MXS SERIES LED

DL-1000H-X/J-MXS SPEC V1.0

GUANGDONG DONE POWER TECHNOLOGY CO.,LTD

Features

- Class I type for insulation(pending)
- Input voltage range: 200-277 V ~ 50/60 Hz
- Efficiency : 95.5%(Typ.)
- Constant current output ,with power limitation for control mode
- Surge level: differential mode :6kV, common mode :15kV
- Metal case, protection grade against water and dust: IP67(X version), IP20(J version)
- Function selection:

  Isolated 3 in 1 dimming

  Auxiliary source: 12V/250mA
- Lifetime design:5years

Applications

Street lighting、Industrial lighting、Venue lighting

Floodlight lighting、Landscape lighting 、Plant lighting

CB SAA

E479166

Model list

Model NO.	Input voltage	Output power	Output voltage	The default current	Eff.	THD.	Power factor
DL-1000H-56X/J-MXS	200-277V 50/60Hz	1000W	36-56Vdc	18A	≥95.5%	≤10%	≥0.97

Note:

1. Test conditions: Ta=25℃, under 230Vac input,after running for 30 minutes with full load.
2. When the input is below 180Vac-10%, the output is automatically turned off; When the input 200-277VAC,rated power 1000W. Please refer to "THE OUTPUT POWER VS INPUT VOLTAGE" curve chart for details.

Input characteristics

Parameter	Min	Typ.	Max	remark
Rated input voltage	200Vac	230Vac	277Vac	When the input is below 180Vac-10 %, the output is automatically tu rned off;
Input voltage range	180Vac	-	305Vac	
Rated frequency range	47Hz	50/60Hz	63Hz	
Power factor	-	0.97	-	@230Vac input ,with full load
T.H.D.	-	-	10%	@230Vac input ,with full load
Input current	-	-	5.5A	@200Vac input ,with full load
Inrush current	-	-	50A	230Vac, cold start (25℃)
Stand-by power consumption	-	-	0.49W(The regular version doesn't have th is function.)	Standby power <0.5W is an optional version, which will increase the cost. The regular version of the high-pow er power supply has no standby pow er consumption <0.5W requirements

Output characteristics

Parameter	Min	Typ.	Max	remark
Rated current DL-1000H-56X/J-MXS	-	17.85A	-	
Output current range DL-1000H-56X/J-MXS	14.3A	-	21.75A（±3%）	
Output voltage range DL-1000H-56X/J-MXS	36V	-	56V	Constant power voltage range: 46-56V
Rated power(200-277Vac)	-	1000W	-	
No-load voltage DL-1000H-56X/J-MXS	-	-	60V	
Efficiency@200Vac DL-1000H-56X/J-MXS	-	94.5%	-	full load @200 Vac Output current 17.85A, 1000W
Efficiency@230Vac DL-1000H-56X/J-MXS	-	95.5%	-	full load @ 230 vac Output current 17.85A, 1000W

Output characteristics

Parameter	Min	Typ.	Max	Note
Current Accuracy	-3%	-	-3%	full load
Output ripple current	-	5% maximum current	-	100% load 20MHZ band Wide ripple current = RMS /Mean value
Line regulation	-3%	-	+3%	full load
Load regulation	-3%	-	+3%	full load
Starting time	-	-	3000ms 2500ms	Full load @120Vac Full load @230Vac
12V output line voltage	10.8V	12V	13.5V	
12V output line current	0mA	-	250mA	The reference is "12-"
Transient peak current of 12V output line @6W	-	-	500mA	In the 5.0ms cycle, the maximum duration of the maximum peak current of 500mA is 2ms, and the average value cannot exceed 250mA

Note: The output current range is limited by the input and output voltages, see the I-V working area for details.

