

DONE

MXG SERIES LED

DL-150W-DX-MXG SPEC V1.0

Features

- Class I structure
- Input voltage: 120-277 V ~ 50/60 Hz
- Efficiency :92%(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:
 - DALI-2 communication protocol (IEC62386-101/102/207)
 - Linear dimming, logarithmic dimming, scene control...
 - Auxiliary source: 12V/300mA
- 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-150W-V56DX-MXG	120-277V 50/60Hz	150W	25-56Vdc	4.2A	≥91.3%	≤10%	≥0.95
DL-150W-V214DX-MXG	120-277V 50/60Hz	150W	95-214Vdc	0.7A	≥92.3%	≤10%	≥0.95

Note:

1. Test conditions of the above parameters: Ta=25°C, 230Vac input, full load operation for 30 minutes;
2. When the input is less than 108Vac ± 10%, the output power gradually decreases. When the input 120-277Vac, rated power 150W. 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	108Vac	-	305Vac	
Rated frequency	47Hz	50/60Hz	63Hz	
Power factor	0.95	-	-	@230Vac full load, rated input voltage
Power factor	0.9	-	-	65%-100% load, 120-277VAC input
T.H.D.	-	-	10%	@230Vac full load
T.H.D.	-	-	20%	65%-100% load, 120-277VAC input
Input current	-	-	1.5A	@120Vac full load
Inrush current	-	-	70A	230Vac, cold start (25°C)

Output characteristic

Parameter	Min	Typ.	Max	Note
Rated current				
DL-150W-V56DX-MXG	-	2.68A	-	
DL-150W-V214DX-MXG	-	0.7A	-	
Output current range				
DL-150W-V56DX-MXG	1.7A	-	4.2A	
DL-150W-V214DX-MXG	0.5A	-	1.05A	
Output voltage range				
DL-150W-V56DX-MXG	25V	-	56V	
DL-150W-V214DX-MXG	95V	-	214V	
Rated power(90-120Vac)	-	75W	150W	The derating begins when the input voltage is less than 108Vac ±10%
Rated power(120-277Vac)	-	150W	-	
No-load voltage				
DL-150W-V56D-MXG	-	-	75V	
DL-150W-V214D-MXG	-	-	250V	
Efficiency@120Vac				
DL-150W-V56DX-MXG	86.0%	88%	-	full load @120Vac
DL-150W-V214DX-MXG	89.0%	90.0%	-	

Output characteristic

Parameter	Min	Typ.	Max	Note
Efficiency@230Vac DL-150W-V56DX-MXG DL-150W-V214DX-MXG	91.0% 92.0%	91.3% 92.3%	-	full load @230Vac
Output Current Ripple	-	5% I _{omax}	-	100% load, 20 MHz BW; Ripple =rms/ average
Accuracy of output current	-5%	-	+5%	full load
Line regulation	-3%	-	+3%	full load
Load regulation	-3%	-	+3%	full load
Starting time	300 ms	-	1000 ms	Full load@120-277Vac
Auxiliary source output voltage	10.8V	12V	13.2V	-
Auxiliary source output current	0 mA	-	300 mA	Reference ground is "Dim -"
Auxiliary source output 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:

- 1.The output current range is limited by the input and output voltage, please refer to "I-V WORKING AREA" for details.
2. When the output voltage is in the constant power range, the current accuracy is -5%-+5%; when the output voltage is below the constant power range, the current accuracy is -10%-+10%;

Dimming characteristic

Dimming function	Min	Typ.	Max	Instructions
DA+, DA- High voltage level	9.5V	16V	22.5V	
DA+, DA- Low voltage level	-	0V	6.5V	
DA+, DA- Current	-	-	2mA	
Dimming output range	10%Iout	-	100%Iout	

Note:

1. DA+, DA- support the maximum 310Vac misconnection
2. The standby power consumption is less than 0.5W when it is turned off

Protection

Function	Function instructions
Input under-voltage protection	When the input voltage is less than 108Vac $\pm 10\%$, the output power gradually decreases.
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°C, the output power decreases gradually.
Output over-voltage protection	Protection mode: Hiccup mode or clamped in output highest voltage , the product is not damaged, LED driver works normally after fault condition is removed.

