

MXS SERIES LED DRIVERS

DL-1200W-V220X-MXS SPEC
V1.0

Features

- Class I structure
- Input voltage: 120-277 V ~ 50/60 Hz
- 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 15kV
- Function selection:

Isolated 3 in 1 dimming

Auxiliary source: 12V/250mA

- Lifetime design: 5years

Applications

Road lighting、Industrial lighting、Venue lighting

Floodlight lighting、Landscape lighting 、Plant lighting



CLASS P

CB

Model list

Model NO.	Input voltage	Output power	Output voltage	The default current	Eff.	T.H.D	PF
DL-1200W-V220X-MXS	120-277V 50/60Hz	1200W	150-220Vdc	6.75A	≥96%	≤7%	≥0.97

Note :

1. Test conditions of the above parameters: Ta=25℃, 230Vac input, full load operation for 30 minutes;
2. When the input is less than 108Vac,Users must reduce the output power to 50% ± 10%.When the input 120-277VAC, rated power 1200W.Please refer to “THE OUTPUT POWER VS INPUT VOLTAGE” curve chart for details.



Input characteristics

Parameter	Min	Typ.	Max	Note
Rated input voltage	120Vac	230Vac	277Vac	
Input voltage range	90Vac		305Vac	
Rated frequency	47Hz	50/60Hz	63Hz	
Power factor	-	0.97	-	@230Vac full load
T.H.D.	-	-	7%	@230Vac full load
Input current	-	-	11A	@120Vac full load
Inrush current	-	-	70A	230Vac, cold start (25℃)

Output characteristic

Parameter	Min	Typ.	Max	Note
Rated current DL-1200W-V220X-MXS	-	5.45A	-	
Output current range DL-1200W-V220X-MXS	4A	-	7.5A	
Output voltage range DL-1200W-V220X-MXS	150V	-	220V	
Rated power(90-120Vac)	-	600W		Users must reduce the output power to 50% ± 10%, when the input voltage is less than 108Vac
Rated power(120-277Vac)	-	1200W	-	
No-load voltage DL-1200W-V220X-MXS	-	-	230V	
Efficiency@120Vac DL-1200W-V220X-MXS	-	94.5%	-	Output current 5.45A

Output characteristic

Parameter	Min	Typ.	Max	Note
Efficiency@230Vac DL-1200W-V220X-MXS	-	96%	-	Output current 5.45A
Accuracy of output current	-3%	-	+3%	
output ripple current	-	5% maximum current	-	100% load 20MHZ band Wide ripple current = RMS / The average
Line regulation	-3%	-	+3%	
Load regulation	-3%	-	+3%	
Starting time		- -	3000ms 2000ms	Full load@120Vac Full load@230Vac
12V output voltage	10.8 V	12V	13.2V	
12V output current	0 mA	-	250 mA	The reference place is Dim-
12V output line transient peak current @6W	-	-	500 mA	In a 5.0ms cycle, the maximum duration of the maximum peak current of 500mA is 2ms, and the average value must not exceed 250mA

Note: The output current range is 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	It can be set to negative dimming mode through program setting
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	-	99%	Output full power at 99% duty cycle
Resistor Dimming (Optional)	External resistance value	0K Ω	-	100K Ω	-
	Dimming output range	0	-	100%	-

Note:

1. Output current of dimming port: 108uA (typical value);
2. The maximum withstand voltage of the dimming port is 12V. If the external power supply voltage exceeds 12V or the signal line is reversely connected, the power supply will be damaged.

Protection

Function	Function instructions
Output overload protection	Protection mode:hiccup mode,recovers automatically after fault condition is removed.
Output short circuit protection	Hiccup mode:recovers automatically after fault condition is removed
Over temperature protection	Self-recovery type: when the housing temperature is greater than 90℃, the output power decreases to 50%±10%.
Output over-voltage protection	Protection mode: The output voltage is controlled by a dual loop. When the feedback fails on one way, the output voltage of the other path can still be controlled below 230V±2V.

- Note:**
1. Unless otherwise specified, all specifications and parameters shall be measured at the conditions of 230Vac (50Hz), rated load and 25℃ of ambient temperature;
 2. Including setting error, line regulation and load regulation.