Dimming characteristics

Dimming function		Min	Typ.	Max	Instructions
0-10V Dimming (Optional)	Safe operation voltage range	0V	-	12V	Damage may occur if the external voltage is greater than or equal to 12V
	Dimming output range	10%	-	100%	-
	Rated operation voltage range	0V	-	10V	Negative dimming mode can be set through the program setting
PWM Dimming (Optional)	PWM high level	9.5V	-	10.5V	-
	PWM low level	0V	-	0.3V	-
	Rated dimming frequency	300Hz	-	2000Hz	-
	PWM duty cycle	10%	-	99%	Full power output at 99% duty cycle
Resistor Dimming (Optional)	Rated external resistance value	10KΩ	-	100KΩ	-
	Dimming output range	10%	-	100%	-

Note:

1. Dimming port output current: 108uA(typical value).
2. The dimmer port can withstand a maximum voltage of 12V. If the voltage of the external power supply exceeds 12V, it is easy to cause damage to the power supply.

Protection

Protection	description
Input undervoltage protection	When the input is below 180Vac(-10%), the output is automatically turned off;
Over Load Protection	Protection mode: hiccup restart mode. After abnormal load conditions are removed, the system automatically recovers
Output short circuit protection	Hiccup mode, automatically recovered after abnormal conditions are removed
Over temperature protection	Self-recovery type; When the casing temperature is greater than 90℃, the output power decreases with the casing temperature increasing.
Output Over-voltage protection	Protection mode: The output voltage adopts dual loop control, when one feedback fails, the other can still control the output voltage below 60V

Note:

1. Unless otherwise specified, all parameters should be measured at the condition of 230Vac (50Hz) input ,with rated load ,and ambient temperature of 25℃.
2. Includes setting error, linear adjustment rate and load adjustment rate.

Environmental

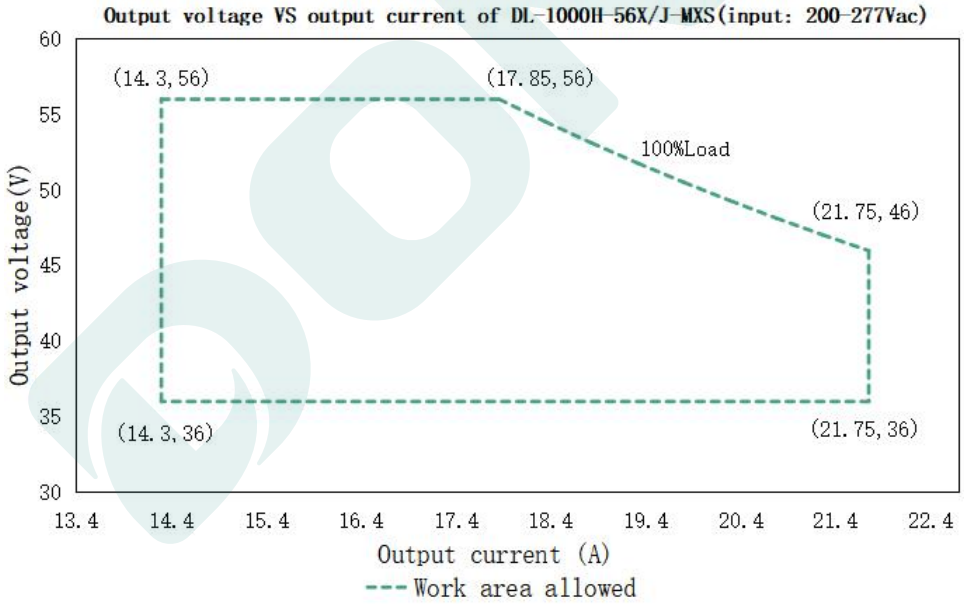
Environmental categories	Parameter
Working temperature	-40 ~ +50 ℃@ 200-277VAC, -40 ~ +45℃@180-200Vac When the input is below 180Vac(-10%~-15%), the output is automatically turned off;
Safety shell temperature	-40 ~ 90℃
Working humidity	20 ~ 95% RH
Storage temperature、humidity	-40~+80℃, 10 ~ 95% RH
Resistant to vibration	10 ~ 500Hz, 5G 12 min/cycle, X, Y, Z axis 72 min each
MTBF	50Khrs min. MIL-HDBK-217F (Ta=25℃)
Lifetime	50000 h @ housing temperature≤75℃, 230Vac, 100% load, see section "housing temperature and life"