Note:

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

Environmental

Environmental categories	Parameter
Working temperature	-40 ~ +55°C @200-277Vac, -40 ~ +45°C @120-200Vac (refer to "Life Curve ")
Max.Case Temp.	-40 ~ 90°C
Working humidity	20 ~ 95% RH, non condensing
Storage temperature、humidity	-40 ~ +80°C, 10 ~ 95% RH
Resistant to vibration	10 ~ 500Hz, 5G 12 min/cycle, X, Y, Z axis 72 min each
MTBF	230Khrs min. MIL-HDBK-217F (Ta=25°C)
Lifetime	75,000 hours @Tcase≤75°C,230Vac, 80% Load, Please refer to "Tcase VS Lifetime" section

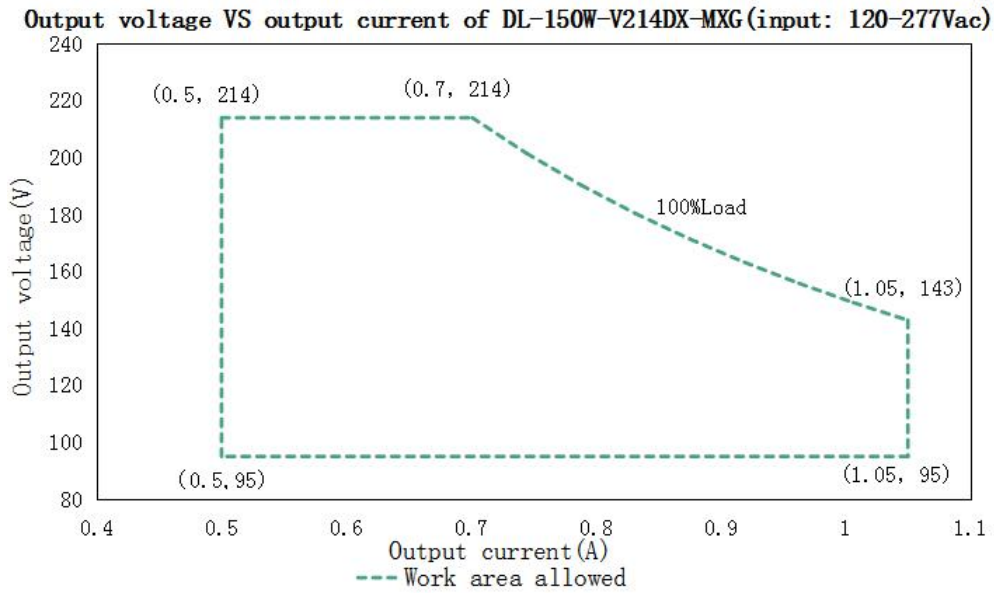
Safety and EMC

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
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:3.75KVac O/P-DIM:1.5KVac
Insulation impedance	I/P-PE:100MΩ / 500VDC; I/P-O/P:100MΩ / 500VDC / 25°C / 70% RH
Leakage current	<0.7mA@277Vac
DALI-2 standards	Instruction
DALI-2	IEC 62386-101、IEC 62386-102、IEC 62386-207

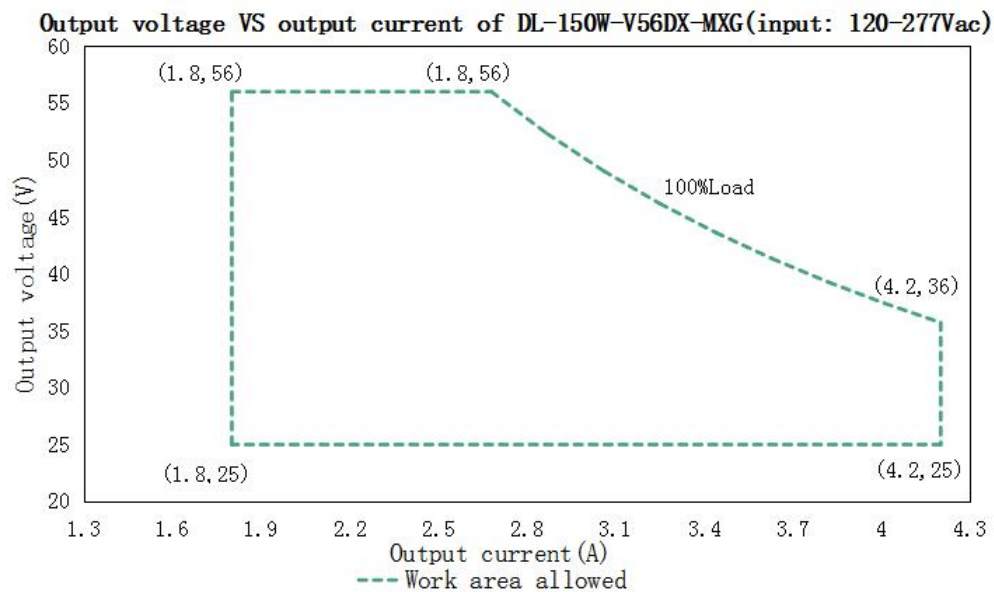
Note:

- 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.
- 2.DALIpart:101、 102、 207

I-V Working area

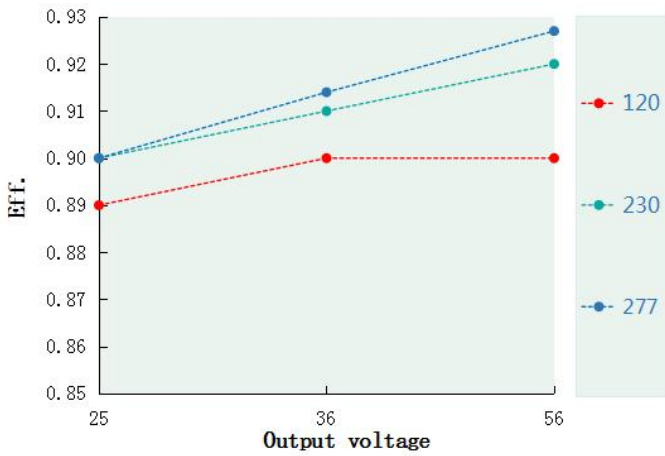


Load	Output								
Load working Voltage	95V	120V	135V	143V	165V	180V	190V	200V	214V
Io_MAX	1.05A	1.05A	1.05A	1.05A	0.91A	0.83A	0.79A	0.75A	0.7A
Po_MAX	99.75W	126.0W	141.75W	150W	150W	150W	150W	150W	150W

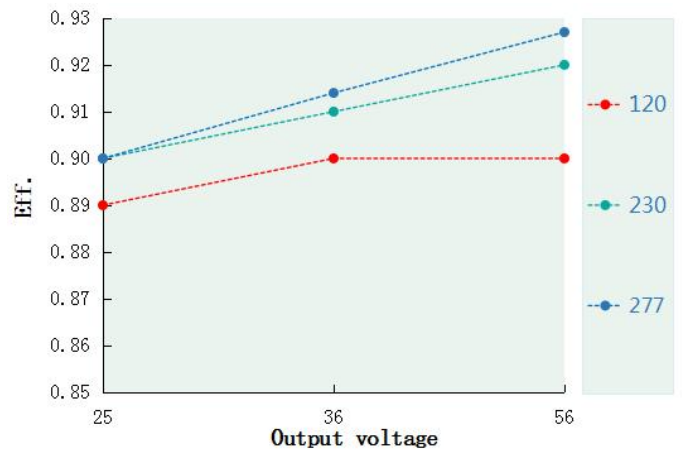


Load	Output								
Load working Voltage	25V	29V	33V	36V	40V	44V	48V	52V	56V
Io_MAX	4.2A	4.2A	4.2A	4.17A	3.75A	3.41A	3.13A	2.88A	2.68A
Po_MAX	105W	121.8W	138.6W	150W	150W	150W	150W	150W	150W

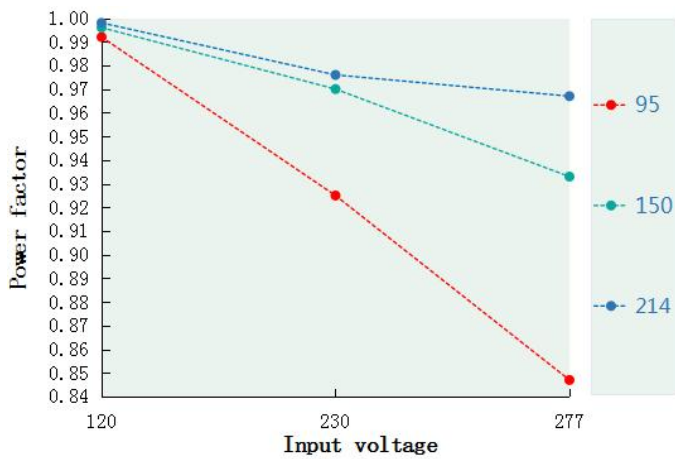
Eff. VS Output voltage(DL-150W-V214DX-MXG)