Environmental

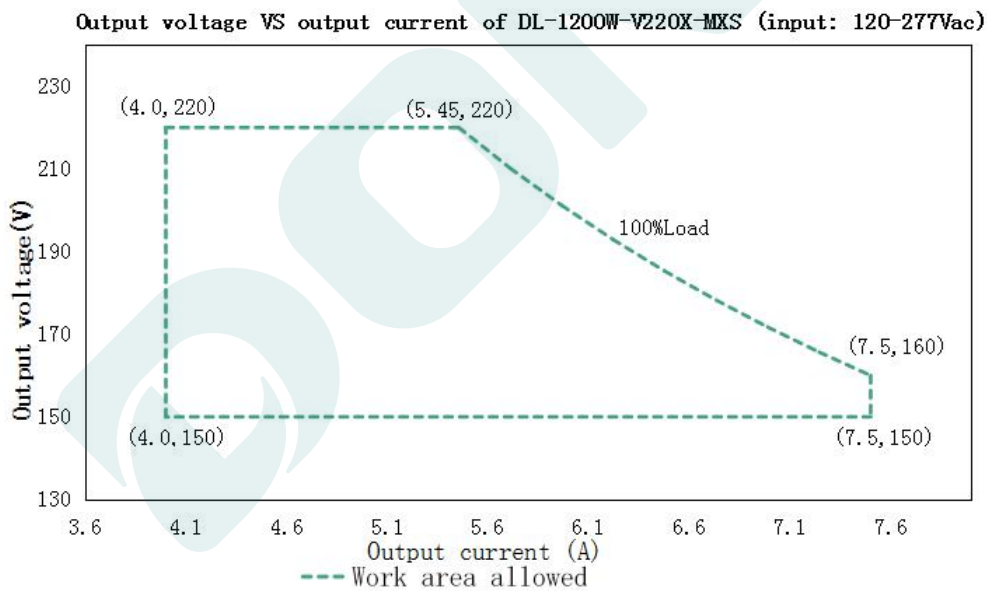
Environmental categories	Parameter
Working temperature	-40 ~ +55℃@200-277Vac, -40 ~ +40℃ @120-200Vac (refer to "Life Curve ")
Working humidity	20 ~ 95% RH, non condensing
Maximum Tc temperature	Tc=+90℃
Storage temperature、humidity	-40~+85℃, 10 ~ 95% RH
Resistant to vibration	10 ~ 720Hz, 5G 12 min/cycle, X, Y, Z axis 72 min each
MTBF	70Khrs min. MIL-HDBK-217F (Ta=25℃)
Lifetime	70000 h @ housing temperature ≤75 ° c, 230Vac, 80% load, see section "housing temperature and life"

Safety and EMC

Safety categories	Standard
Safety	GB19510.1、GB19510.14、EN61347-1、EN61347-2-13、IEC61347-1、IEC61347-2-13、AS/NZS61347.1、AS61347.2.13、EN 62384、UL8750；
EMC	EN 55015、EN 61547、EN 61000-3-2、GB/T 17743、GB17625.1、EN 61000-3-3 FCC Part 15
Surge protection	Differential mode L-N ±6KV (2 ohm) ,common mode L, N-PE± 15 KV (12 ohm)；Refer to IEC61000-4-5 2014 Criterion B
High-pot test	I/P-O/P:3.75KVac I/P-PE :1.5KVac O/P-PE : 0.5KVac I/P-DIM:1.5KVac O/P-DIM:1.5KVac
Insulation impedance	I/P-PE:100MΩ / 500VDC； I/P-O/P:100MΩ / 500VDC / 25℃/ 70% RH
Leakage current	<0.7mA@230Vac