Safety and EMC

Safety categories	Standard
Safety	EN61347-1、EN61347-2-13、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 leve	Differential mode L-N ±6KV (2 ohm) ,common mode L, N-PE± 15KV (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; O/P-P/E:100MΩ / 500VDC / 25℃/ 70% RH
Leakage current	<0.7mA@277Vac

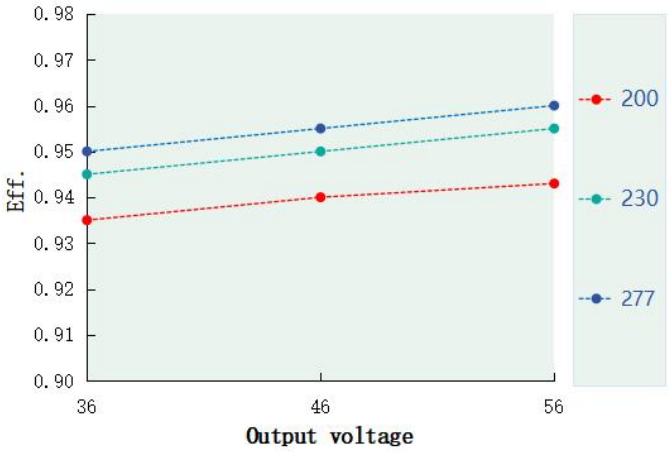
Note: Attention!As a componet of the whole, the EMC performance of the final product is not only decided by the driver, even if the driver is well-designed and fulfil all the required compliance. The final equipment manufacturers must re-qualify EMC Directive on the complete product.

I-V Working area

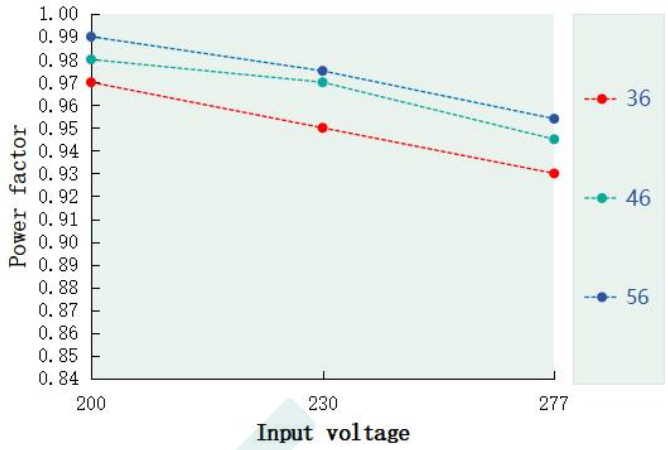


Load	Output							
Load working Voltage	36V	39V	42V	46V	48V	51V	53V	56V
Io_MAX	21.75A	21.75A	21.75A	21.74A	20.83A	19.6A	18.87A	17.85A
Po_MAX	783W	848.25W	913.5W	1000W	1000W	1000W	1000W	1000W

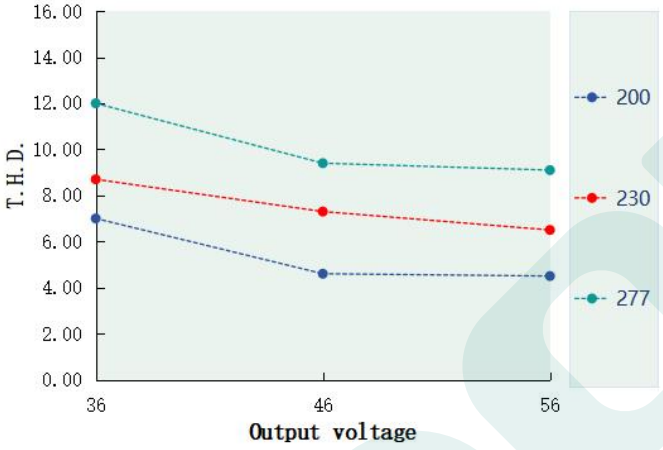
Eff. VS Output voltage(DL1000H-56X/J-MXS)



