

The logo for DONE, featuring the word "DONE" in a bold, teal, sans-serif font. The letter "D" is stylized with a circular element on its left side. The logo is contained within a white rounded square with a thin teal border.

MXC SERIES LED DRIVERS

DL-320H-MXC SPEC V1.0

Features

- Class I structure
- Input voltage: 200-277 V ~ 50/60 Hz
- Efficiency :93%(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

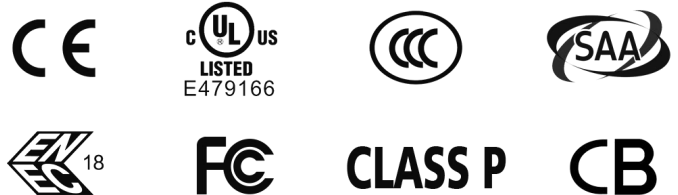
- Lifetime design: 5 years



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.	T.H.D	PF
DL-320H-56A/P-MXC	200-277V 50/60Hz	320W	25-56Vdc	5.71A	≥93%	≤10%	≥0.95
DL-320H-428A/P-MXC	200-277V 50/60Hz	320W	228-428Vdc	0.75A	≥94%	≤10%	≥0.95

Note :

Test conditions of the above parameters: Ta=25℃, 230Vac input, full load for 30 minutes;

Input characteristics

Parameter	Min	Typ.	Max	Note
Rated input voltage	200Vac	230Vac	277Vac	
Input voltage range	180Vac		305Vac	
Rated frequency	47Hz	50/60Hz	63Hz	
Power factor	-	0.95	-	@230Vac full load
T.H.D.	-	-	10%	@230Vac full load
Input current	-	-	1.8A	@230Vac full load
Inrush current	-	-	100A	230Vac, cold start (25°C)
no-load power consumption	-	-	10W	No load, 230Vac input
stand-by power consumption	-	-	3W	Dimmer terminal voltage < 0.5V±0.1, 230Vac input

Note : The preceding power consumption parameters are average power consumption if not specified.

Output characteristic

Parameter	Min	Typ.	Max	Note
Rated current	-	5.71A	-	
DL-320H-56A/P-MXC	-	0.75A	-	
DL-320H-343A/P-MXC				
Output current range	4.2A	-	7.65A	
DL-320H-56A/P-MXC	0.5A		1.05A	
DL-320H-343A/P-MXC				
Output voltage range	25V	-	56V	
DL-320H-56A/P-MXC	228V		428V	
DL-320H-343A/P-MXC				
Rated power	-	-	320W	
DL-320H-56A/P-MXC				
DL-320H-343A/P-MXC				
No-load voltage	-	-	63V	
DL-320H-56A/P-MXC	-	-	450V	
DL-320H-343A/P-MXC				
Efficiency@230Vac	-	93%	-	@230Vac full load
DL-320H-56A/P-MXC	-	94%	-	
DL-320H-343A/P-MXC				

Output characteristic

Parameter	Min	Typ.	Max	Note
Current Accuracy	-3%	-	+3%	full load @230Vac
Output ripple current	-	-	5%	Full load@20MHZ band Wide ripple current = RMS / Mean value
linear adjustment rate	-3%	-	+3%	full load
Load regulation	-3%	-	+3%	full load
Starting time	-	-	0.5S	Full load@230Vac

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	1V	-	12V	When the external voltage is greater than or equal to 12V, the dimming fails
	Dimming output range	10%	-	100%	-
	Rated dimming voltage range	1V	-	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	0	-	0.3V	-
	PWM frequency band	300Hz	-	2000Hz	-
	PWM duty cycle	10%	-	99%	Output full power at 99% duty cycle
Resistor Dimming (Optional)	External resistance value				-
	Dimming output range				-
Resistance dimming (optional)	Resistance of the external resistor	10KΩ	-	100KΩ	-
	Dimming output range	10%	-	100%	-

Note:

- 1, dimming port output current: 108uA(typical value);
2. If the P version is 1-10V dimming (0V can be turned off), the dimming port can withstand the maximum voltage of 12V. If the external power supply voltage exceeds 12V or the signal cable is reversed, the power supply will be damaged.