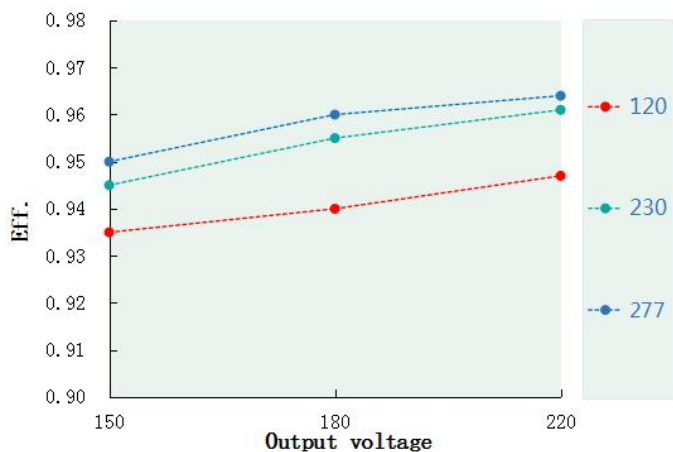
Note: 1.The driver is considered as a component that will be operated in combination with the final equipment. Since EMC performance will be affected by the complete installation,the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.

I-V Working area

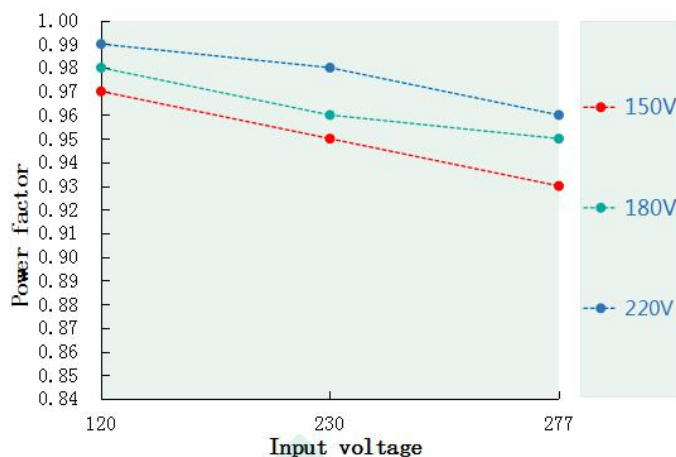


Load	Output							
Load working Voltage	150	160	170	180V	190V	200V	210V	220V
Io_MAX	7.5A	7.5A	7.06	6.67A	6.32A	6.0A	5.71A	5.45A
Po_MAX	1125W	1200W	1200W	1200W	1200W	1200W	1200W	1200W

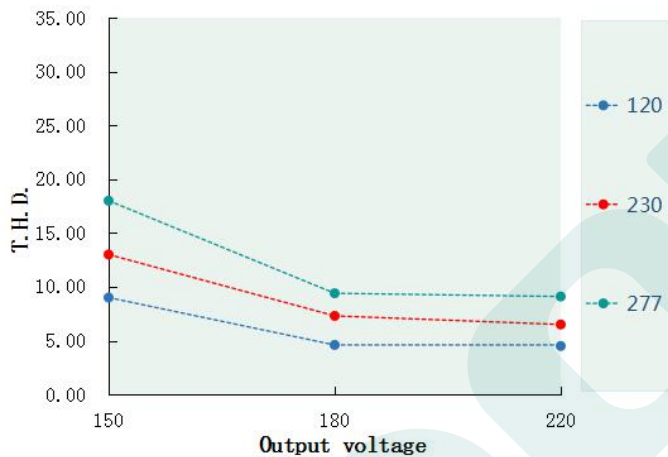
Eff. VS Output voltage(DL-1200W-V220X-MXS)



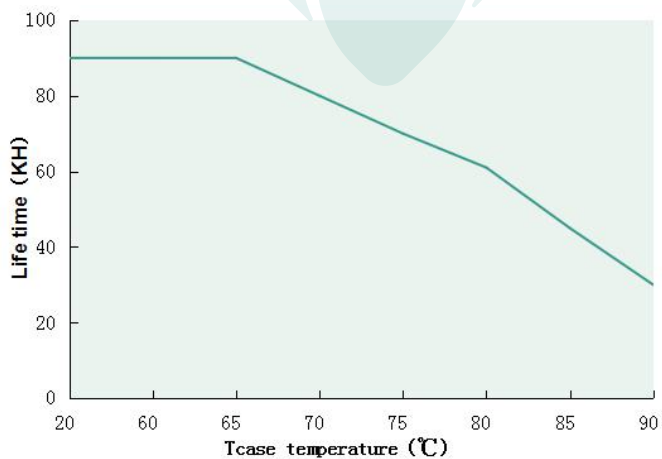
Power factor VS Input voltage(DL-1200W-V220X-MXS)



