

RAP SERIES LED DRIVERS

DL-150W-RAP_V1.0

A decorative graphic at the bottom of the page consisting of teal-colored wavy lines and circuit-like patterns with small white dots.

Guangdong DONE Electronic Technology Co., Ltd

Features

- Class I structure
- Input voltage: 100-240VAC ~ 50/60Hz
- Efficiency :89%(Typ.)
- plastic shell structure, protection grade: IP65
- Lightning protection level: differential mode 4kV
- All-round protection: output temperature, output over-voltage, output over-current, short circuit protection
- 3 years warranty



Product introduction

DONE DL-150W-RAP is a series of constant voltage products with output power of 150W. Can operate in the input voltage range of 90-264Vac, and provide 12Vdc,24Vdc,36Vdc,48Vdc,with perfect output over temperature, over voltage, over current, overload, short circuit protection. The product is designed with IP65 protection grade. The plastic shell greatly improves the reliability of outdoor applications. Provide reliable power supply solutions for outdoor landscape lighting, architectural lighting, and advertising sign lighting.

Model list

Model NO.	Input voltage	Output power	Output voltage	The default current	Eff. (Typ.)	T.H.D	PF
DL-150W-V12-RAP	100-240V 50/60Hz	150W	12Vdc	0-12.5A	≥89%	-	-
DL-150W-V24-RAP	100-240V 50/60Hz	150W	24Vdc	0-6.3A	≥90%	-	-
DL-150W-V36-RAP	100-240V 50/60Hz	150W	36Vdc	0-4.2A	≥90%	-	-
DL-150W-V48-RAP	100-240V 50/60Hz	150W	48Vdc	0-3.2A	≥90%	-	-

Note :

1. Test conditions of the above parameters: Ta=25℃, 230Vac input, full load operation for 30 minutes;
2. Including setting error, linear adjustment rate and load adjustment rate;
3. Power supply is used as a component with terminal equipment. EMC is affected by the whole set of devices. Terminal equipment manufacturers need to re-confirm the EMC for the whole set of devices.

Input characteristics

Parameter	Min	Typ.	Max	Note
Rated input voltage	100Vac 140Vdc	230Vac	240Vac 339Vdc	
Input voltage range	90Vac	-	264Vac	
Rated frequency	47Hz	50/60Hz	63Hz	
Power factor	-	-	3A	100% load, 100Vac input
Inrush current	-	-	120A	230Vac, cold start (25℃)
16A Circuit breaker The number of power supplies of the same model can be configured	4pcs (Type B circuit breaker) 8pcs (Type C circuit breaker) for 230Vac input			

Output characteristic

Parameter	Min	Typ.	Max	Note
Rated current DL-150W-V12-RAP DL-150W-V24-RAP DL-150W-V36-RAP DL-150W-V48-RAP	-	12.5A 6.3A 4.2A 3.2A	-	N/A
Output current range DL-150W-V12-RAP DL-150W-V24-RAP DL-150W-V36-RAP DL-150W-V48-RAP	-	-	12.5A 6.3A 4.2A 3.2A	N/A
Output voltage range DL-150W-V12-RAP DL-150W-V24-RAP DL-150W-V36-RAP DL-150W-V48-RAP	-	12V 24V 36V 48V	-	N/A
Rated power (100-264Vac)	-	150W	-	N/A
No-load voltage DL-150W-V12-RAP DL-150W-V24-RAP DL-150W-V36-RAP DL-150W-V48-RAP	-	-	12.5V 24.5V 36.5V 48.5V	N/A
Efficiency@230Vac DL-150W-V12-RAP DL-150W-V24-RAP DL-150W-V36-RAP DL-150W-V48-RAP	88% 89% 89% 89%	89% 90% 90% 90%	-	100% load @230Vac

Output characteristic

Parameter	Min	Typ.	Max	Note
Output voltage Ripple	-	$\leq 2\%$	-	100% load
Accuracy of output voltage	-3%	-	+3%	full load
Line regulation	-2%	-	+2%	full load
Load regulation	-2%	-	+2%	full load
Starting time	-	-	500ms	Full load@230Vac

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 gradually.
Output over-voltage protection	Output voltage > works voltage 1.08-1.2 times turn-off
Output over-current protection	Output current >1.1-1.5 times turn-off

