

DONE ® 东菱电源	产品类型	东菱 LED 室外驱动电源 DONE WATERPROOF LED DRIVER		
	产品系列	DL-240W-V260A/S/X-SEF	REV.	1.0

中山市东菱照明科技有限公司

Zhongshan Done Lighting Technology Co.,Ltd.

SPECIFICATION

CUSTOMER			
MODEL NO.	DL-240W-V260A/S/X-SEF		
VERSION	V1.0		
CUSTOMER			
TEST	CHECK	APPROVE	
CUSTOMER REMARKS			
Please return to us one copy of "SPECIFICATION FOR APPROVAL" with you approved signature..			
MANUFACTURE			
EDIT	CHECK	APPROVE	
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■ VERSION

DATE	CAUSES OF CHANGE	REV.	CHECK
2020.06.22	Initial version.	V1.0	

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FEATURES

- ◇ Class I structure
- ◇ Input Voltage : 120-277V ~ 50/60Hz
- ◇ Up to 95% efficiency
- ◇ The total harmonic distortion is less than 7%
- ◇ Constant power drive , Constant current output control mode
- ◇ Metal clad construction , level of protection : IP65
- ◇ Lightning protection level : difference module 4kV ,
common mode 4kV
- ◇ Long life design , 5 years warranty
- ◇ Output current can be adjusted Externally
- ◇ The dimming function : Three in one dimming
(Only S and X series)
- ◇ Auxiliary power supply : 12V/300mA auxiliary power supply
(Only X series)



TYPICAL APPLICATIONS

Industrial lighting、The venue lighting

MODEL LIST

Model	AC Input	Output power	Output voltage	Output current	Efficiency	T.H.D	PF
DL-240W-V260A-SEF	120-277V 50/60Hz	240W	180-260Vdc	1.2A	>95%	<7%	>0.95
DL-240W-V260S-SEF							
DL-240W-V260X-SEF							

Remark :

1. Default tested at 230Vac,full load with 30 minutes,Ta:25°C.
2. When the input voltage is lower than 108Vac±5%, the output power gradually decreases ;
120-277Vac , P rated 240W ; Please refer to the input voltage VS output power curve for details.

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■ SPECIFICATION

◇ INPUT

Rated voltage	120 - 277Vac
voltage range	90 - 305Vac
Frequency	50/60Hz
Power factor(PF)	PF>0.95 @230Vac full load
Total harmonic distortion(THD)	THD<7% @230Vac full load
Input current	DL-240W-V260X-SEF $I_{in}<2.8A$ @120Vac full load
Inrush current (typ.)	Cold start 90A @230Vac

◇ OUTPUT

Model	DL-240W-V260A-SEF DL-240W-V260S-SEF DL-240W-V260X-SEF
Rated current	0.92A
Output current ripple	$\leq 5\%I_o$
Output current range	0.75-1.25A
Output voltage range	180-260Vdc
Rated output power(90-108Vac)	140W $\pm$ 20%
Rated output power(120-277Vac)	240W
No load voltage	330Vdc Max
Efficiency	95%@230Vac full load
Accuracy off output current	$\pm 5\%$
Line regulation	$\pm 3\%$
Load regulation	$\pm 5\%$
Setup time	<500ms @230Vac full load

Remarks : The range of output current is limited by in-out voltage , For details, please refer to the I-V working area.

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◇ Others

0-10V Dimming (Optional)	Safety Dimming Voltage Range	0V - 12V
	Dim Range	0 - 100%
	Rated Dim Range	0V - 10V
PWM Dimming (Optional)	PWM High	9.5V - 10.5V
	PWM Low	0V - 0.3V
	PWM Frequency	300Hz - 2000Hz
	PWM Duty	0 - 100%
Resistor Dimming (Optional)	Resistance	0Kohm - 100Kohm
	Dim Range	0 - 100%
Auxiliary power supply (Optional)	Output voltage	12V
	Output current	300mA

Remarks:

1. Output current of dimming port: 100uA (typical value);
2. The maximum withstand voltage of the dimming port is 12V. If the external power supply voltage exceeds 12V or the signal line is reversely connected, the power supply will be damaged.