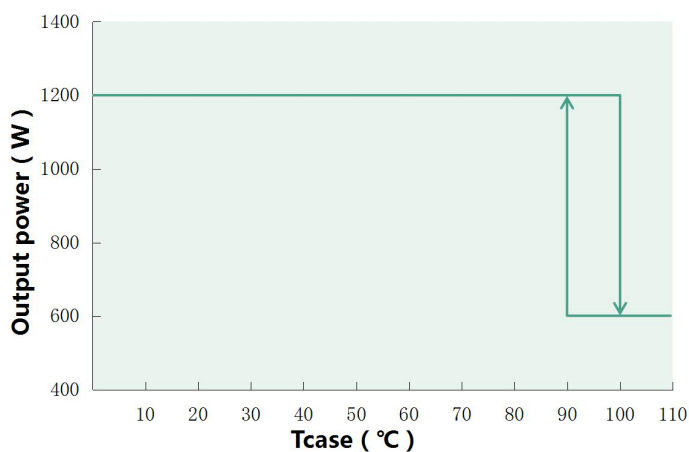
T.H.D. VS Output voltage(DL-1200W-V220X-MXS)



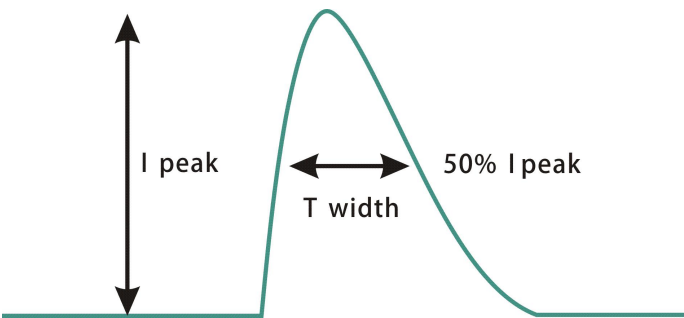
Tcase VS Lifetime(DL-1200W-V220X-MXS)



Output power VS Tcase (DL-1200W-V220X-MXS)

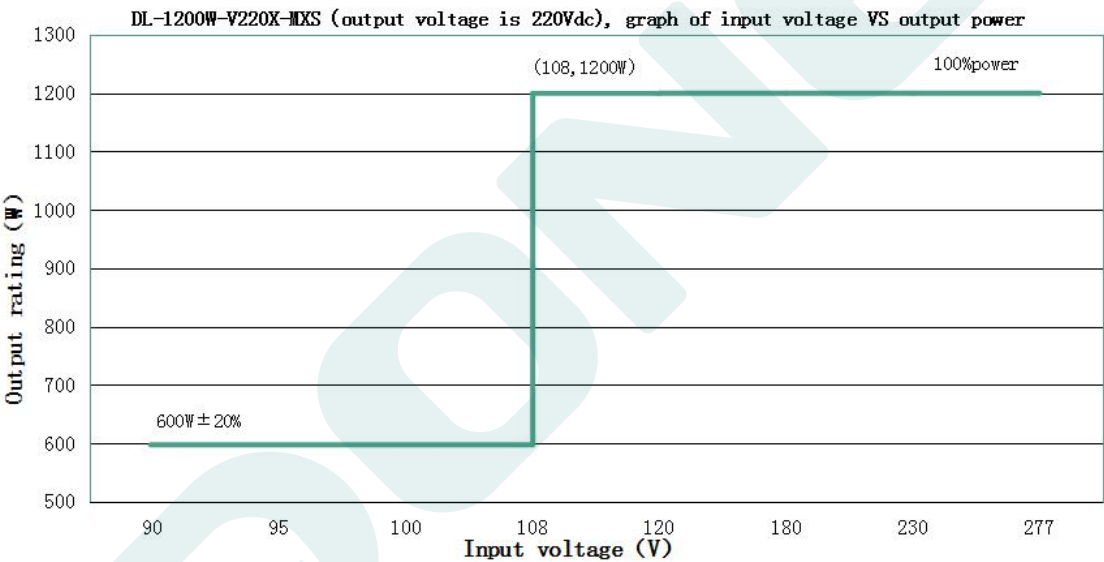


Inrush Current(DL-1200W-V220X-MXS)