Protection

Function	Function instructions
Output overload protection	Protection mode: hiccup restart mode. After abnormal load conditions are removed, the system automatically recovers
Output short circuit protection	hiccup mode mode:recovers automatically after fault condition is removed.
Over temperature protection	Self-restorable type; When the casing temperature is greater than 95°C, the output power is reduced to 50%±10% as the casing temperature increases;
Output over-voltage protection	Protection mode: burp or clamp in a state of maximum output voltage, the product is not damaged, when the fault is removed, the power supply works normally
Input undervoltage protection	Protection mode: When the input voltage is lower than 165Vac±10V, the output power derates to 50%±10%. See derating curve for details

Note:

1. Unless otherwise specified, all specifications are measured at 230Vac (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@200-277Vac(refer to "Service Life Curve ")
Working humidity	20 to 95% RH, non-condensing
Tc temperature	95°C
Storage temperature, humidity	-40~+85°C, 10 ~ 95% RH
Store temperature and humidity	-40~+85°C, 10 ~ 95% rh
MTBF	230Khrs min. MIL-HDBK-217F (Ta=25°C)
Lifetime	50000 hours @ Casing temperature ≤75°C, 230Vac, 80% load, please refer to the section "Casing Temperature and life"

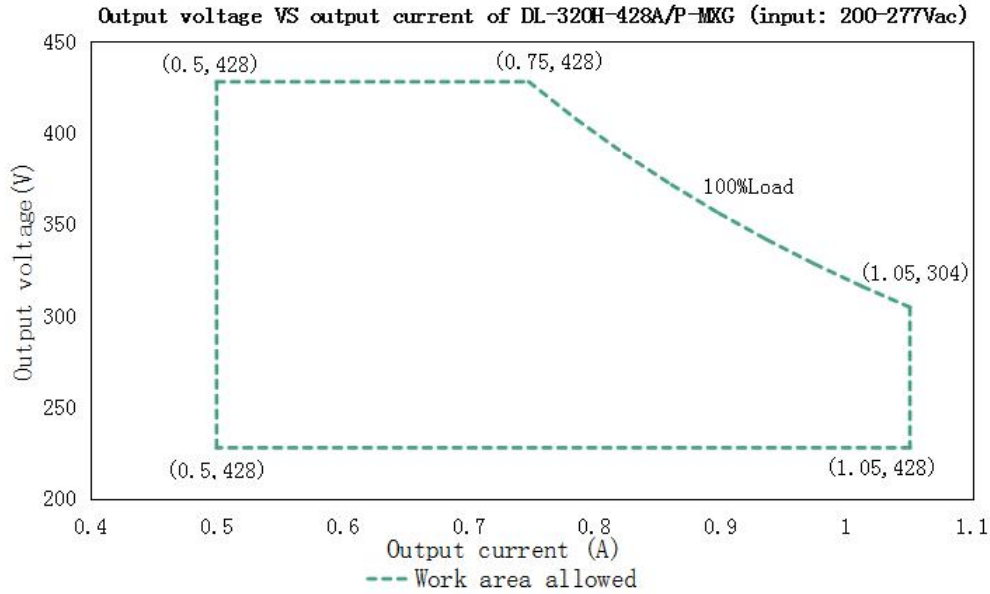
Safety and EMC

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 61000-3-2 、GB/T 17743、GB17625.1、 EN 61000-3-3
lighting protection grade	Differential mode L-N ± 6 KV (2 Ω), common mode L, n-ground ± 15 KV (12 Ω) as per IEC61000-4-5 2014
withstand voltage	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 resistance	I/P-PE:100M Ω / 500VDC; I/P-O/P:100M Ω / 500VDC / 25 $^{\circ}$ C/ 70% RH
leak current	<0.75mA@230Vac

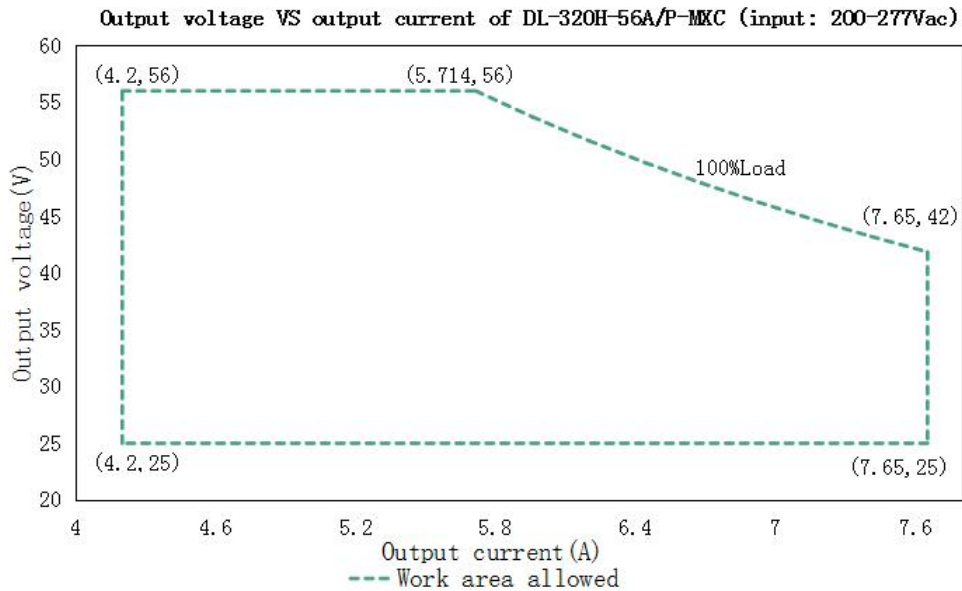
Note:

As the power supply is used as a component with the terminal equipment, the EMC is affected by the entire device, and the terminal equipment manufacturer needs to re-confirm the EMC of the entire device.

I-V Working area

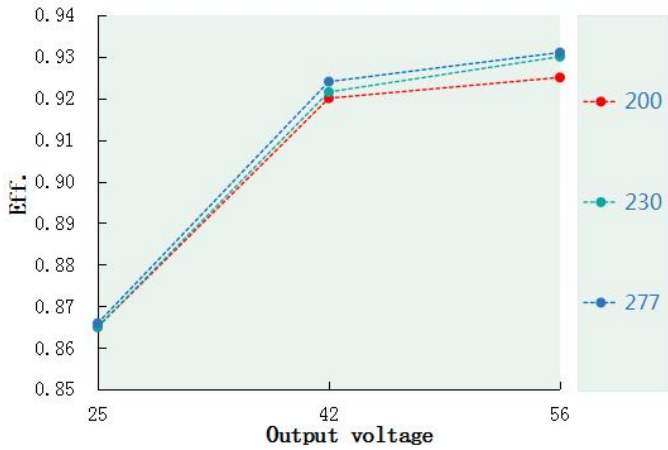


Load	Output								
Load working Voltage	25V	29V	33V	36V	42V	46V	48V	52V	56V
Io_MAX	7.65	7.65	7.65	7.65	7.65	6.95	6.67	6.15	5.71
Po_MAX	191	222	252	275	320	320	320	320	320

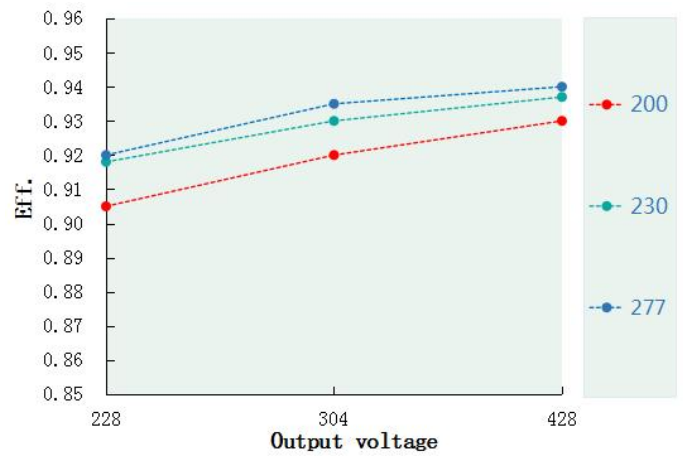


Load	Output								
Load working Voltage	228V	240V	260V	280V	304V	330V	360V	390V	428V
Io_MAX	1.05	1.05	1.05	1.05	1.05	0.97	0.89	0.82	0.75
Po_MAX	239	252	273	294	320	320	320	320	320

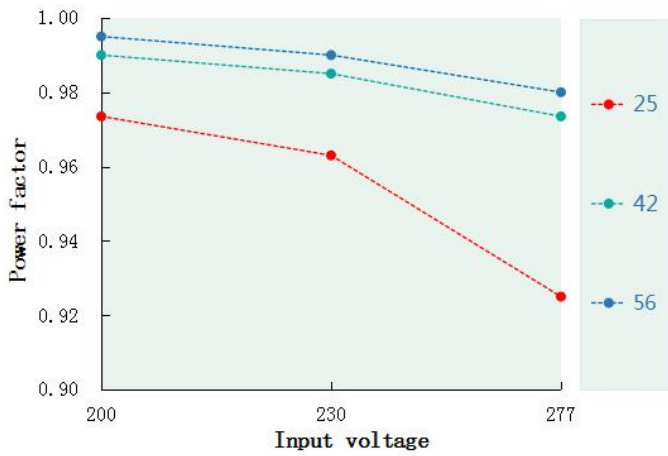
Eff. VS Output voltage(DL-320H-56A/P-MXC)



