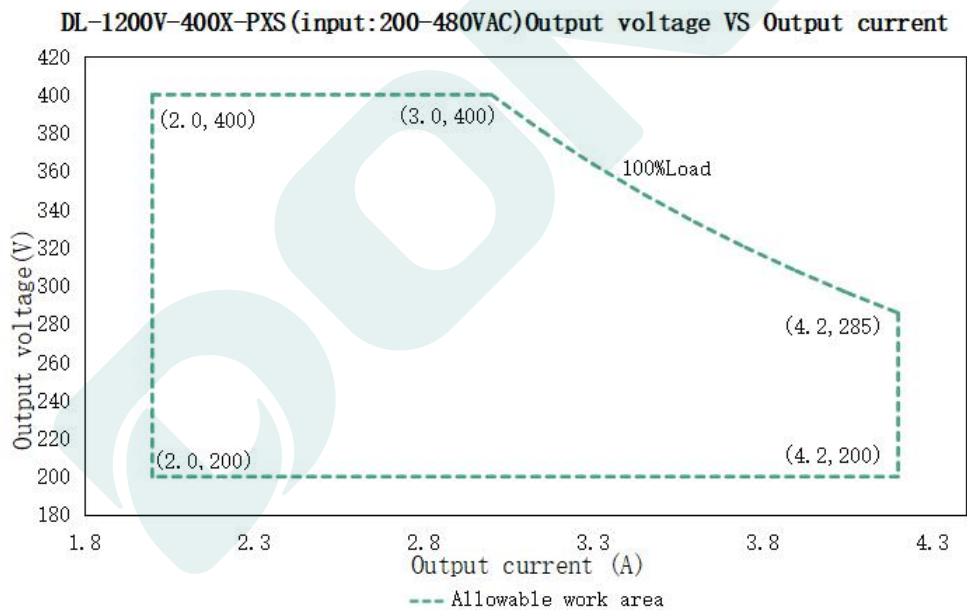
Environmental categories	Parameter
Working temperature	-40 ~ +55°C @200-480Vac (refer to "Life Curve ")
Max.Case Temp.	Tcase= +90°C
Working humidity	20 ~ 95% RH, non condensing
Storage temperature、humidity	-40~+80°C, 10 ~ 95% RH
Resistant to vibration	10 ~ 500Hz, 5G 12min/cycle, X, Y, Z axis 72 min each
MTBF	50Khrs min. MIL-HDBK-217F (Ta=25°C)
Lifetime	70000H@Tcase≤75°C,380Vac, 100% load,refer to the section "Housing Temperature and Life"

Safety and EMC

Safety categories	Standard
Safety	EN61347-1、EN61347-2-13、EN62384、IEC61347-1、IEC61347-2-13、AS/NZS61347.1、AS61347.2.13、EN 62384、UL8750;
EMC	EN IEC 55015、EN IEC 61000-3-2、EN 61000-3-3
Surge level	Differential mode L/N ± 6 KV (2 Ω), common mode L/N-ground ± 10 KV (12 Ω) Refer to IEC61000-4-5 2014
High-pot test	I/P-PE : 2.0KVac O/P-PE : 2.0KVac I/P-DIM : 2.0KVac O/P-DIM : 2.0KVac
Insulation impedance	I/P-PE:100M Ω / 500VDC; O/P-PE:100M Ω / 500VDC / 25°C/ 70% RH
Leakage current	<0.75mA@230Vac

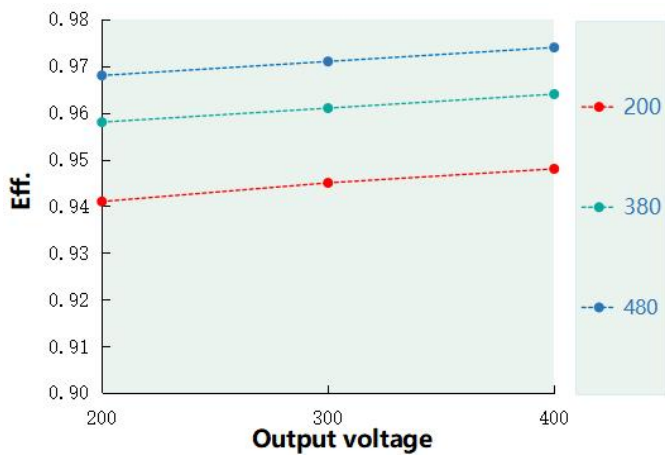
Note:The driver is considered as a component that will be operated in combination with the final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.