Input voltage	Peak current	T(@50% Peak current)
120Vac	15A	2000us
230Vac	33.3A	1600us
277Vac	40A	5000us

Output power VS Input voltage



DL-1200W-V220X-MXS (When the output voltage is 220Vdc, the rated output current value and output power corresponding to different input voltage)								
Input Voltage	90Vac	96Vac	100Vac	106Vac	120Vac	180Vac	230Vac	277Vac
Iout	2.73A	2.73A	2.73A	2.73A	5.45A	5.45A	5.45A	5.45A
Pout	600W	600W	600W	600W	1200W	1200W	1200W	1200W

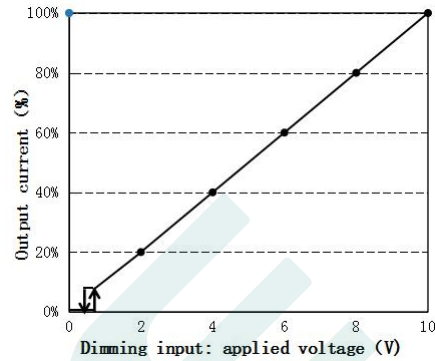
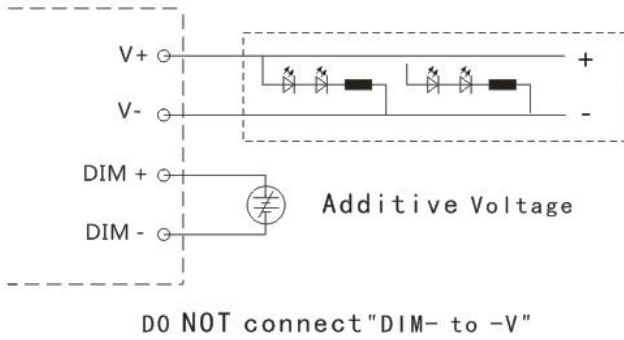
Note: When the input voltage is 90-105Vac,Users must reduce the output power to 50% ± 10%.

Dimming operation

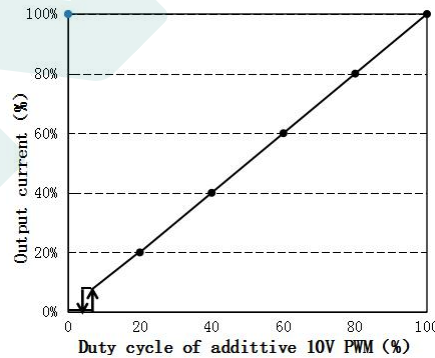
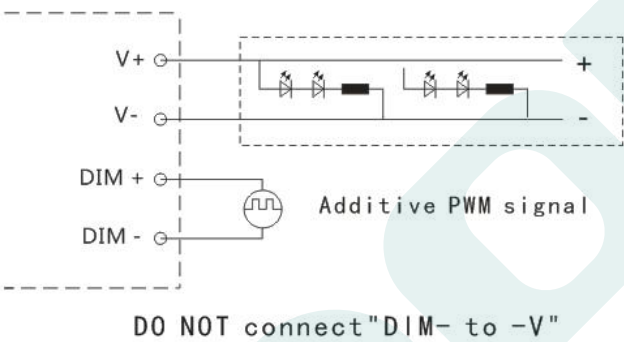
※ Three-in-one dimming function (X version)

- A. connect a resistor 0-100K or 0-10V DC voltage or 10V PWM signal between DIM+ and DIM- to adjust the output current.
B. output current of dimming port: 108uA (typical value). (to be determined!)