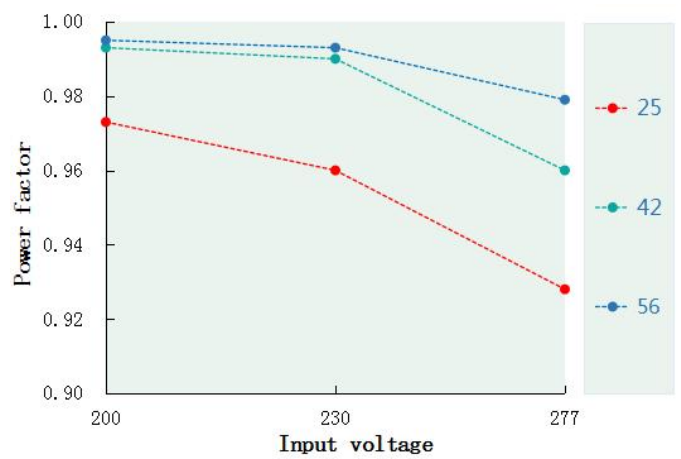
Eff. VS Output voltage(DL-320H-428A/P-MXC)



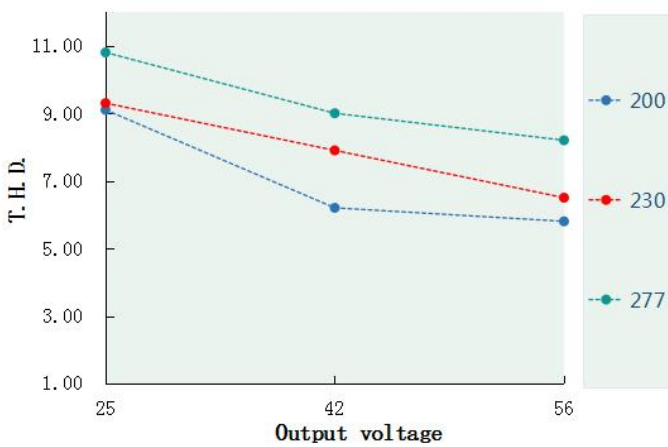
Power factor VS Input voltage(DL-320H-56A/P-MXC)



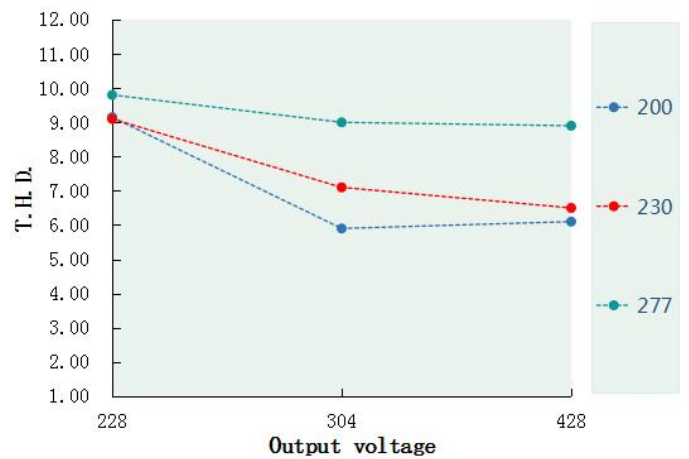
Power factor VS Input voltage(DL-320H-428A/P-MXC)



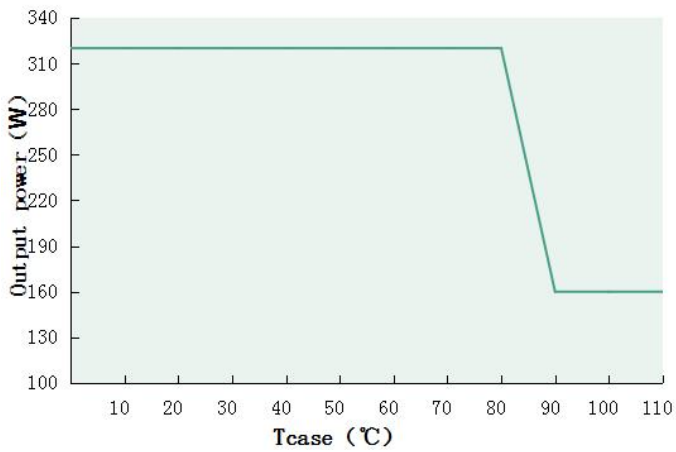
T.H.D. VS Output voltage(DL-320H-56A/P-MXC)



