

DONE

MPC SERIES LED DRIVERS

DL-50W-MPC SPEC V1.1

Features

- Class I structure
- Input voltage: 100-277 V ~ 50/60 Hz
- Efficiency :89%(Typ.)
- Metal shell structure, protection grade: IP67
- Lightning protection level: differential mode 6kV
- Can pass the double 85 test (15 days) @ 230Vac full load
- The LED drives I/P-O/P to withstand voltage up to 1500Vac for 60s
- Lifetime design: 3 years



Applications

Outdoor lighting lamps such as street lamps, spotlights, wall washing lamps, etc.

Model list

Model NO.	Input voltage	Output power	Output voltage	The default current	Eff.	T.H.D	PF
DL-50W-C600-MPC	100-277Vac 50/60Hz	51.6W	40-86Vdc	600mA	>90%	<10%	>0.95
DL-50W-C750-MPC		42W	25-56Vdc	750mA			
DL-50W-C900-MPC		50.4W	25-56Vdc	900mA			
DL-50W-C1050-MPC		52.5W	25-50Vdc	1050mA			
DL-50W-C1200-MPC		45.6W	20-38Vdc	1200mA			
DL-50W-C1350-MPC		51.3W	20-38Vdc	1350mA			
DL-50W-C1400-MPC		50.4W	20-36Vdc	1400mA			
DL-50W-C1500-MPC		54W	20-36Vdc	1500mA			

Note :

1. Test conditions of the above parameters: Ta=25 °C, 230Vac input, working at full load for 30 minutes.

Input characteristics

Parameter	Min	Typ.	Max	Note
Rated input voltage	100Vac	230Vac	277Vac	
Input voltage range	90Vac	230Vac	305Vac	
Rated frequency	47Hz	50/60Hz	63Hz	
Power factor	-	0.95	-	@230Vac full load
T.H.D.	-	-	10%	@230Vac full load
Input current	-	-	0.7A	@100Vac full load
Inrush current	-	-	70A	230Vac, cold start (25°C)

Output characteristic

Parameter	Min	Typ.	Max	Note
Rated current				
DL-50W-C600-MPC	0.558A	0.6A	0.642A	
DL-50W-C750-MPC	0.697A	0.75A	0.803A	
DL-50W-C900-MPC	0.837A	0.9A	0.963A	
DL-50W-C1050-MPC	0.976A	1.05A	1.124A	
DL-50W-C1200-MPC	1.116A	1.2A	1.284A	
DL-50W-C1350-MPC	1.255A	1.35A	1.445A	
DL-50W-C1400-MPC	1.302A	1.4A	1.498A	
DL-50W-C1500-MPC	1.395A	1.5A	1.605A	
Output current range				
DL-50W-C600-MPC	40V	-	86V	
DL-50W-C750-MPC	25V	-	56V	
DL-50W-C900-MPC	25V	-	56V	
DL-50W-C1050-MPC	25V	-	50V	
DL-50W-C1200-MPC	20V	-	38V	
DL-50W-C1350-MPC	20V	-	38V	
DL-50W-C1400-MPC	20V	-	36V	
DL-50W-C1500-MPC	20V	-	36V	

Output characteristic

Parameter	Min	Typ.	Max	Note
Rated power(100-277Vac)				
DL-50W-C600-MPC	24W	-	51.6W	
DL-50W-C750-MPC	18.75W	-	42W	
DL-50W-C900-MPC	22.5W	-	50.4W	
DL-50W-C1050-MPC	26.25W	-	52.5W	
DL-50W-C1200-MPC	24W	-	45.6W	
DL-50W-C1350-MPC	27W	-	51.3W	
DL-50W-C1400-MPC	28W	-	50.4W	
DL-50W-C1500-MPC	30W	-	54W	
No-load voltage				
DL-50W-C600-MPC	-	-	98V	
DL-50W-C750-MPC	-	-	68V	
DL-50W-C900-MPC	-	-	68V	
DL-50W-C1050-MPC	-	-	68V	
DL-50W-C1200-MPC	-	-	55V	
DL-50W-C1350-MPC	-	-	55V	
DL-50W-C1400-MPC	-	-	55V	
DL-50W-C1500-MPC	-	-	55V	
Efficiency@230Vac				
DL-50W-C600-MPC	89%	91%		
DL-50W-C750-MPC	89%	90%		
DL-50W-C900-MPC	89%	90.5%		
DL-50W-C1050-MPC	89%	90%	-	full load
DL-50W-C1200-MPC	89%	90%		
DL-50W-C1350-MPC	89%	89%		
DL-50W-C1400-MPC	89%	89%		
DL-50W-C1500-MPC	89%	89%		
Accuracy of output current	-7%	-	+7%	
Line regulation	-5%	-	+5%	
Load regulation	-5%	-	+5%	
Starting time	500ms	-	1000ms	Full load @100-277Vac