◇ Protection

Low Voltage protection	When the input voltage is less than 108Vac±5%, the output power gradually decreases.
Over Load protection	Protection mode: hiccup restart mode, automatic recovery after removal of abnormal load conditions.
Short Circuit Protection	Doze mode, can automatically recover after abnormal conditions are removed.
Over temperature Protection	When the Tcase is over 90 °C , the output power gradually decreases.
Over Voltage protection	Protection mode: hiccuping or clamping in output maximum voltage ,Production undamaged,When troubleshooting,Normal operation of power supply.

Remarks:

1. All specifications are tested at 230Vac (50Hz) , rated load, and Ta:25°C.
2. Including setting error, linear adjustment rate and load adjustment rate.

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■ ENVIRONMENT

Working temperature	-40 ~ +60°C (Refer to "Derating Curve")
Working humidity	20 ~ 95% RH, non-condensing
Storage temperature/humidity	-40~+80°C, 10 ~ 95% RH
Resistant to vibration	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes
MTBF	210K hrs min. MIL-HDBK-217F (Ta=25°C)

■ SAFETY & EMC

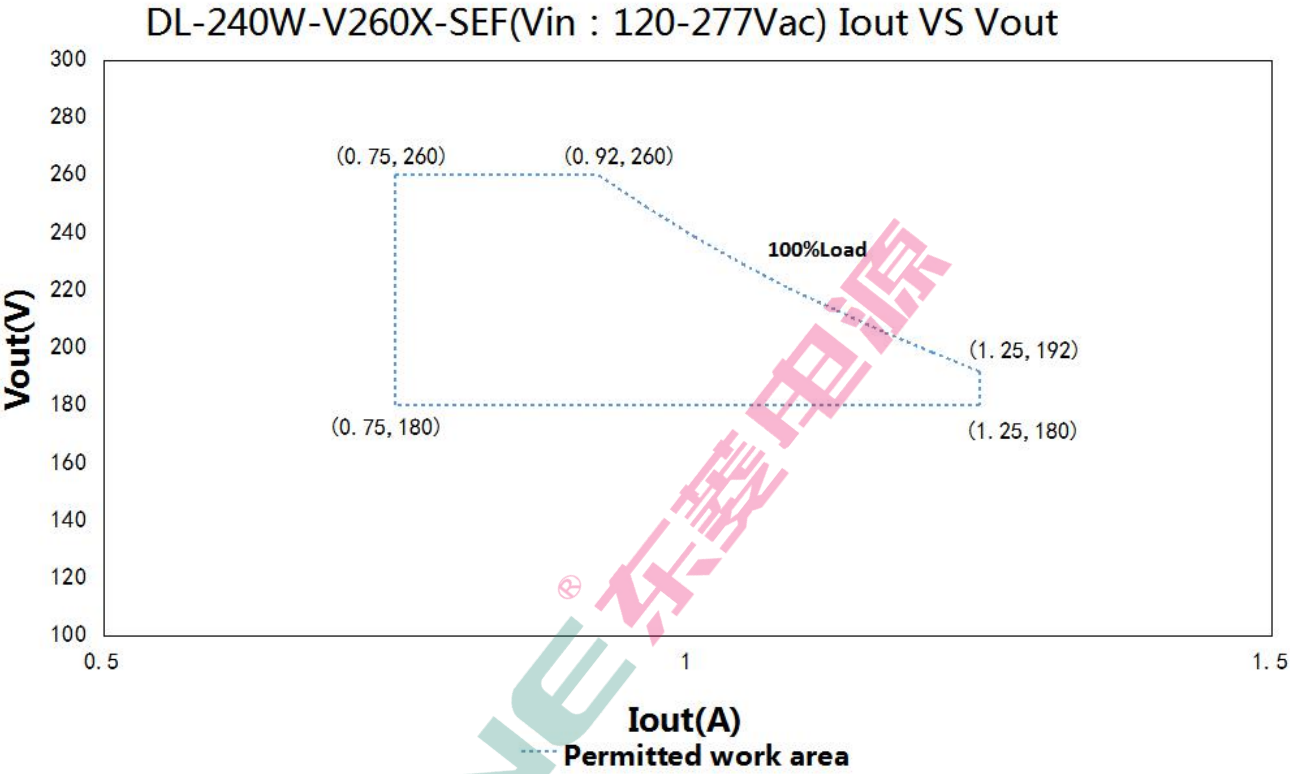
Safety	GB19510.1、GB19510.14、EN61347-1、EN61347-2-13、IEC61347-1、IEC61347-2-13、AS/NZS61347.1、AS61347.2.13、UL8750
EMC	EN 55015、EN 61000-3-2、GB/T 17743、GB17625.1、EN 61000-3-3、EN61547、FCC Part 15 Sub part B、ANSI C63.4a
Surge level	difference mode L-N $\pm$ 4 KV (2 ohm), common mode L, N-PE $\pm$ 4 KV (12 ohm) , Residual voltage of power output to ground $\leq$ 1.5kV , Refer to IEC61000-4-5 2014
High-pot test	I/P-PE :1.5KVAC O/P-PE :1.5KVAC I/P-DIM:1.5KVAC DIM-PE:500VAC (Remove ground screw)
Insulation resistance	I/P-O/P:100M Ohms / 500VDC / 25°C/ 70% RH
Leakage current	<0.7mA