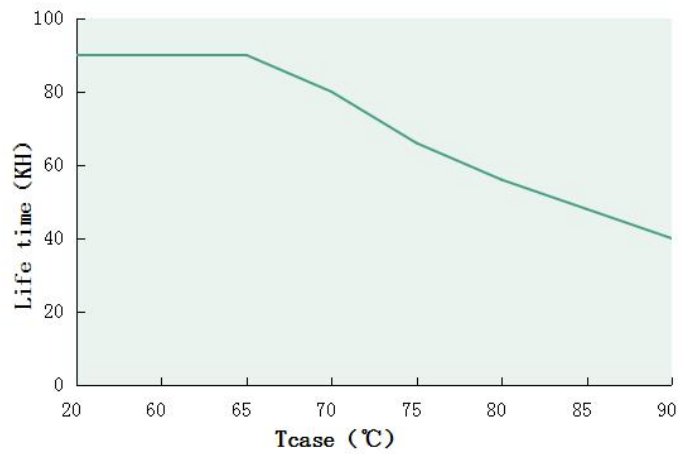
T.H.D. VS Output voltage(DL-320H-428A/P-MXC)



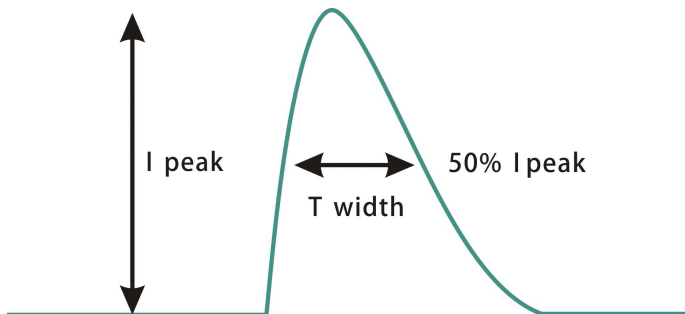
Tcase VS Lifetime(DL-320H-56A/P-MXC)



Output power VS Tcase (DL-320H-MXC)

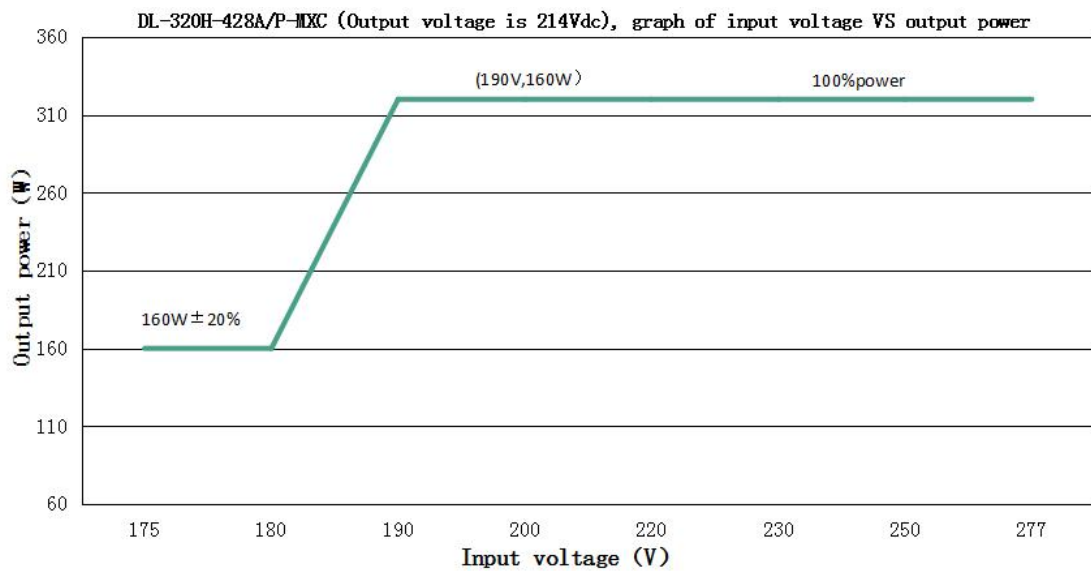
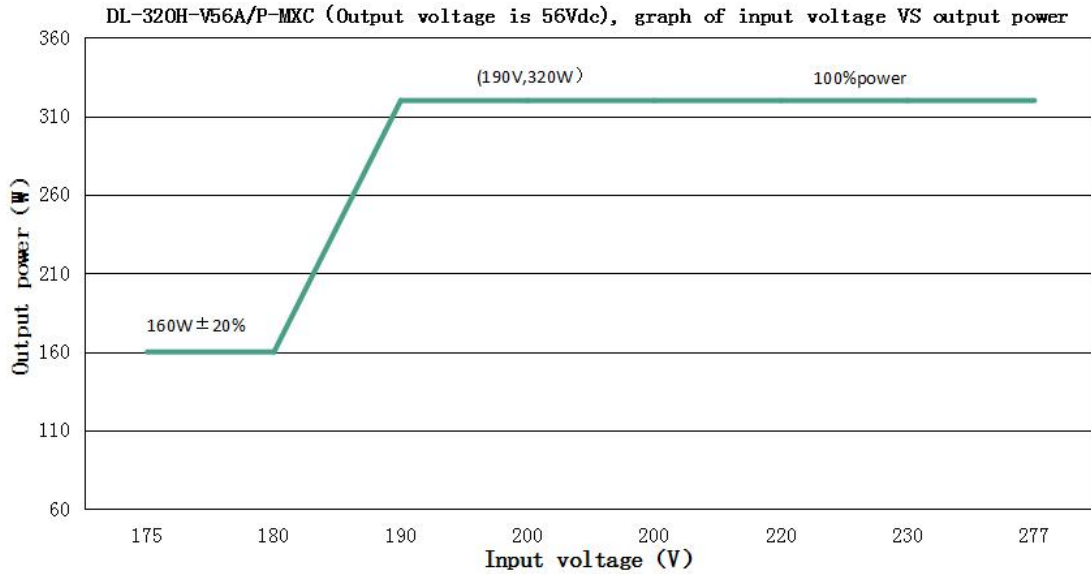