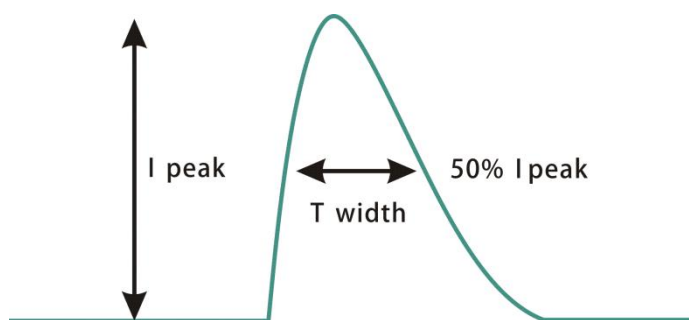
Safety and EMC

Safety categories	Standard
Safety	GB4943.1
EMC	CQC12-045670
Surge protection	Differential mode L-N $\pm 4\text{KV}$ (2 ohm) ,Refer to IEC61000-4-5 2014
High-pot test	I/P-O/P:3KVac
Insulation impedance	I/P-O/P:100M Ohms/500Vdc/ 25℃/ 70% RH
Leakage current	<0.7mA@240Vac

Environmental

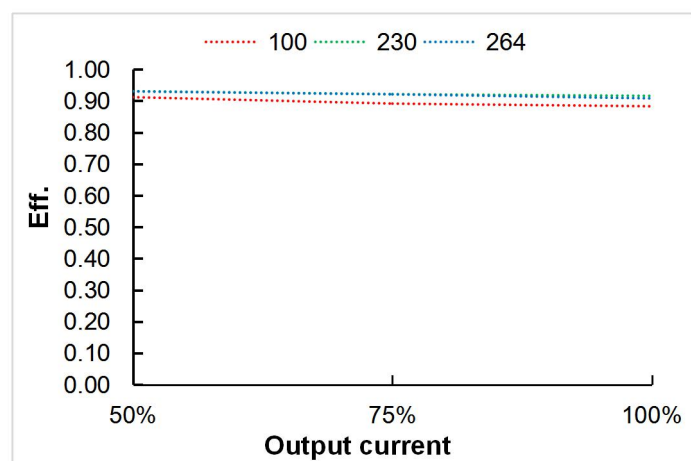
Environmental categories	Parameter
Working temperature	-40~55℃/90℃@230Vac; -40~45℃/90℃@100Vac(refer to "Life Curve ")
Working humidity	20 ~ 95% RH, non condensing
Storage temperature、 humidity	-40 ~ +80℃, 10 ~ 90% RH
Resistant to vibration	10 ~ 500Hz, 5G 12 min/cycle, X, Y, Z axis 72 min each
MTBF	230Khrs min. MIL-HDBK-217F (Ta=25℃)
Lifetime	50,000 hours @Ta≤40℃,230Vac, 100% Load, Please refer to "Tcase VS Lifetime" section

Inrush current

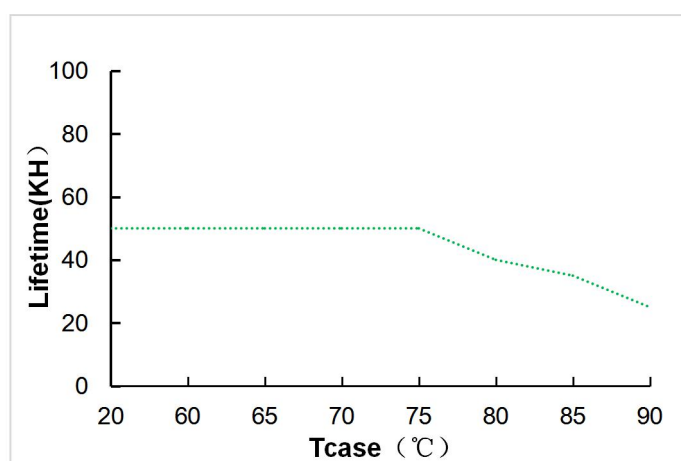


Input voltage	Peak current	T(@50% Peak current)
100Vac	65A	90us
230Vac	96.7A	180us
264Vac	98.3A	270us