Remarks:

- 1.The power supply is considered as a component that will be operated in combination with 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.Disconnect the grounding screw temporarily during the withstand voltage test.

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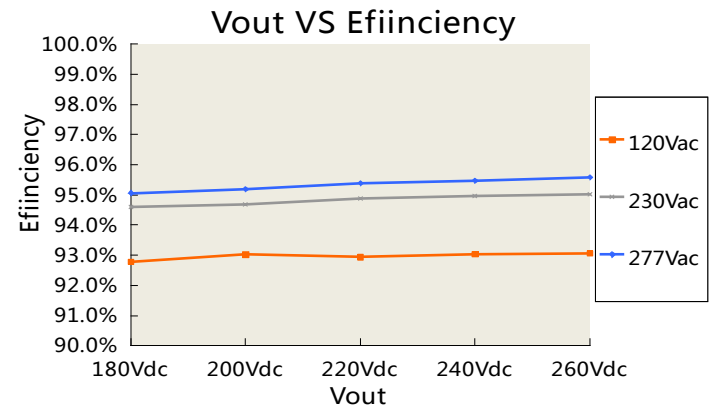
I-V Working Area



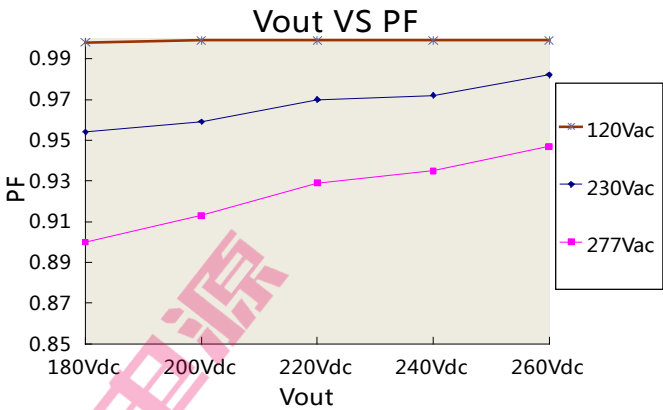
DL-240W-V260X-SEF(120-277Vac , Rated output current and output power corresponding to different load voltages)									
Load working Voltage	180V	190V	200V	210V	220V	230V	240V	250V	260V
Io_MAX	1.25A	1.25A	1.2A	1.14A	1.09A	1.04	1	0.96	0.92
Po_MAX	225W	237.5W	240W	240W	240W	240W	240W	240W	240W