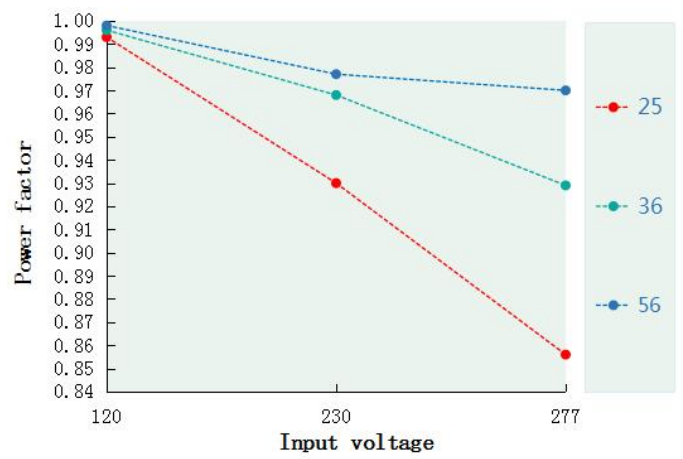
Eff. VS Output voltage(DL-150W-V56DX-MXG)



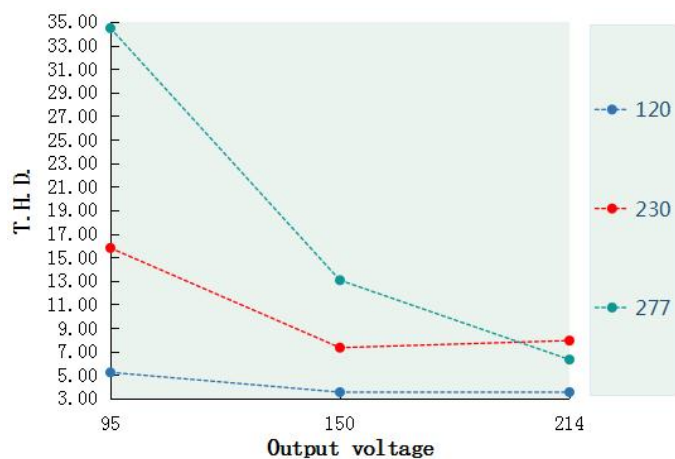
Power factor VS Input voltage(DL-150W-V214DX-MXG)



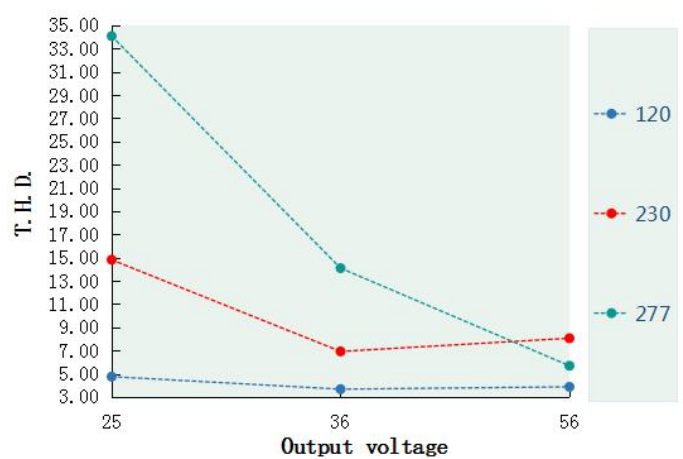
Power factor VS Input voltage(DL-150W-V56DX-MXG)