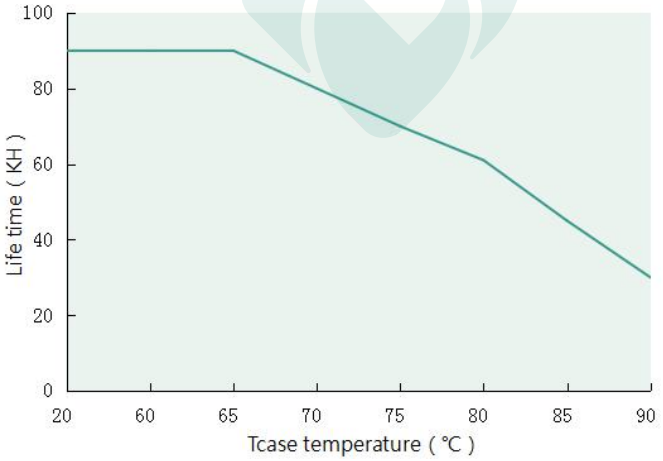
Power factor VS Input voltage(DL1000H-56X/J-MXS)



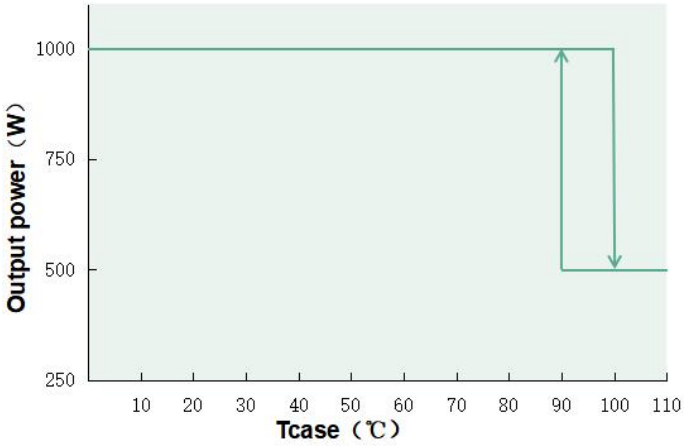
T.H.D. VS Output power(DL1000H-56X/J-MXS)



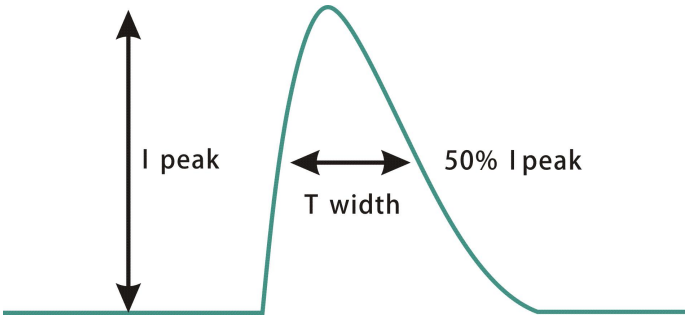
Tcase VS Lifetime(DL1000H-56X/J-MXS)



Output power VS Tcase (DL1000H-56X/J-MXS)