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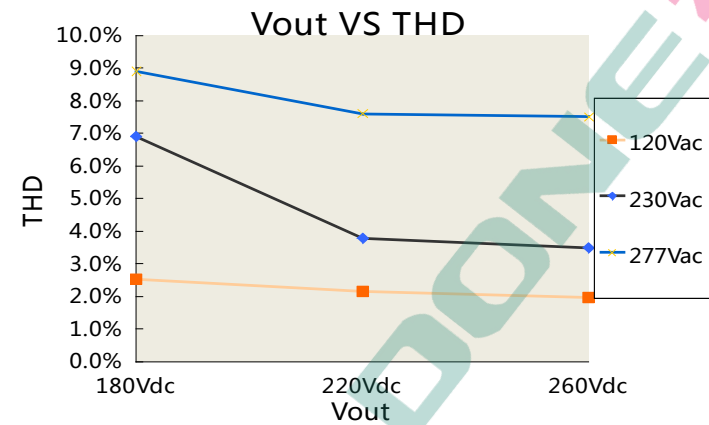
Vout VS Efficiency (DL-240W-V260X-SEF)



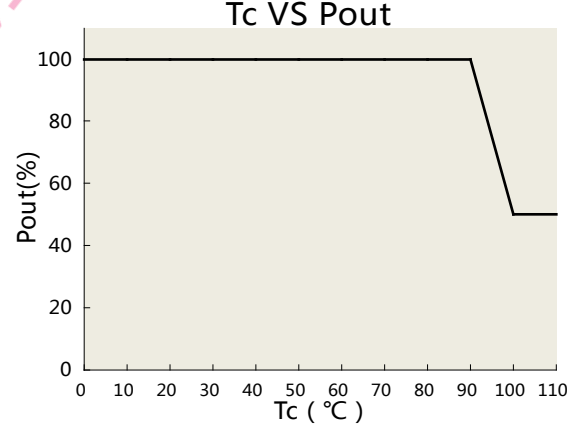
Vin VS PF (DL-240W-V260X-SEF)



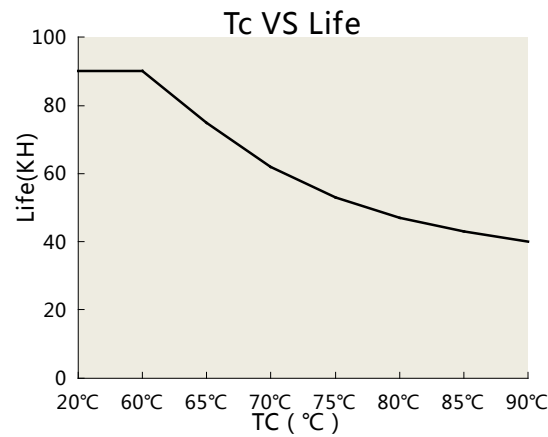
Vout VS THD (DL-240W-V260X-SEF)



Tc VS Pout (DL-240W-V260X-SEF)