I-V Working area

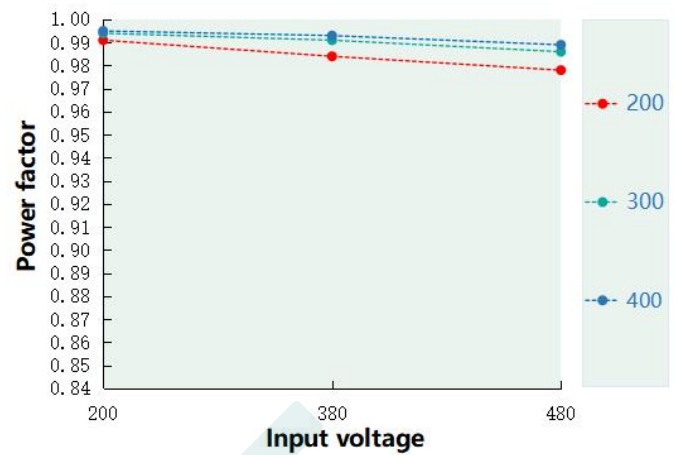


Load	Output								
Load working voltage	200V	250V	285V	300V	320V	340V	360V	380V	400V
Power current Io_ MAX	4.2A	4.2A	4.2A	4.0A	3.75A	3.52A	3.33A	3.15A	3A
Power supply Po_ MAX	840W	1050W	1197W	1200W	1200W	1200W	1200W	1200W	1200W

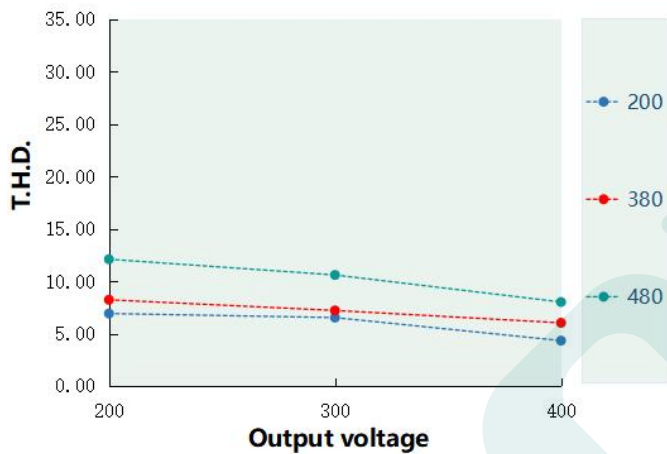
Efficiency VS output voltage DL-1200V-400X-PXS



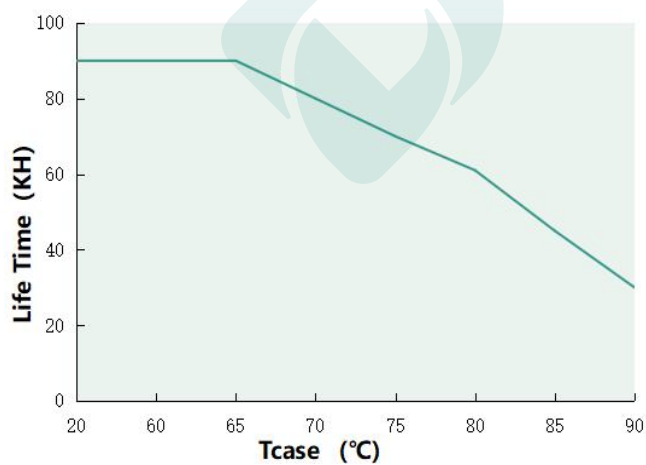
Power factor VS input voltage DL-1200V-400X-PXS