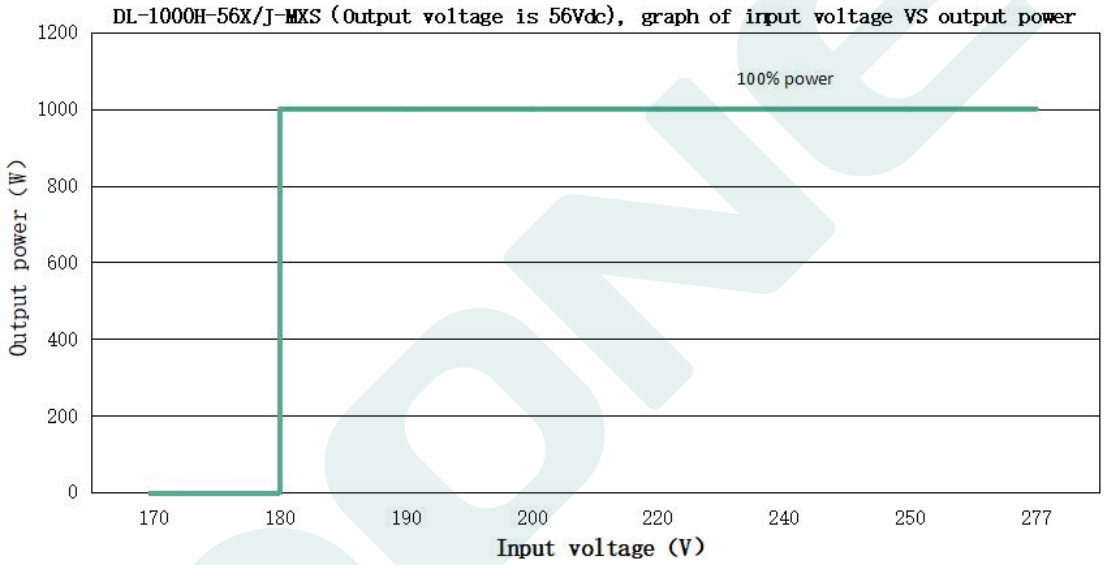


Input surge current(DL1000H-56X/J-MXS)



Input voltage	Peak current	T(@50% Peak current)
200Vac	45A	2000us
230Vac	50A	1600us
277Vac	75A	5000us

Output power VS Input voltage



DL-1000H-56X/J-MXS (For output 56Vdc, the rated output current & power under different input voltage)								
Input Voltage	170Vac	180Vac	190Vac	200Vac	220Vac	240Vac	250Vac	277Vac
Iout	0A	17.85A	17.85A	17.85A	17.85A	17.85A	17.85A	17.85A
Pout	0W	1000W	1000W	1000W	1000W	1000W	1000W	1000W

Note: When the input is below 180Vac(-10%), the output is automatically turned off.

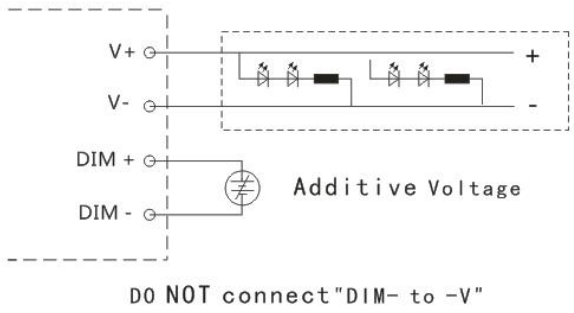
Dimming function

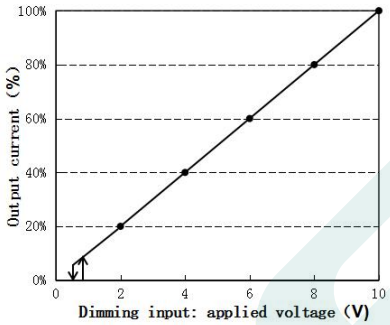
※ Three-in-one dimming function

A. To adjust the output current, applying one of the three methods between DIM+ and DIM- : a resistor of 0-100K, or any voltage of 0-10V , or a PWM signal with amplitude of 10V.

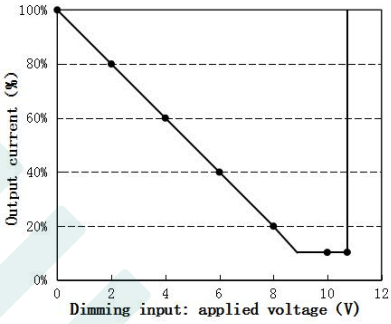
B. output current of dimming port: 100uA (typical value).