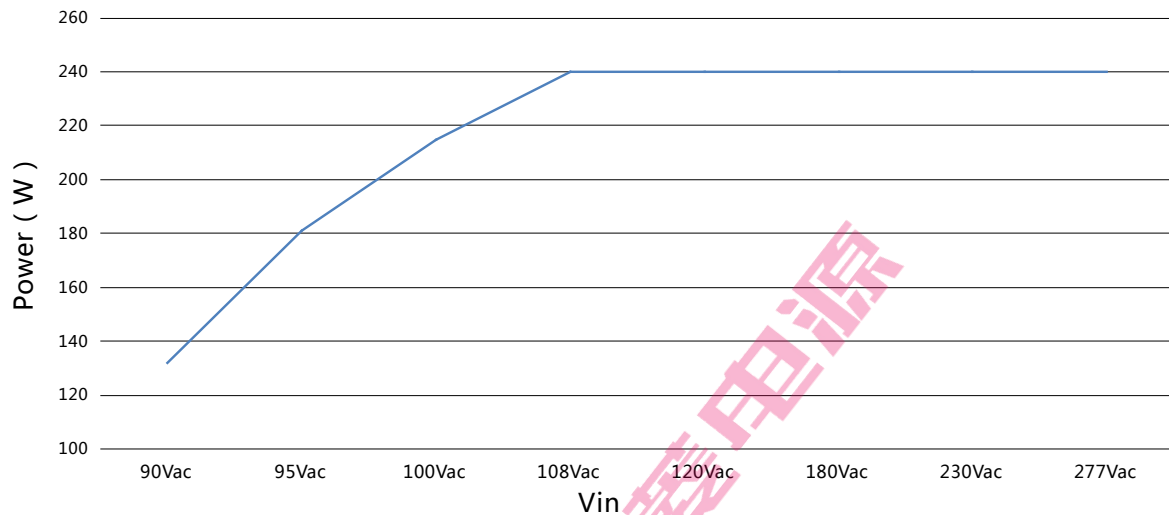


Tc VS Life (DL-240W-V260X-SEF)



■ Pout VS Vin

DL-240W-V260X-SEF (Uout=260V) Pout VS Vin graph



DL-240W-V260X-SEF(260Vdc, Rated output current and output power corresponding to different Input voltages)

Input Voltage	90Vac	95Vac	100Vac	108Vac	120Vac	180Vac	230Vac	277Vac
Io	0.51A	0.73A	1.25A	1.25A	1.25A	1.25A	1.25A	1.25A
Po	132W	181W	215W	240W	240W	240W	240W	240W

Remarks:

When the input voltage is lower than 108Vac±5Vac, the output power gradually decreases;

When the input voltage is 90V, the output power range is 140W ± 20%.

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■ DIMMING OPERATION

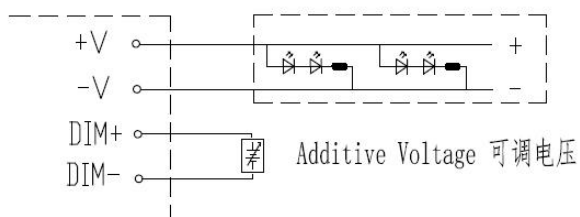
※ 3 in 1 dimming (For S ang X Type)

1. Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-: 0 ~ 10VDC, or 10V PWM signal or resistance.

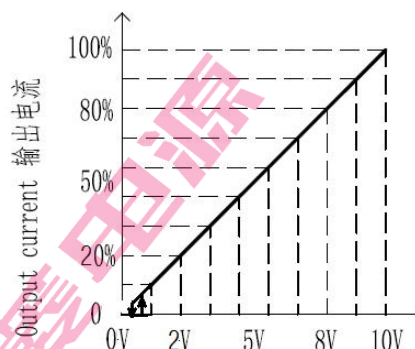
Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.

Dimming source current from power supply: 100μA (typ.)