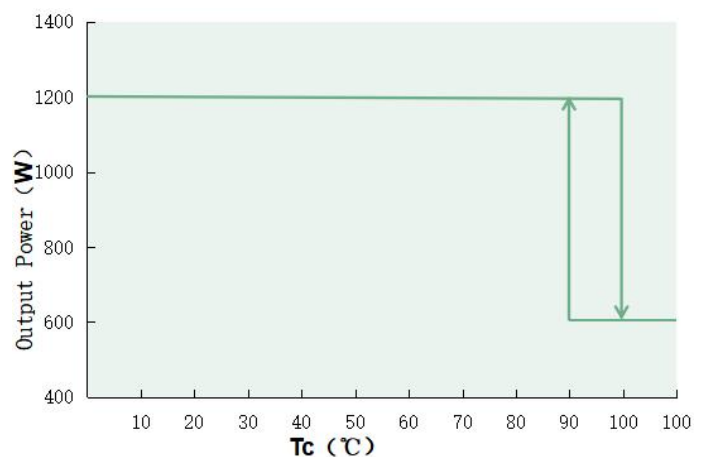
T.H.D. VS output voltage DL-1200V-400X-PXS



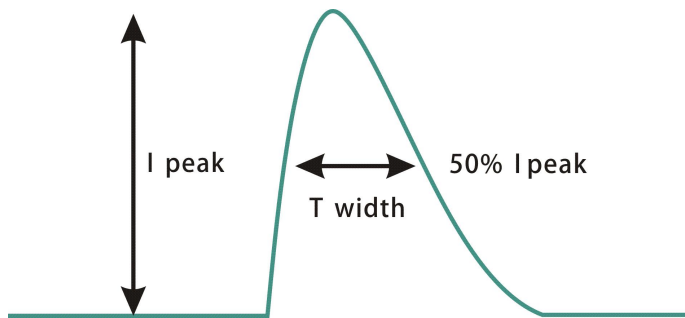
Tc VS Lifetime DL-1200V-400X-PXS



Output power VS Tcase DL-1200V-400X-PXS

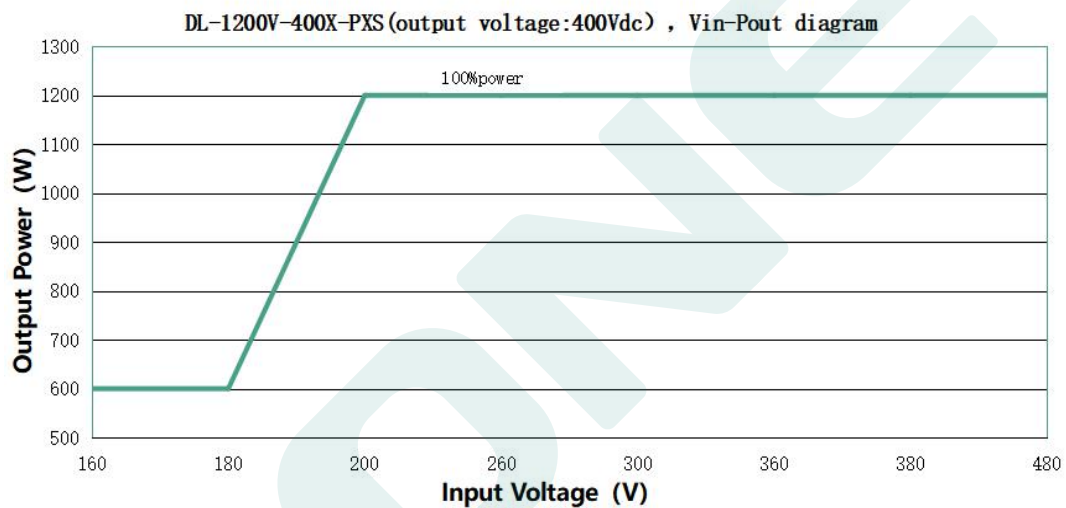


Input Inrush current (DL-1200V-400X-PXS)



Input voltage	Peak current	T (@50% Peak current)
200Vac	95A	800us
380Vac	100A	630us
480Vac	120A	618us

Output power VS input voltage (derating curve)



DL-1200V-400X-PXS(When the output voltage is 400Vdc, the rated output current and output power corresponding to different input voltages)

Input Voltage	180Vac	200Vac	240Vac	300Vac	340Vac	360Vac	380Vac	480Vac
I _{out}	1.5A	3A	3A	3A	3A	3A	3A	3A
P _{out}	600W	1200W	1200W	1200W	1200W	1200W	1200W	1200W