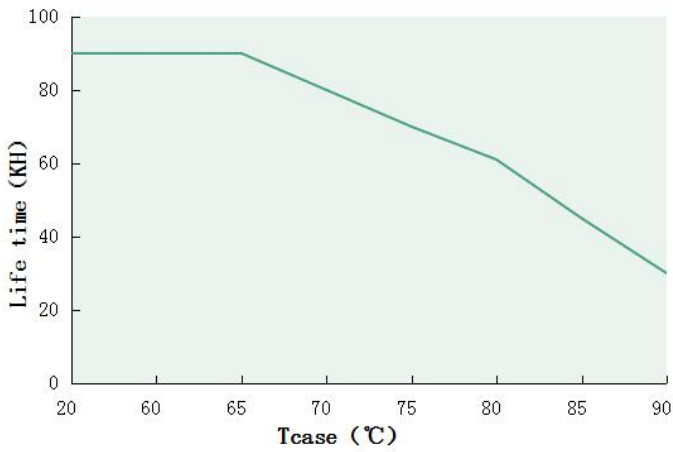
T.H.D. VS Output voltage(DL-150W-V214DX-MXG)



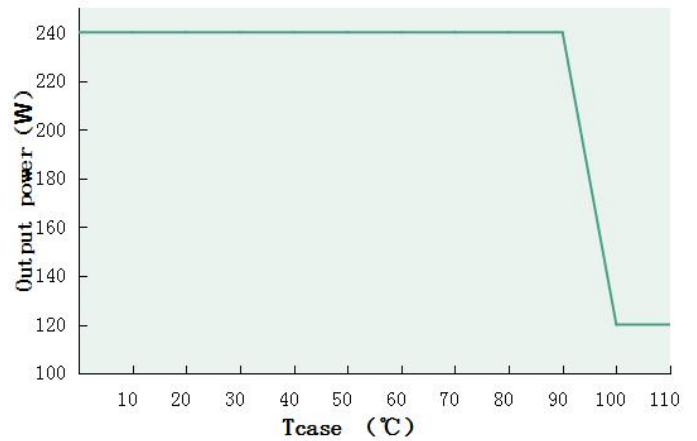
T.H.D. VS Output voltage(DL-150W-V56DX-MXG)



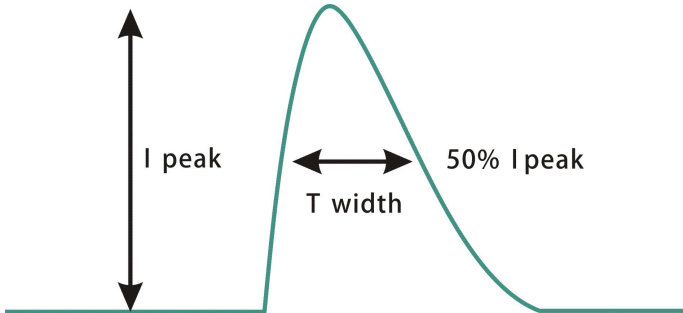
Tcase VS Lifetime(DL-150W-DX-MXG)



Output power VS Tcase (DL-150W-DX-MXG)

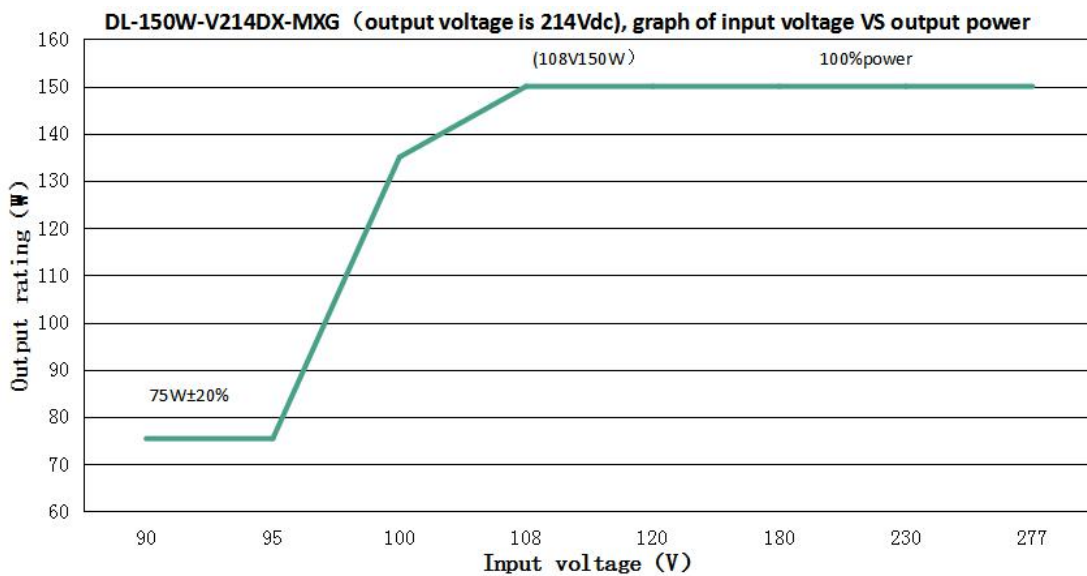


Inrush current(DL-150W-DX-MXG)