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.
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 ~ +60°C @100-277Vac (refer to "Life Curve ")
Working humidity	20 ~ 95% RH, non condensing
Storage temperature、humidity	-30~+85°C, 10 ~ 90% RH
Resistant to vibration	10 ~ 500Hz, 5G 12 min/cycle, X, Y, Z axis 72 min each
MTBF	100Khrs min. MIL-HDBK-217F (Ta=25°C)

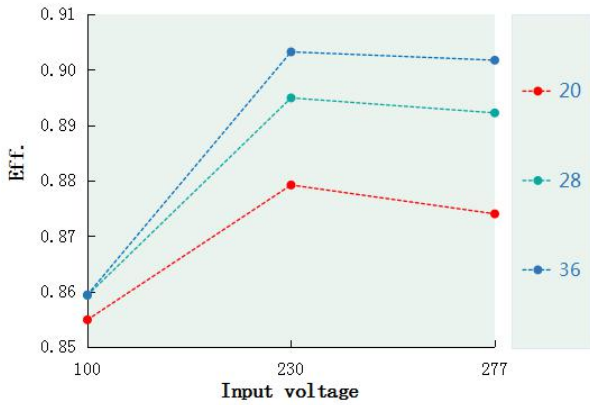
Safety and EMC

Safety categories	Standard
Safety	/
EMC	/
Surge protection	Differential mode L-N $\pm 6\text{KV}$ (2 ohm) ; Refer to IEC61000-4-5 2014 Criterion B
High-pot test	I/P-O/P:1.5KVac
Insulation impedance	I/P-O/P:100M Ω / 500VDC / 25 $^{\circ}\text{C}$ / 70% RH
Leakage current	<0.7mA@230Vac

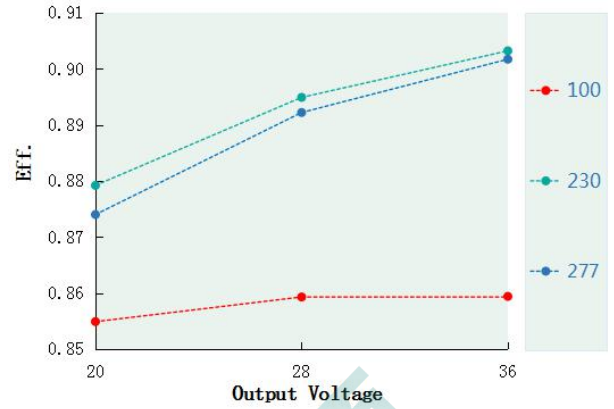
Note:

- 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.

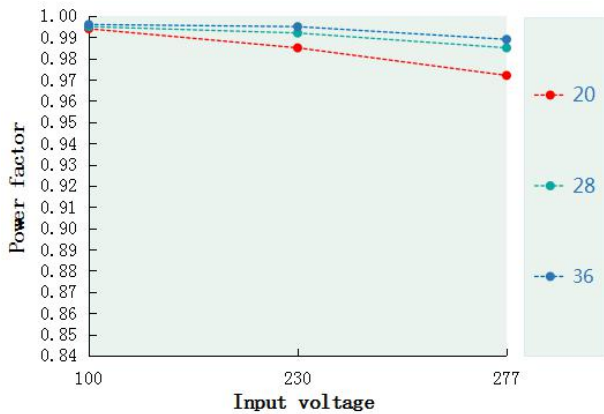
Eff. VS Input voltage(DL-50W-C1500-MPC)



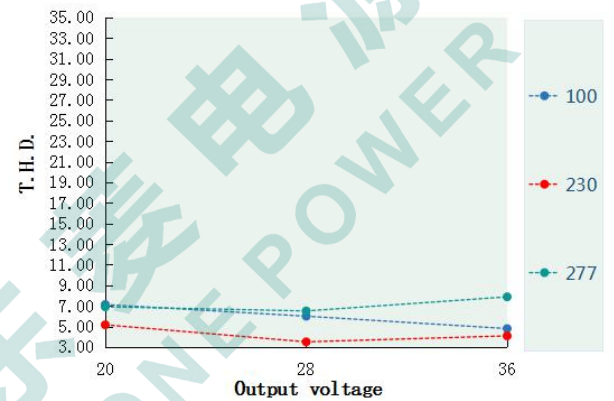
Eff. VS Output voltage(DL-50W-C1500-MPC)