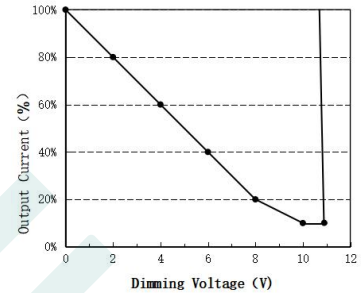
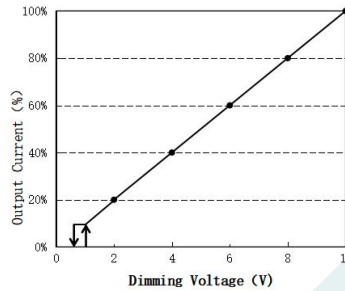
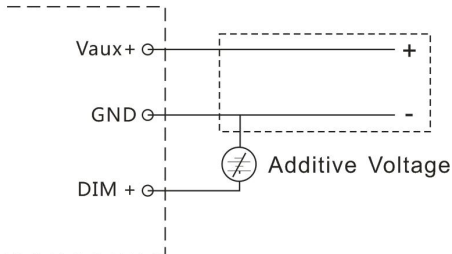
Note: When the input voltage is lower than 200Vac, the user must actively derate the output power to 600W or less.

Dimming operation

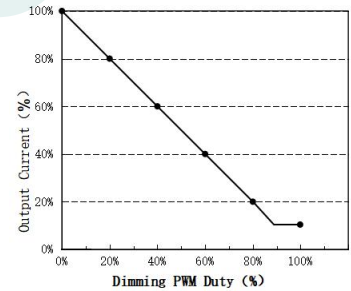
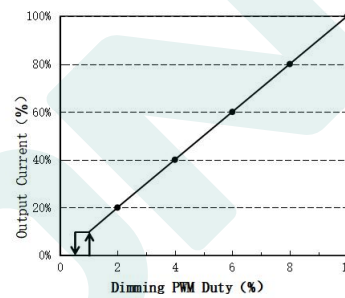
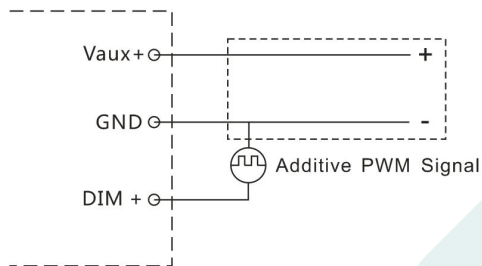
※ Three-in-one dimming function

- A. Connect a resistor 0-100K or 0-10V DC voltage or 10V PWM signal between DIM+ and GND to adjust the output current.
B. Output current of dimming port: 100uA (typical value).

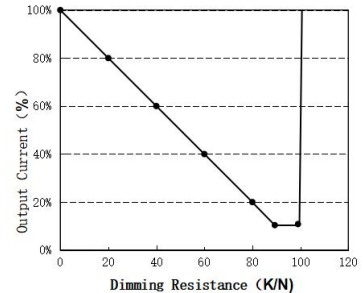
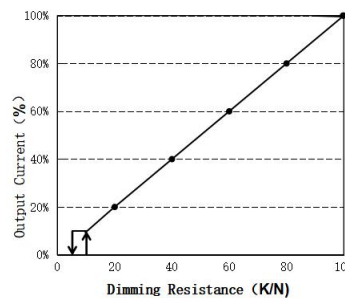
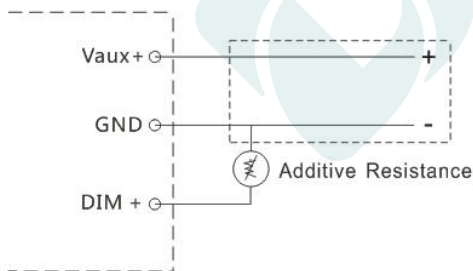
⊗ Applied voltage of 0-10V:



⊗ Applying additive 10V PWM signal (Frequency range: 300Hz-2KHz) :



⊗ Applied an additional 0-100K resistor:



Note:

1. Positive and negative logic dimming can be set through the program.
2. 0-10V dimming includes positive and negative logic, which is also for PWM dimming.
3. Dimming off applies to positive and negative logic. For other requirements, contact technical support.