◎ Applying additive 0-10Vdc:

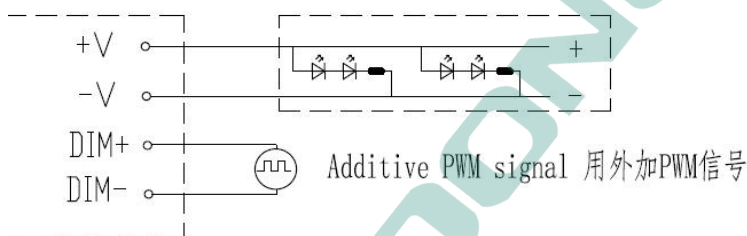


DO NOT connect "DIM- to -V" 请勿将DIM- 与-V相连

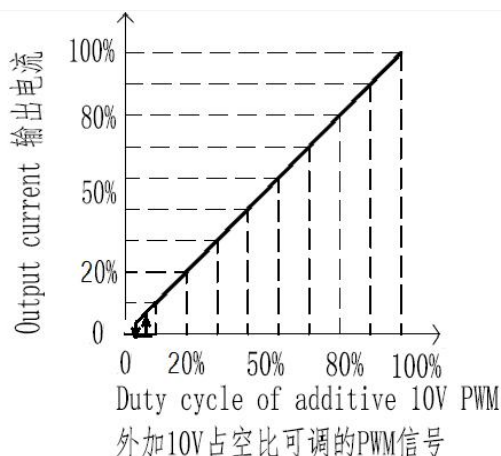


Dimming input: Additive voltage 调光输入: 外加电压

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

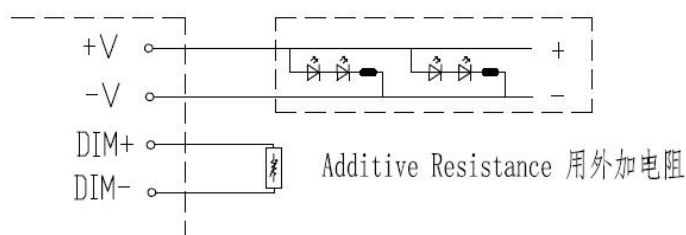


DO NOT connect "DIM- to -V" 请勿将DIM- 与-V相连

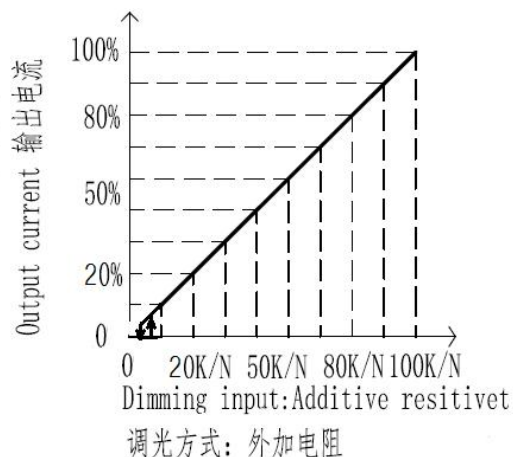


外加10V占空比可调的PWM信号

◎ Applying additive 0-100K resistance:



DO NOT connect "DIM- to -V" 请勿将DIM- 与-V相连



调光方式: 外加电阻

Note : N is the number of synchronous dimming operation drivers; Example: If the number of synchronous dimming operation drivers is 1 and the output current is 20%, then the external resistance is $20K/1=20K$; The number of synchronous dimming operators is 2, the output current is 20%, and the external resistance is $20K/2=10K$, and so on.