Input voltage	Peak current	T(@50% Peak current)
120Vac	28A	278us
230Vac	56A	236us
277Vac	68A	262us

Output power VS Input voltage

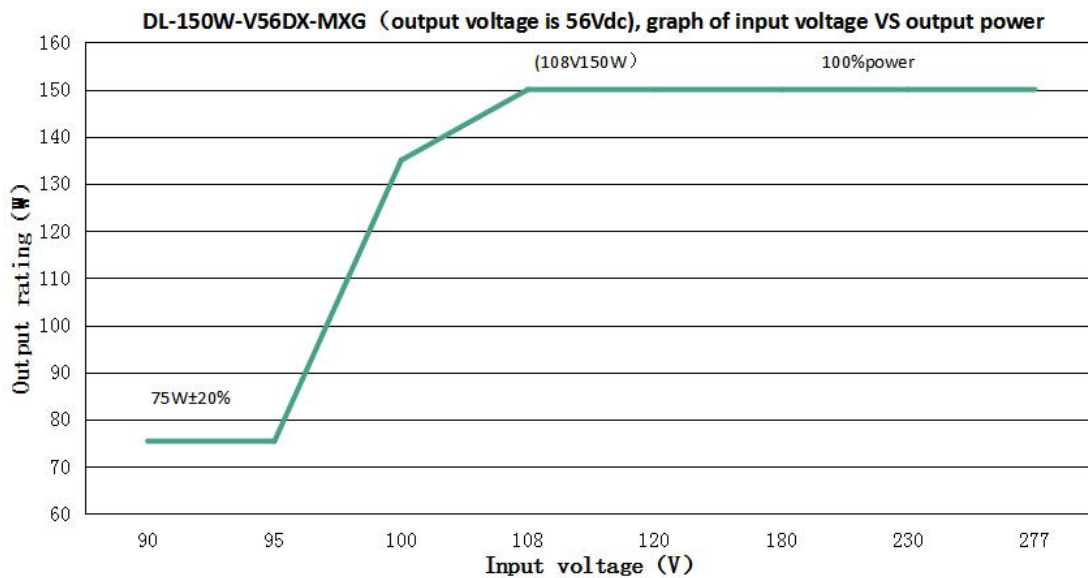


DL-150W-V214DX-MXG (When the output voltage is 214Vdc, the rated output current value and output power corresponding to different input voltage)

Input Voltage	90Vac	95Vac	100Vac	108Vac	120Vac	180Vac	230Vac	277Vac
Iout	0.42A	0.42A	0.63A	0.7A	0.7A	0.7A	0.7A	0.7A
Pout	74.8W	74.8W	128W	150W	150W	150W	150W	150W

Note:
 Output power will decrease gradually when input voltage less than 108Vac ± 10%;When the input voltage is 90Vac,the output power range is 75W±20%.

Output power versus Input voltage



DL-150W-V56DX-MXG (When the output voltage is 56Vdc, the rated output current value and output power corresponding to different input voltage)

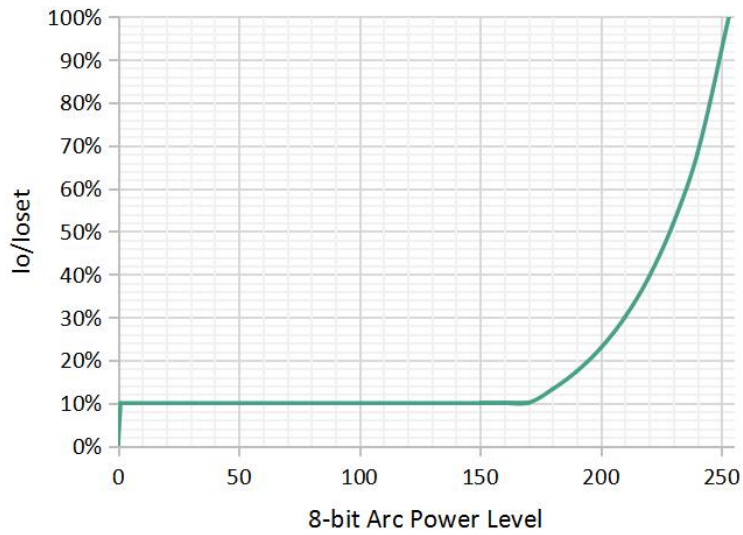
Input Voltage	90Vac	95Vac	100Vac	108Vac	120Vac	180Vac	230Vac	277Vac
Iout	1.48A	1.48A	2.41A	2.68A	2.68A	2.68A	2.68A	2.68A
Pout	75.4W	75.4W	135W	150W	150W	150W	150W	150W