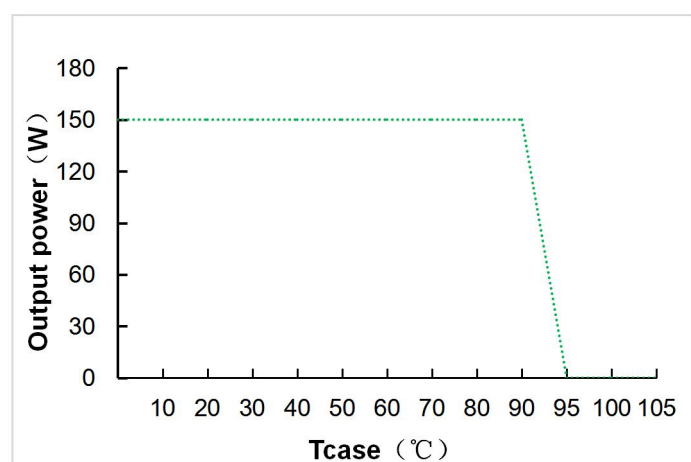
DL-150W-RAP Parametric curve



Eff. VS Output current

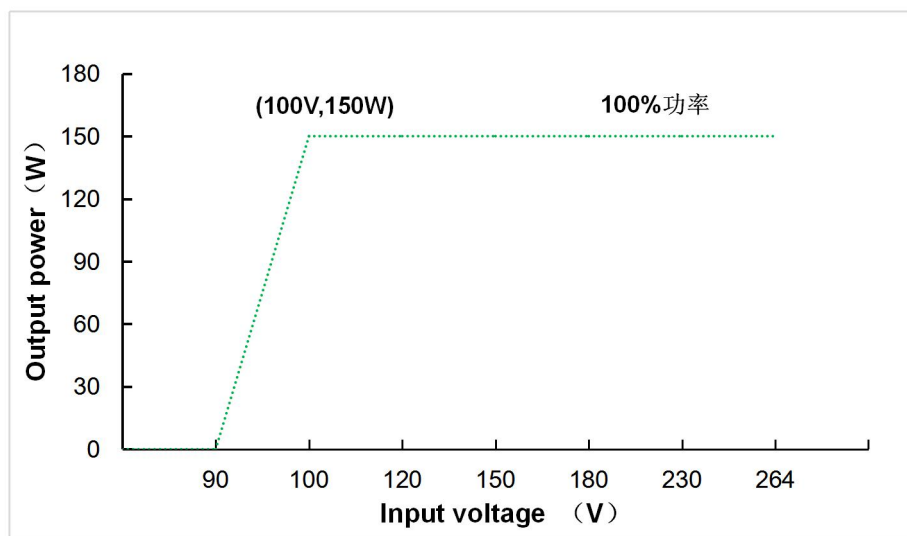


Lifetime VS Tcase



Output power VS Tcase

DL-150W-RAP Parametric curve



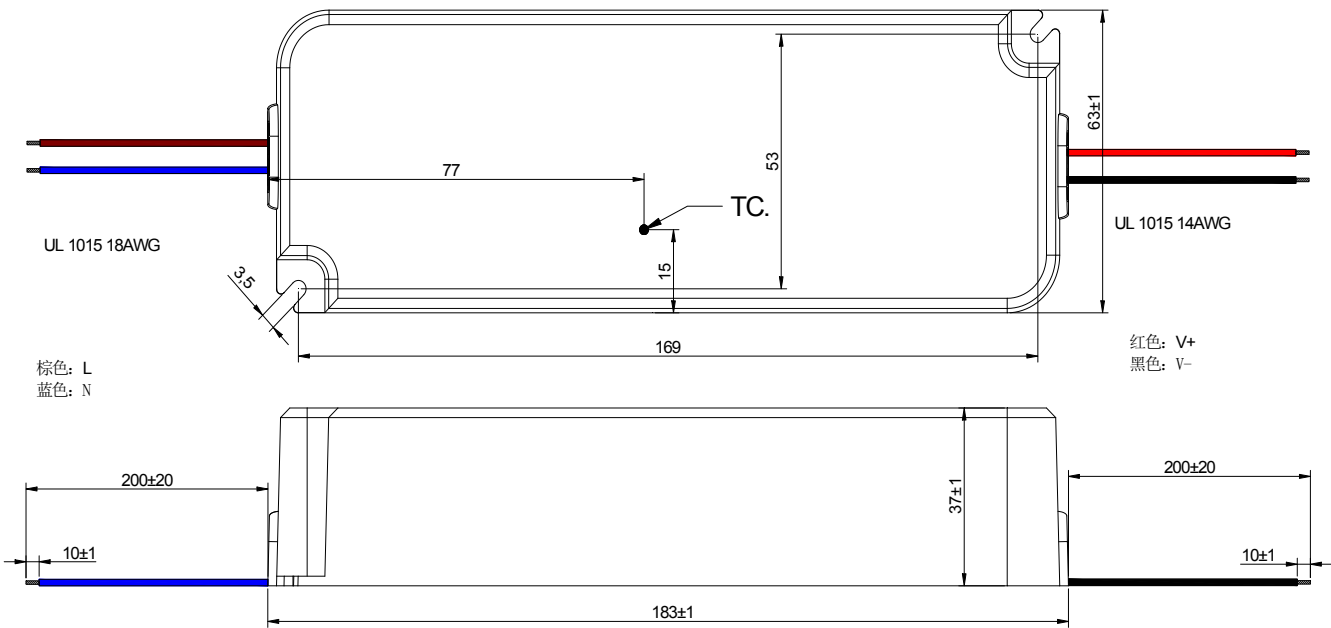
Output power VS Input voltage

Note: If the input voltage is lower than 90Vac, the output is off.

Mechanical specification