◎ **With 0-10V dimming voltage(for both logic,negative and positive):**



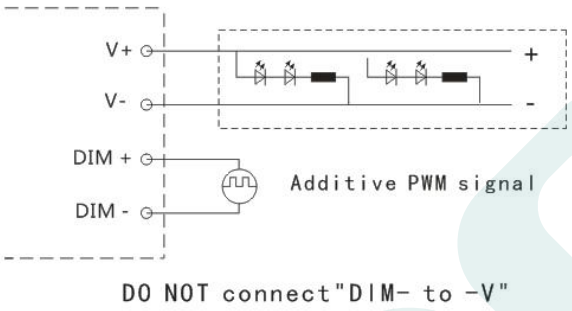


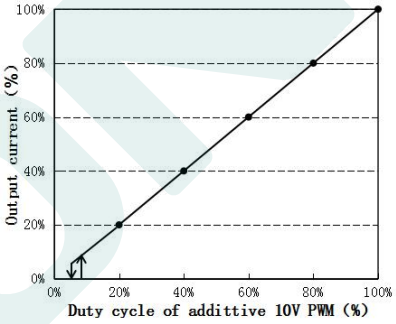
Positive logic dimming curve



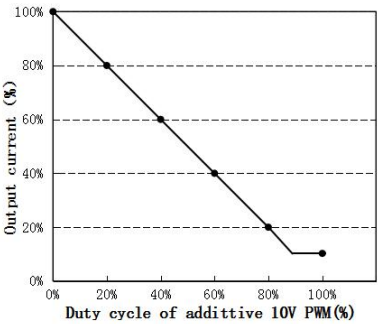
Negative logic dimming curve

◎ **With 10V PWM signal (Frequency range: 300Hz-2K Hz) :**



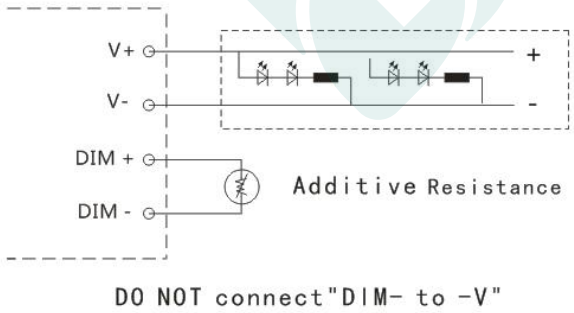


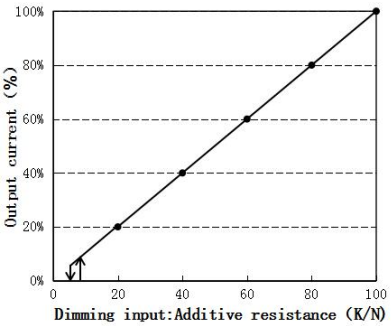
Positive logic dimming curve



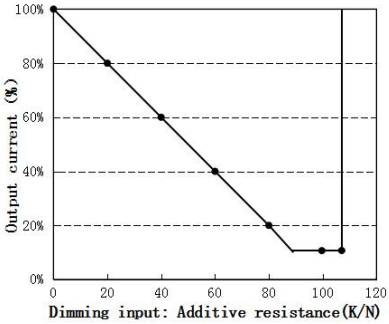
Negative logic dimming curve

◎ **With an additional 0-100K resistor:**





Positive logic dimming curve



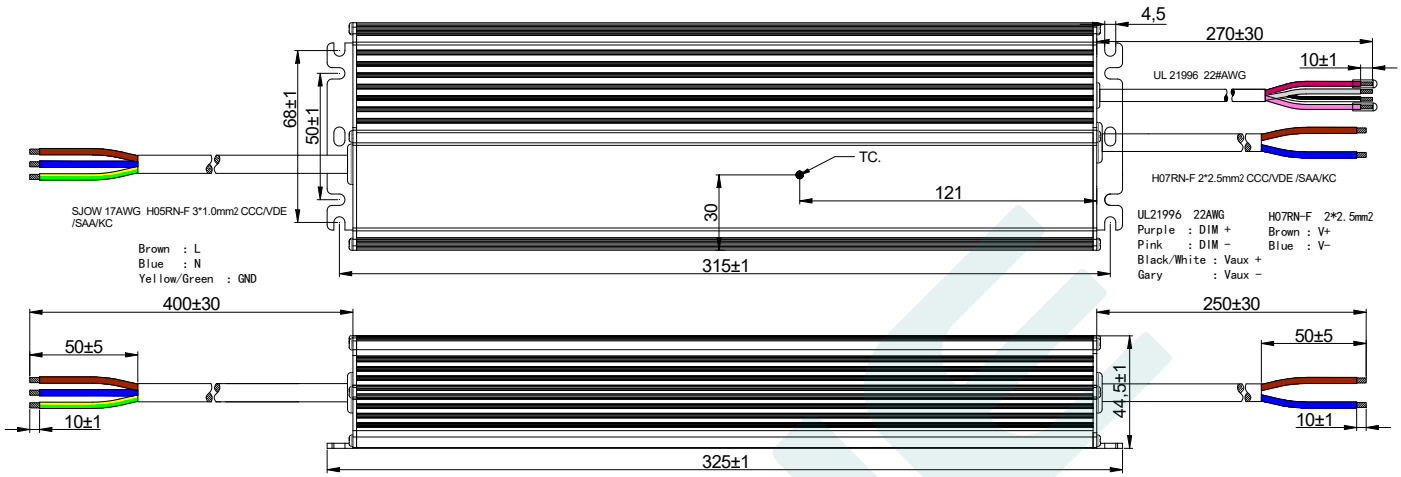
Negative logic dimming curve

Note: Both operation way, of positive logic or negative logic,can be selected by program.