Note:
 Output power will decrease gradually when input voltage less than 108Vac ± 10%;When the input voltage is 90Vac,the output power range is 75W±20%.

Dali-2 dimming curve

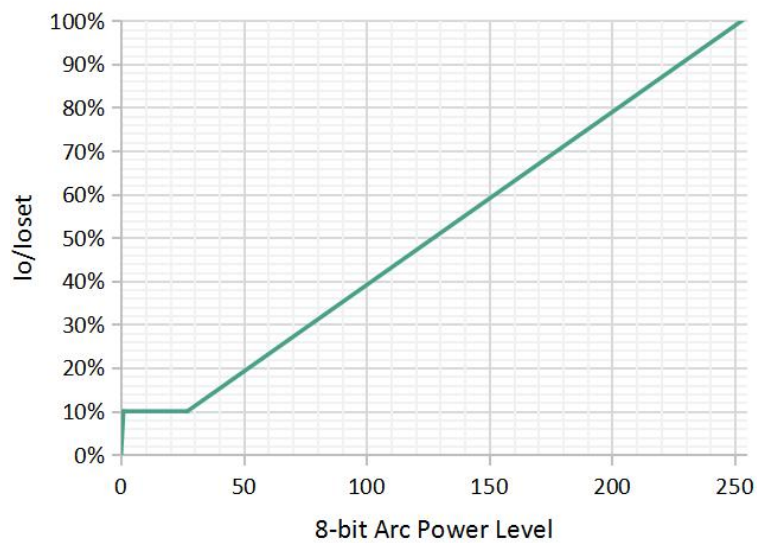
Logarithmic Dimming Curve

Logarithmic Dimming Curve



Linear Dimming Curve

Linear Dimming Curve



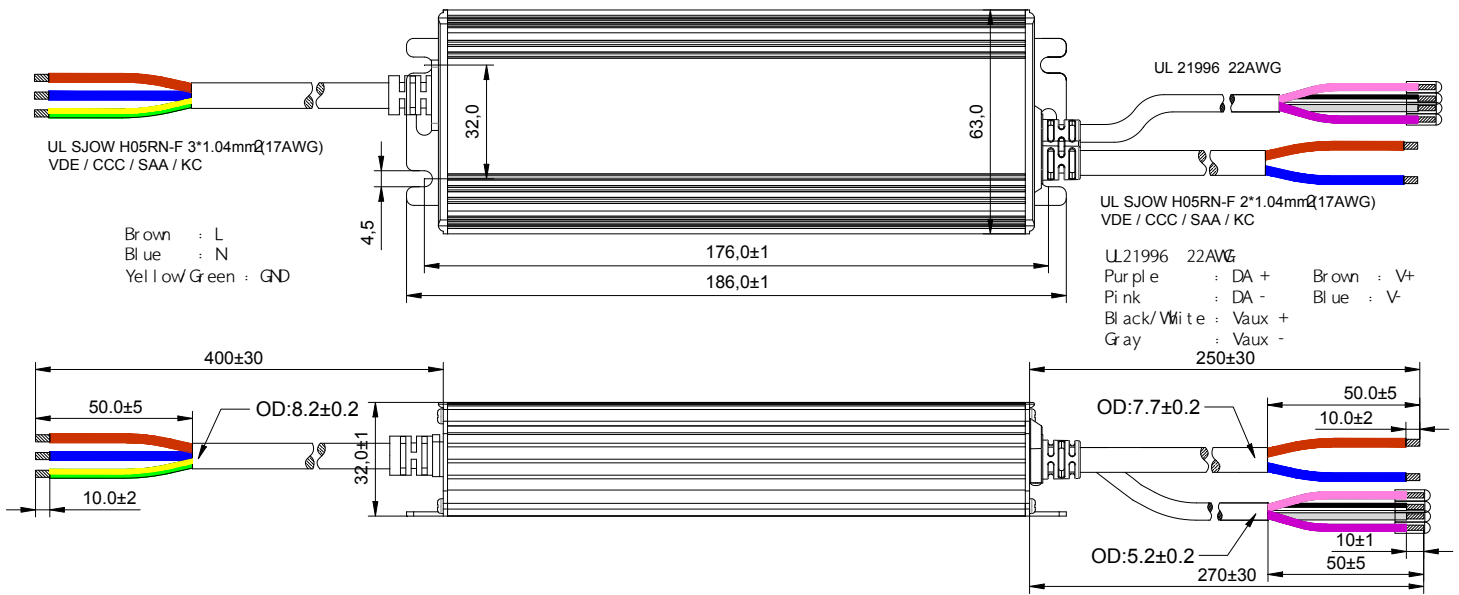
Note:

- 1.Factory default logarithmic dimming.

Mechanical specification

Size (mm) L186*W63*H32

DL-150W-V56DX-MXG
DL-150W-V214DX-MXG

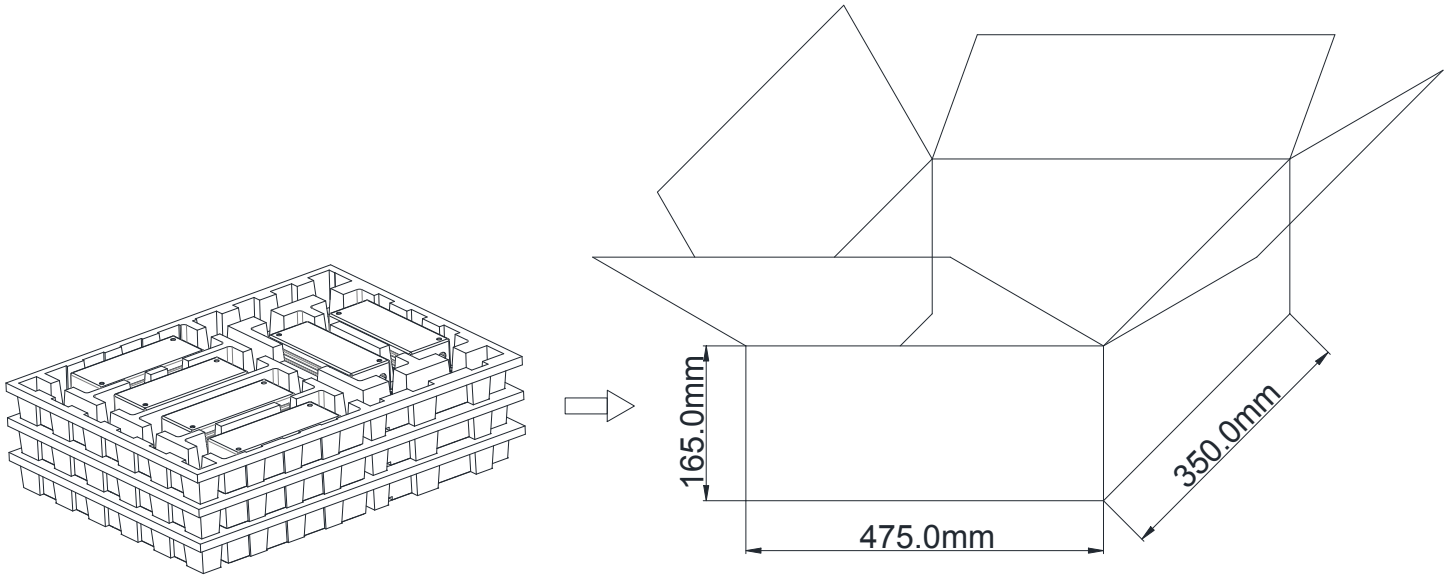


Weight

Weight 800 g

Packaging

Packaging (mm) L475*W350*H160



Note: One Carton 3 layers and 6 pcs each layer, total 18pcs/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
2022.12.09	Initial version.	V1.0	

MANUFACTURER		
EDIT	CHECK	APPROVE