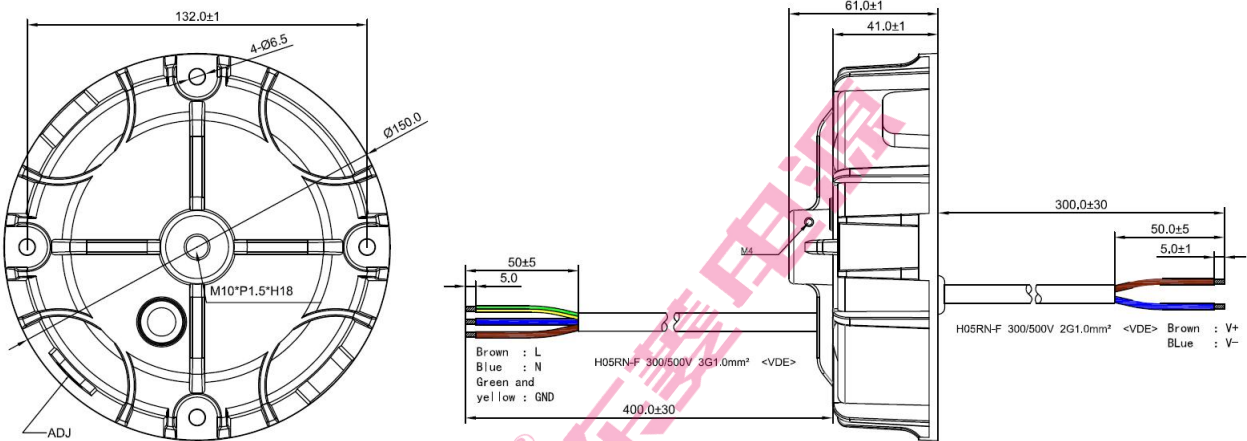
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MACHINE SIZE MAP:

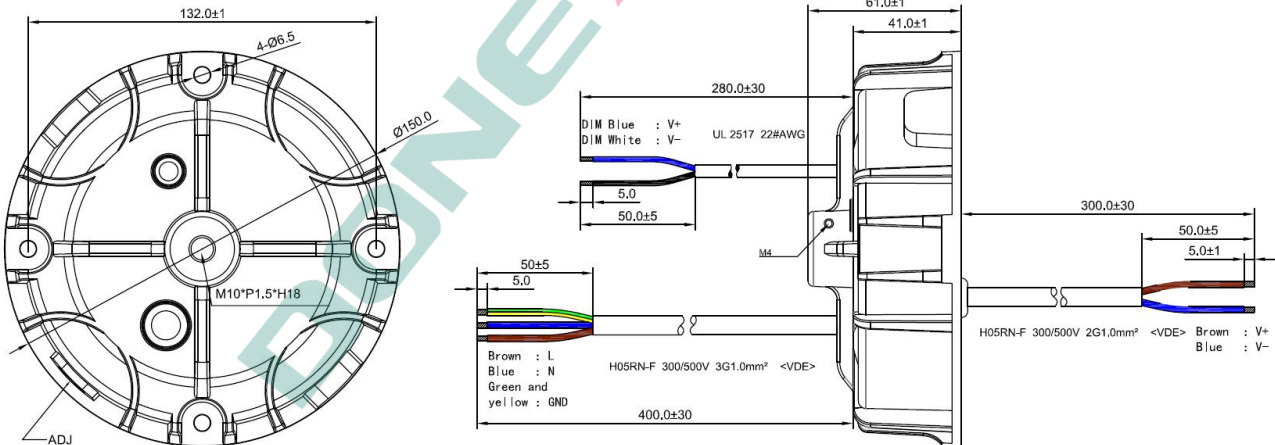
Size (mm)	Φ150mm*H61mm
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Case model : QP200-03
 unit:mm