Mechanical specification

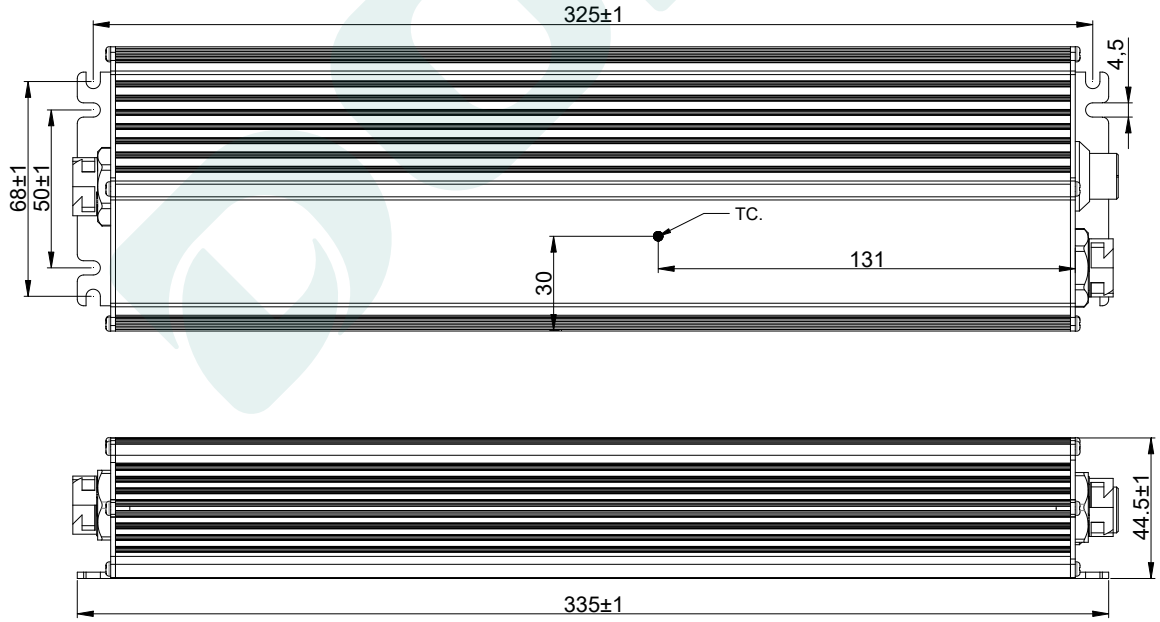
Size (mm)	L325*W90*H44.5

DL-1000H-56X-MXS



Size (mm)	L335*W90*H44.5

DL-1000H-56J-MXS

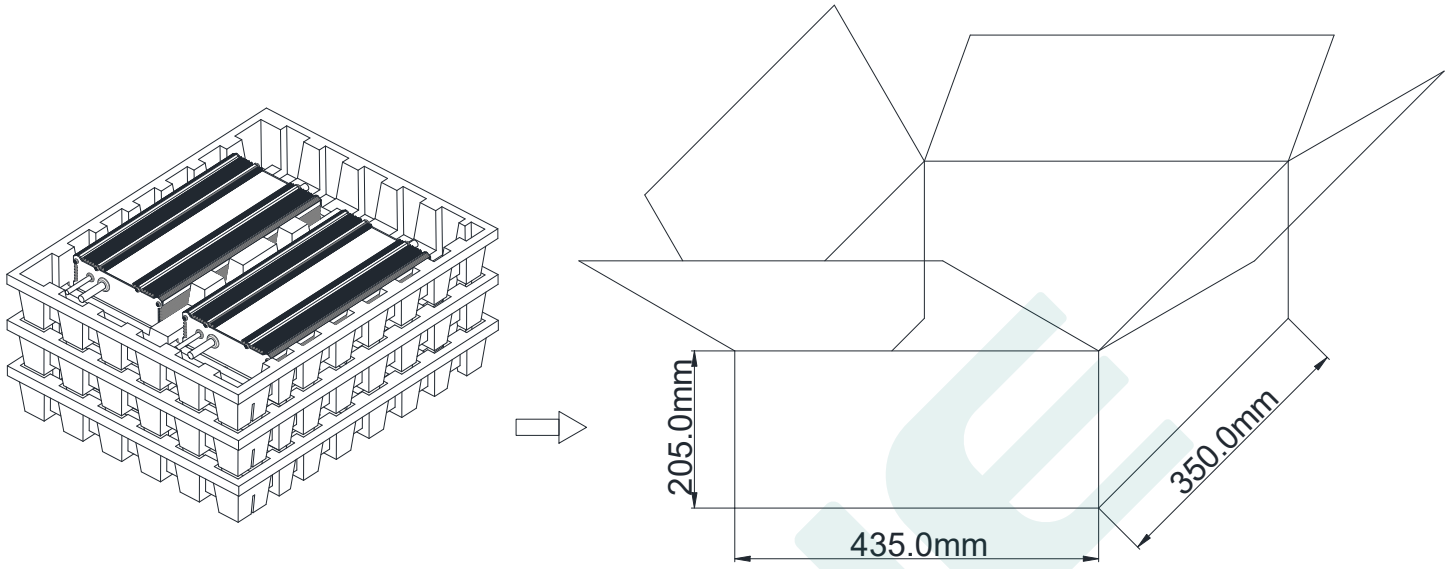


Weight

Weight	3370g

Packaging

Packaging (mm)	L435*W350*H205



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

Note:

1. According to the qualified certificate of the LED DRIVER, that with English label is for sale in Europe, America and India.
2. That with Chinese label are used for Chinese market.

Version

DATE	DESCRIPTION	REV.	CHECK
2025.5.17	Initial version.	V1.0	JH 2025.05.21 13:45:25 +08'00' DYX 2025.05.21 13:52:35 +08'00'

MANUFACTRUER		
EDIT	CHECK	APPROVE
ZMH 2025.05.17 11:23:14 +08'00'	HSY 2025.05.21 11:37:28 +08'00'	数字签名者：张鸿生 DN：cn=张鸿生, o, ou, email=978425630@qq.com, c=<无 日期：2025.05.21 14:03:32 +08'00'