Inrush Current(DL-320H-56A/P-MXC)



Input voltage	Peak current	T(@50% Peak current)
200Vac	/	/
230Vac	95A	7.14us
277Vac	/	/

input voltage VS output power



DL-320H-56A/P-MXC (When the output voltage is 56Vdc, the rated output current value and output power corresponding to different input voltage)

Input Voltage	165Vac	180Vac	200Vac	220Vac	230Vac	240Vac	264Vac	277Vac
Iout	2.86	5.71	5.71	5.71	5.71	5.71	5.71	5.71
Pout	160	320	320	320	320	320	320	320

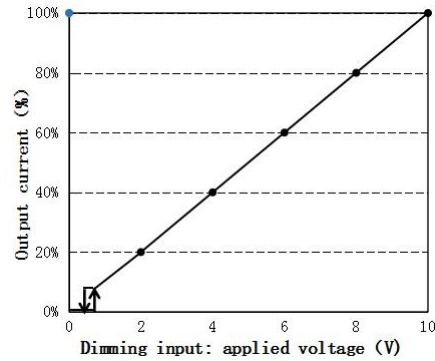
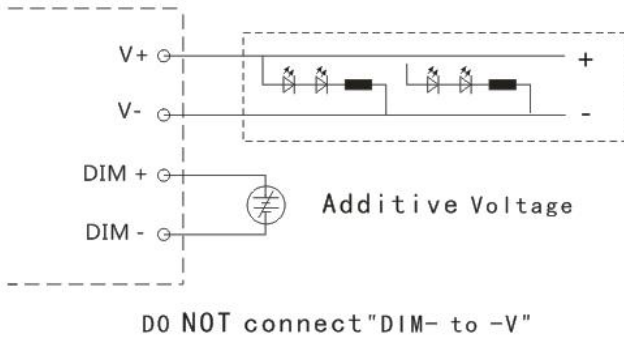
Note: When the input voltage is 165 ± 10 Vac, the output power range is 120W ± 10%.

Dimming operation

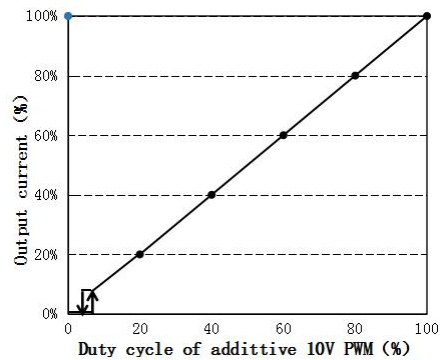
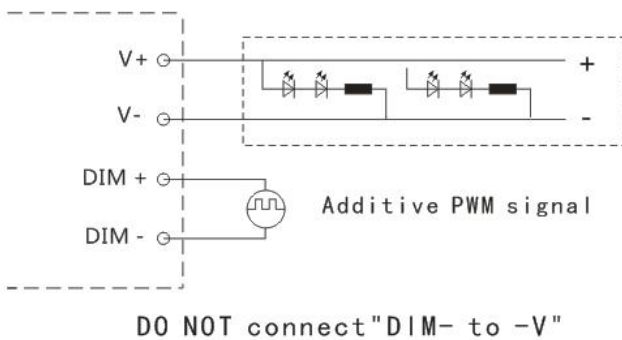
※ Three-in-one dimming function (X version)

- 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).