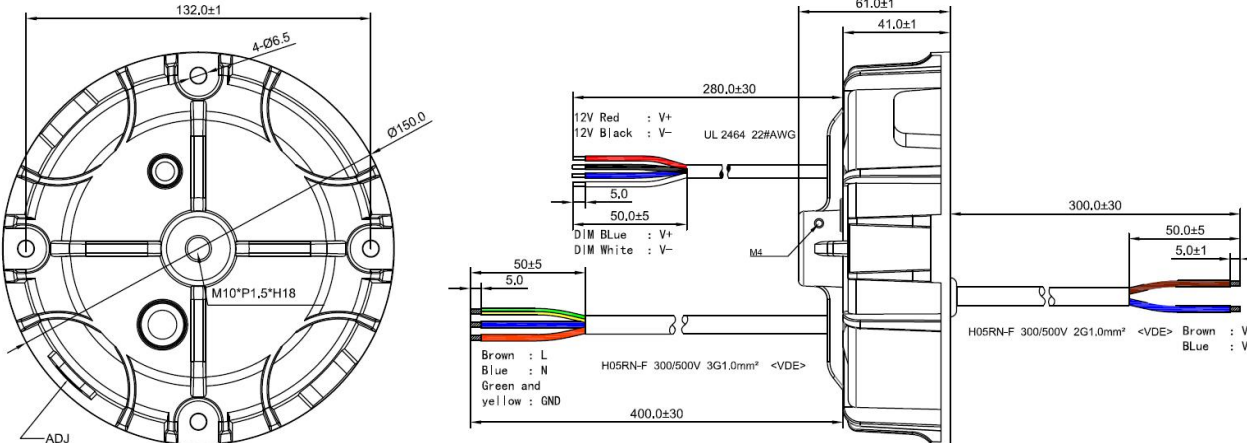
DL-240W-V260A-SEF



DL-240W-V260S-SEF



DL-240W-V260X-SEF



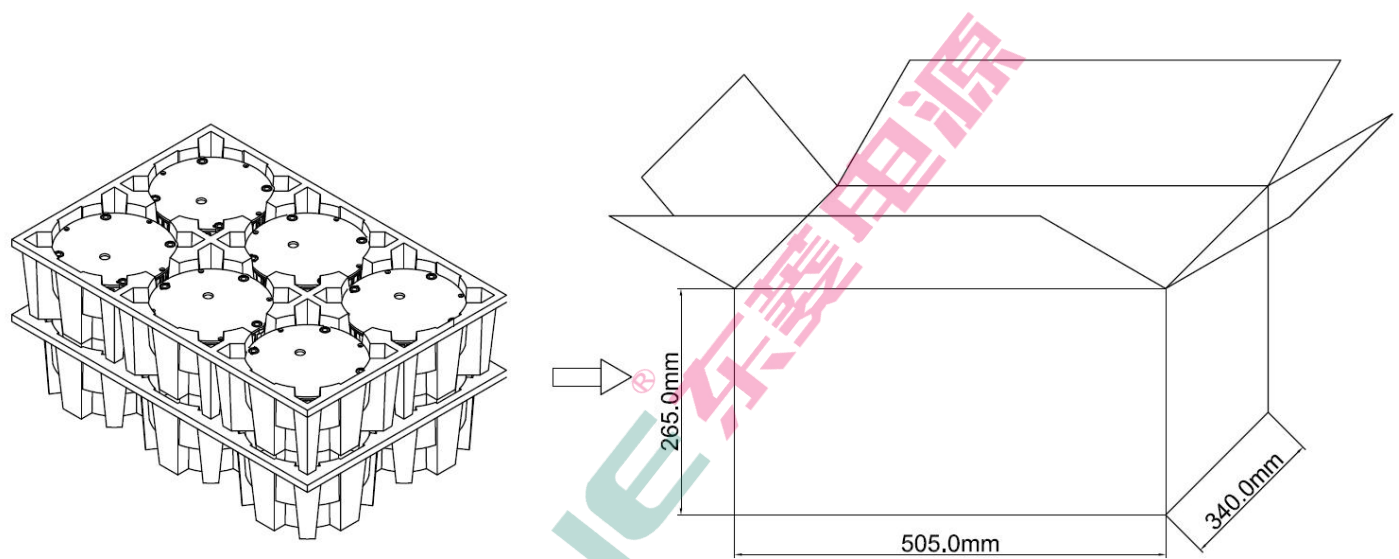
WEIGHT

Weight	1125g
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■ PACKAGING

Packaging (mm)	L505*W340*H265mm
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Remacks: A case of 2 layers ,
Each layer of 6 PCS

Warning:

1. According to the certificate obtained by the power supply, the LED DRIVER with English label is applicable to luminaires sold in Europe, America and India;
2. The LED DRIVER with Chinese label is only used for luminaires sold to China.