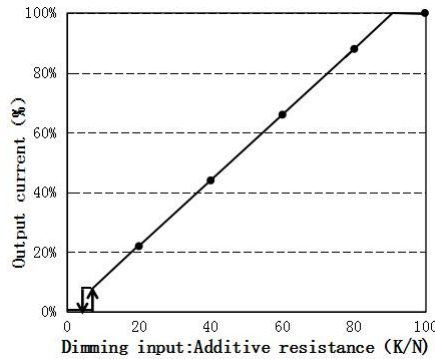
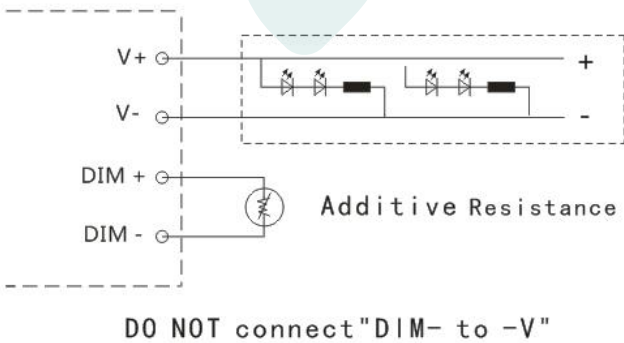
◎ With an applied voltage of 0-10V:



◎ Applying additive 10V PWM signal (Frequency range: 300Hz-2K Hz) :



◎ With an additional 0-100K resistor:



Mechanical specification

Size (mm) L310mm*W130mm*H45mm

DL-1200W-V220X-MXS

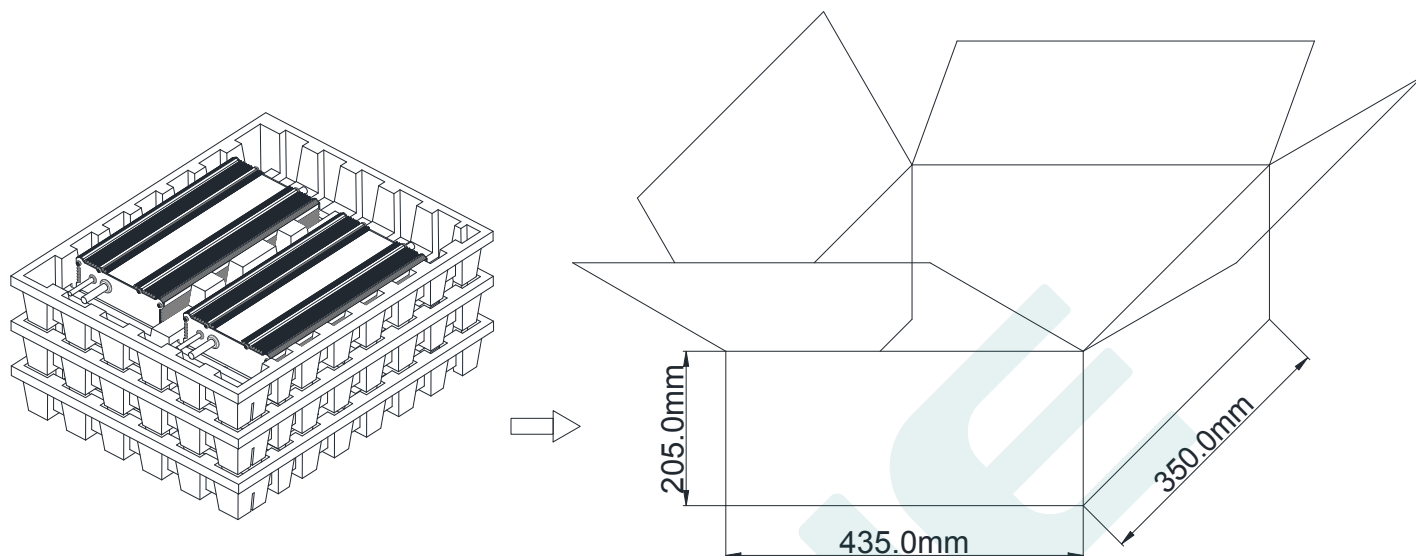


Weight

Weight 3480 g

Packaging

Packaging (mm) L435*W350*H205



Note: One Carton 3 layers and 2 pcs each layer, total 6pcs/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
2023.10.06	Initial version.	V1.0	

MANUFACTRUER		
EDIT	CHECK	APPROVE