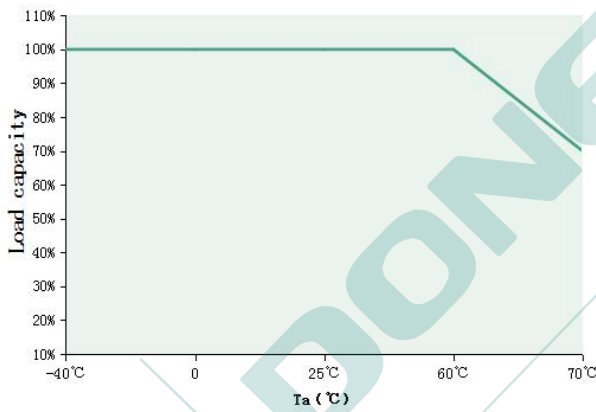
Power factor VS Input voltage(DL-50W-C1500-MPC)



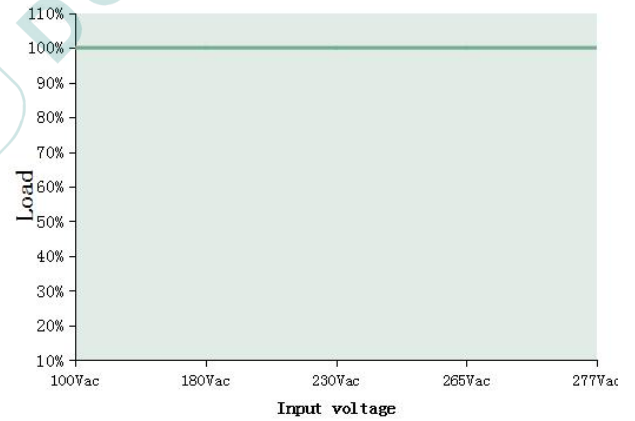
T.H.D. VS Output voltage(DL-50W-C1500-MPC)