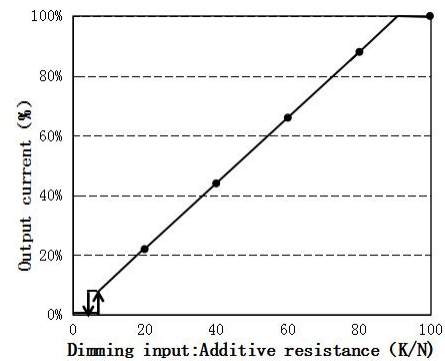
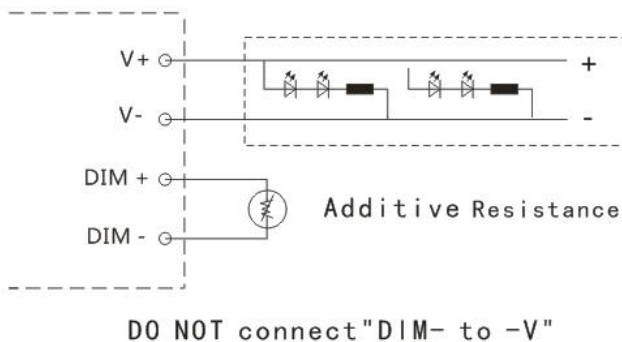
◎ With an applied voltage of 0-10V:



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



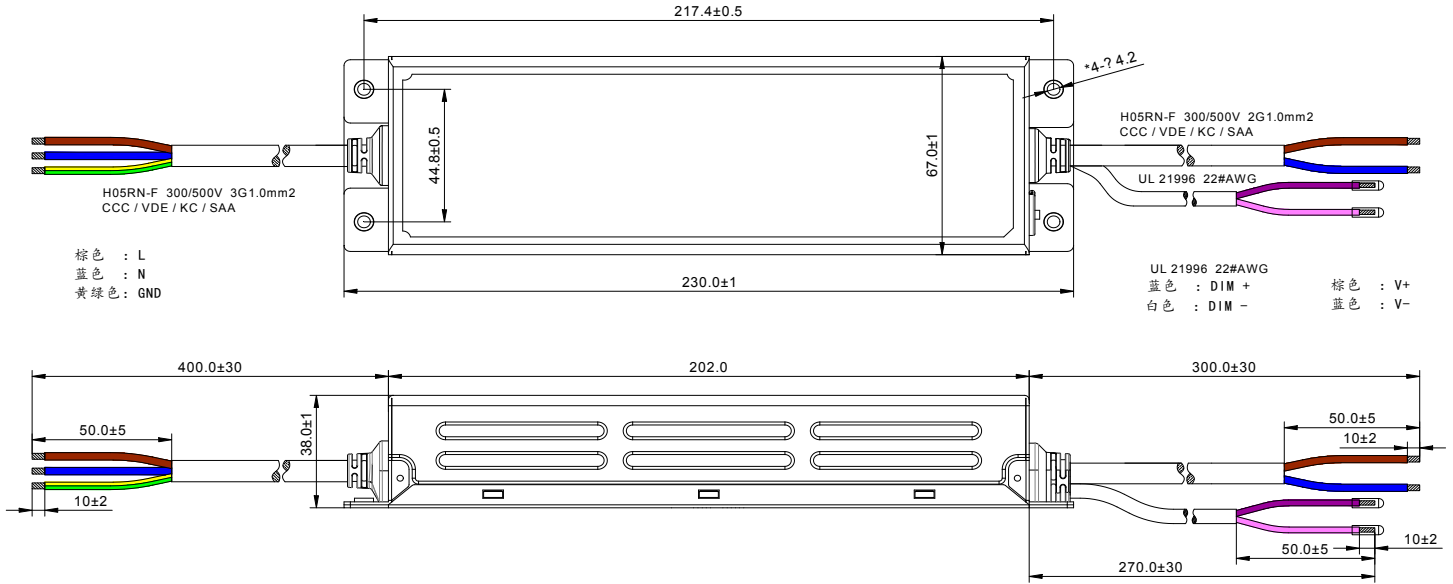
◎ With an additional 0-100K resistor:



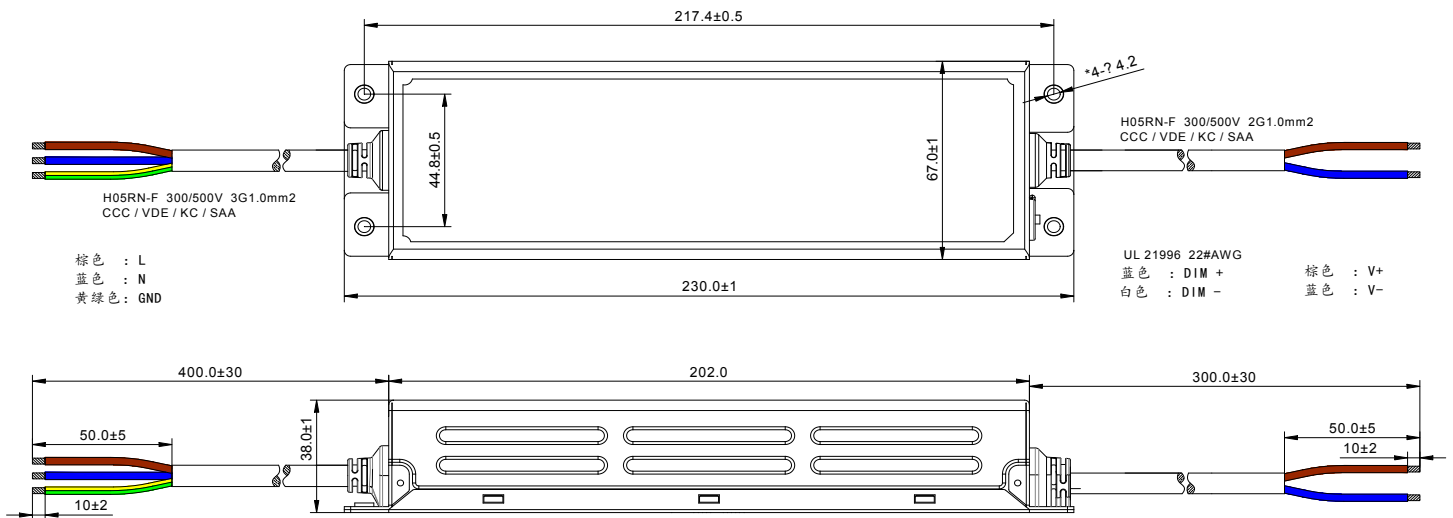
Mechanical specification

Size (mm) L230mm*W67mm*H38mm

DL-320H-56P/428P-MXC



DL-320H-56A/428A-MXC

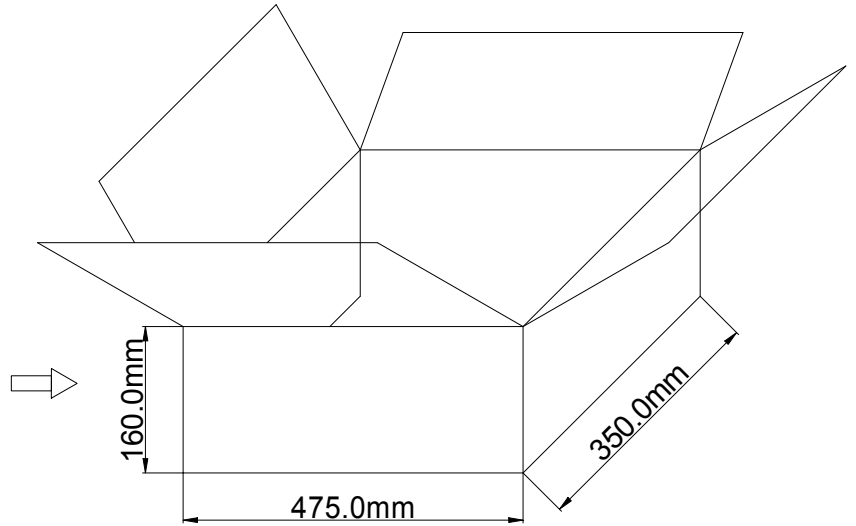
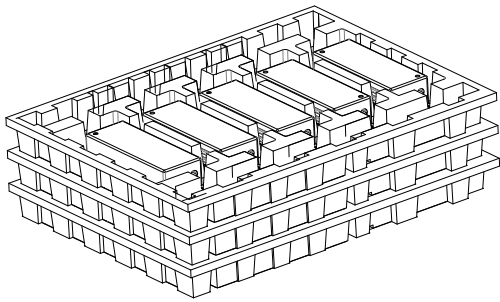


Weight

Weight 1530 g

Packaging

Packaging (mm) L475*W350*H160



Note: One Carton 3 layers and 5 pcs each layer, total 15pcs/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
2023.10.14	Initial version.	V1.0	

MANUFACTRUER		
EDIT	CHECK	APPROVE