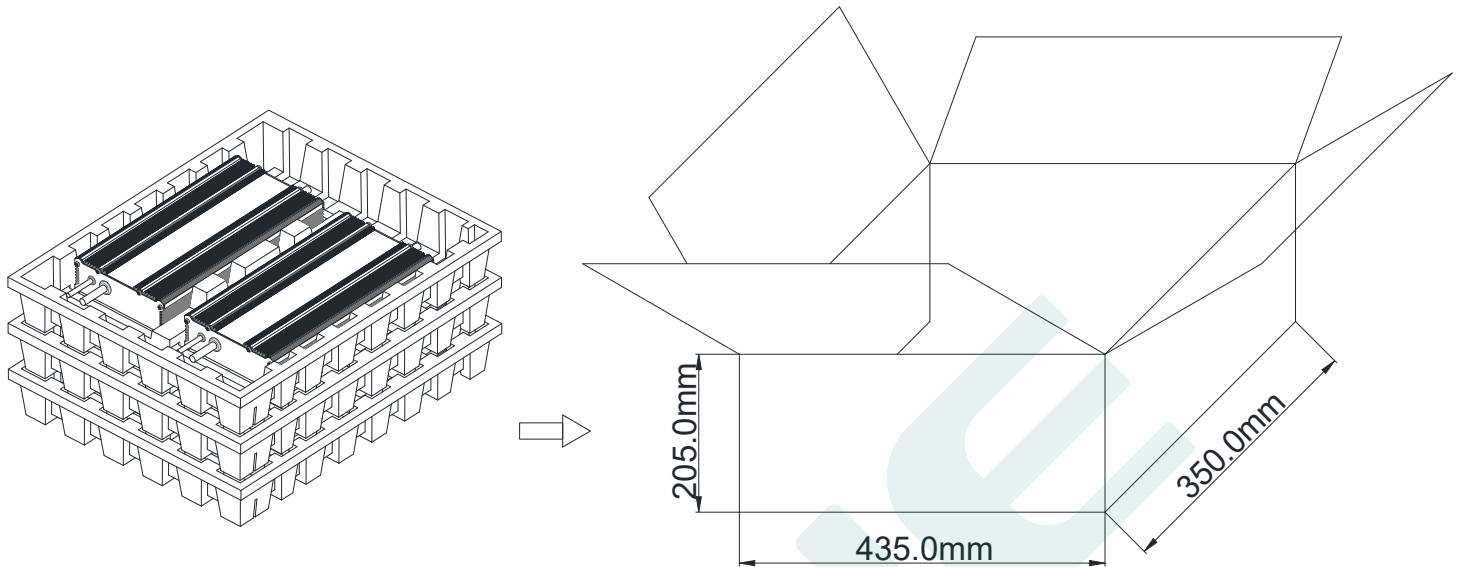
Caution:

1. It is recommended to design LED beads in series first and then in parallel.
2. There is no excessive heat-dissipating copper foil left on the aluminum substrate.
3. The creepage distance of the aluminum substrate wiring > 5.6mm.
4. The creepage distance between LED+ and LED- on the aluminum substrate > 2.5mm.
5. The insulation level of the LED lamp board should meet the requirements of reliability design. The recommended withstand voltage between the LED lamp beads and the aluminum substrate is 100% full inspection > 3.5KVAC.
6. The final right of interpretation of the parameters above belongs to Guangdong Done Power Technology Co., Ltd.



Packaging

Packaging (mm) L435*W350*H205



Note: One Carton 3 layers and 2 pcs each layer, total 6 pcs/carton.

Note:

1. According to the certificate obtained by the LED DRIVER, the LED DRIVER with the English label is sold in Europe, America and India.
2. The LED DRIVER with Chinese label is only used for China market.



Version

DATE	DESCRIPTION	REV.	CHECK
2025.5.6	Initial version.	V1.0	
2025.5.19	Add the Input Inrush current table; modify THD on page 2; modify High-pot test section on page 6	V1.1	
2025.6.4	Modify efficiency and THD.	V1.2	
2025.7.28	Add caution on page 10	V1.3	

MANUFACTRUER		
EDIT	CHECK	APPROVE