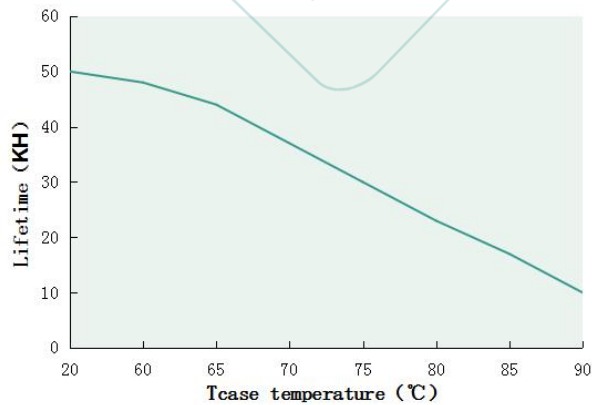
Load reduction curve



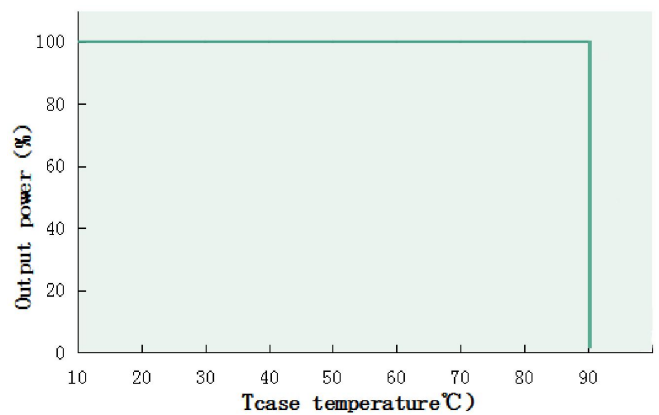
Input voltage VS Load



Tcase temperature VS Lifetime



Output power VS Tcase temperature



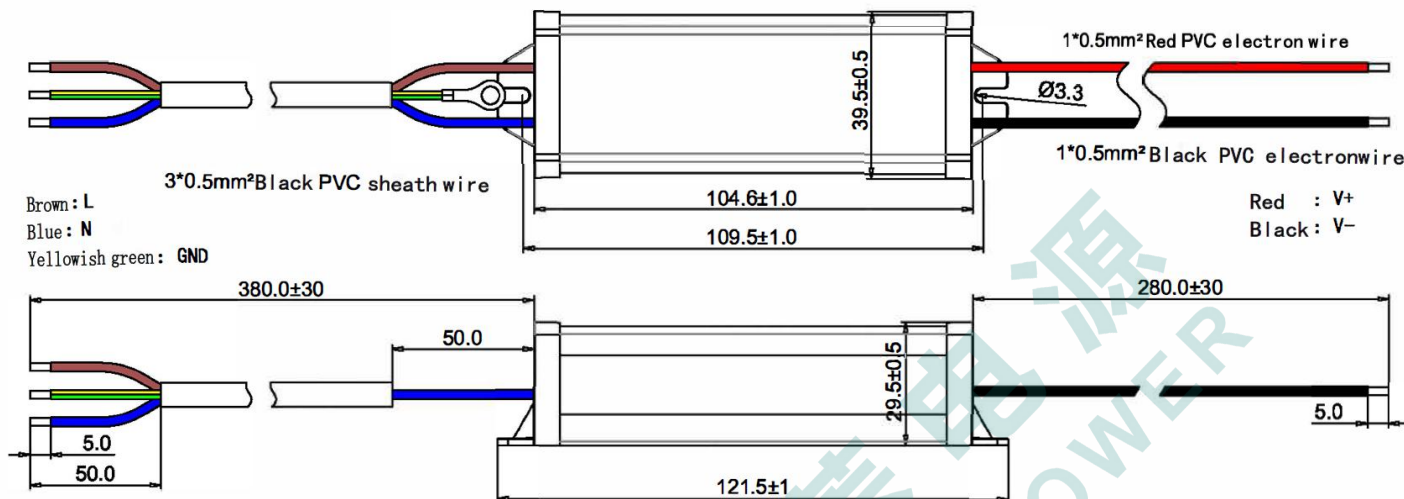
Mechanical specification

Size (mm)

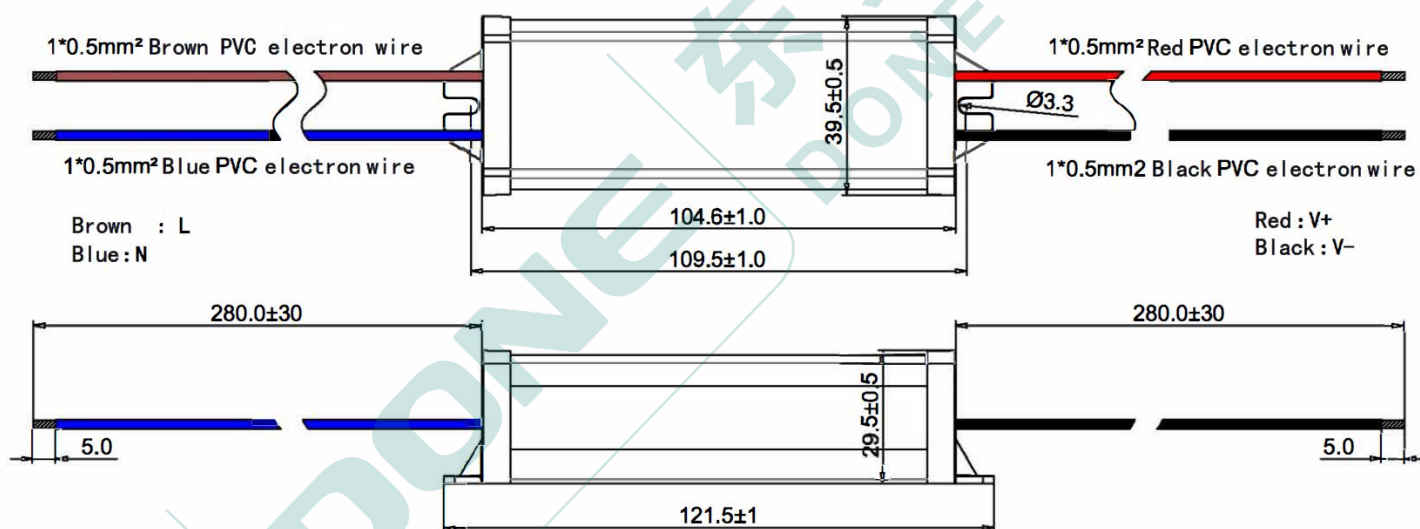
L121.5*W39.5*H29.5

Housing model: 2M11A (unit: mm)

Standard wire rod 1:



Standard wire rod 2:




Weight

Weight

217 g

Version

DATE	DESCRIPTION	REV.	CHECK
2021.4.7	Initial version.	V1.0	
2021.6.16	Cancel the undervoltage protection function on page 5	V1.1	

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EDIT

CHECK

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