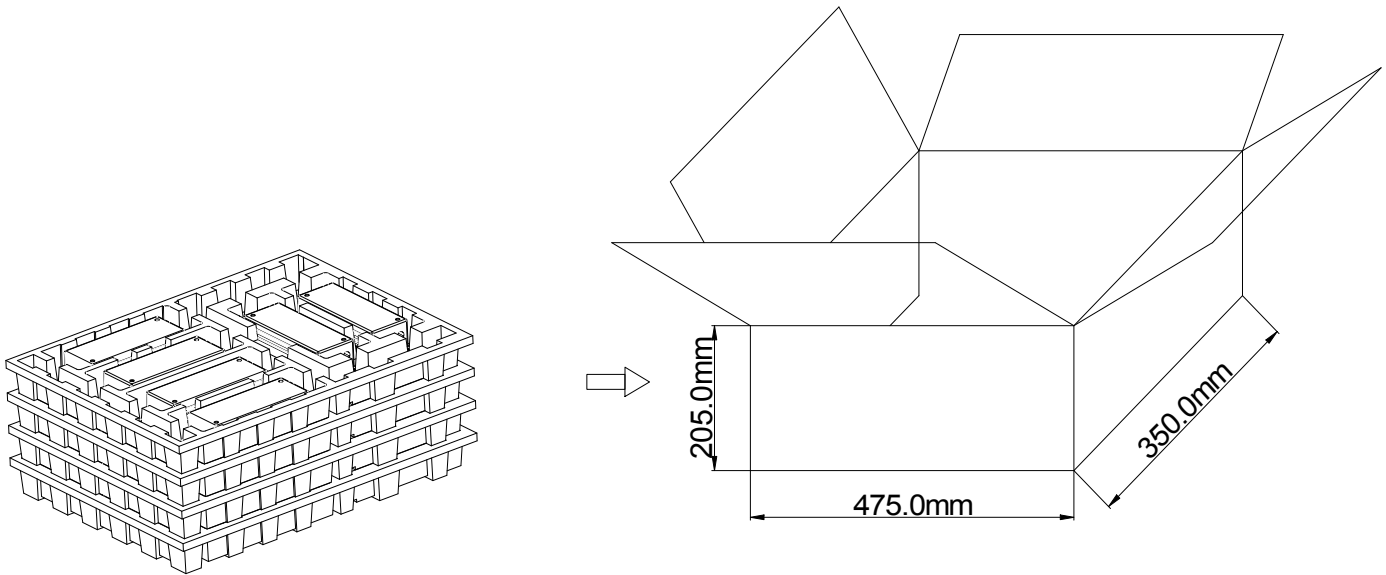
Size (mm)	L183mmxW63mmxH37mm	0.73KG
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DL-150W-RAP



Packaging

Packaging (mm) L475*W350*H205



Note: One Carton 4 layers and 6pcs each layer, total 24pcs/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
2023.09.24	Initial version.	V1.0	

MANUFACTRUER		
EDIT	CHECK	APPROVT