

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

DONE

SBS SERIES LED DRIVER

DL-80Z-SBS SPEC V1.1

Features

- Class I type for insulation
- Input voltage range: 100-277Vac ~ 50/60 Hz
- Efficiency :90%(Typ.)
- Constant current output ,with power limitation for control mode
- Metal case, protection grade against water and dust: IP65
- Surge level:
 - differential mode :4kV,
 - common mode :6kV
- Guaranteed Lifetime : 5 years



Applications

Explosion-proof lighting



Model list

Model NO.	Input voltage	Output power	Output voltage	The default current	Eff. (Typ.)	T.H.D	PF
DL-80Z-V38A-SBS	100-277Vac 50/60Hz	80W	20-38Vdc	2.4A	≥90%	≤10%	≥0.95
DL-80Z-V58A-SBS	100-277Vac 50/60Hz	80W	32-58Vdc	1.8A	≥90%	≤10%	≥0.95

- Note :**
1. Test conditions: Ta=25℃ , under 230Vac input,after running for 30 minutes with full load .
 2. When the input is less than 90±10Vac,the output power gradually decreases to a half.and it recovers full power of 80W when the input is above 100VAC again. Please refer to “THE OUTPUT POWER VS INPUT VOLTAGE” curve chart for details.

Input characteristics

Parameter	Min	Typ.	Max	remark
Rated input voltage	100Vac	230Vac	277Vac	
Input voltage range	90Vac		305Vac	
Rated frequency range	47Hz	50/60Hz	63Hz	
Power factor	-	0.95	-	@230Vac input ,with full load
T.H.D.	-	-	10%	@230Vac input ,with full load
Input current	-	-	1A	@100Vac input ,with full load
Inrush current	-	-	70A	@230Vac input, cold start (25°C)

Output characteristics

Parameter	Min	Typ.	Max	remark
Rated current				
DL-80Z-V38A -SBS	-	2.1A	-	
DL-80Z-V58A -SBS	-	1.38A	-	
Output current range				
DL-80Z-V38A -SBS	1.5A	-	2.5A	
DL-80Z-V58A -SBS	1.05A	-	1.9A	
Output voltage range				
DL-80Z-V38A -SBS	20V	-	38V	Constant power:32-38V
DL-80Z-V58A -SBS	32V	-	58V	Constant power:42-58V
Rated power(100-277Vac)	-	80W	-	Decrease to a half once input voltage being less than 90±10Vac
No-load voltage				
DL-80Z-V38A -SBS	-	-	55V	
DL-80Z-V58A -SBS	-	-	75V	
Efficiency@100Vac				
DL-80Z-V38A -SBS	86%	88%	-	@100Vac input ,with full load
DL-80Z-V58A -SBS	86%	88%	-	

Output characteristics

Parameter	Min	Typ.	Max	Note
Efficiency@230Vac DL-80Z-V38A -SBS	88%	90%	-	@230Vac input ,with full load
DL-80Z-V58A -SBS	88%	90%	-	
Accuracy of output current	-6%	-	+6%	For constant-power range , with full load
Line regulation	-5%	-	+5%	full load
Load regulation	-5%	-	+5%	full load
Starting time	-	-	1000ms	Full load @100-277Vac

Note: 1.The output current is limited by the input and output voltage, please refer to “I-V WORKING AREA” for details;

2.The output current accuracy range is $\pm 7\%$ when the input voltage is 100-180Vac, and $\pm 6\%$ when the input voltage is 180-277Vac.

Dimming characteristics

Dimming function		Min	Typ.	Max	Instructions
Resistor Dimming (Optional)	Rated external resistance value	0K Ω	-	100K Ω	-
	Dimming output range	30%	-	100%	-

Protection

Protection	description
under-voltage protection	When the input voltage is less than 90 \pm 10Vac, the output power decreases.
Output over-voltage protection	hiccup mode,and recovers automatically when the fault condition is removed.
Output short circuit protection	Hiccup mode,and recovery automatically when the fault condition is removed.
Over temperature protection	when the temperature of the case is greater than 90 $^{\circ}$ C , the output power decreases to a half.
Output over-power protection	The maximum output power is limited to about 1.1 time of the rating automatically. Only for P version

Note:

1. Unless otherwise specified, all parameters should be measured at the condition of 230Vac (50Hz) input ,with rated load ,and ambient temperature of 25 $^{\circ}$ C ;
2. Including setting error, linear adjustment rate and load adjustment rate;

Environmental

Environmental categories	Parameter
Working temperature	-40 ~ +50°C@100-277Vac (refer to "Life Curve ")
Working humidity	20 ~ 85% 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)

Safety and EMC

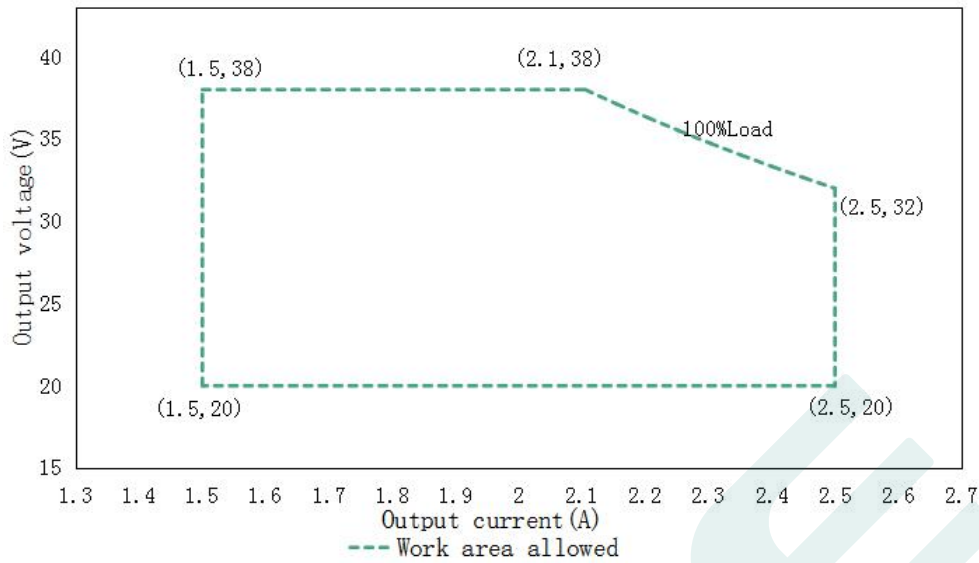
Safety categories	Standard
Safety	GB19510.1、GB19510.14、EN61347-1、EN61347-2-13、IEC61347-1、IEC61347-2-13、AS/NZS61347.1、AS61347.2.13、EN 62384;
EMC	EN 55015、EN 61000-3-2 、GB/T 17743、GB17625.1、 EN 61000-3-3
Surge leve	Differential mode L-N ±4KV (2 ohm) ,common mode L, N-PE± 6KV (12 ohm); Refer to IEC61000-4-5 2014 Criterion B
High-pot test	I/P-O/P:3.75KVac I/P-PE :1.5KVac O/P-PE : 0.5KVac
Insulation impedance	I/P-PE:100MΩ / 1000VDC; 25°C/ 70% RH
Leakage current	<0.7mA@277Vac

Note:

1.Attention! As a component of the whole, the EMC performance of the final product is not only decided by the driver, even if the driver is well-designed and fulfil all the required compliance. The final equipment manufacturers must re-qualify EMC Directive on the complete product.

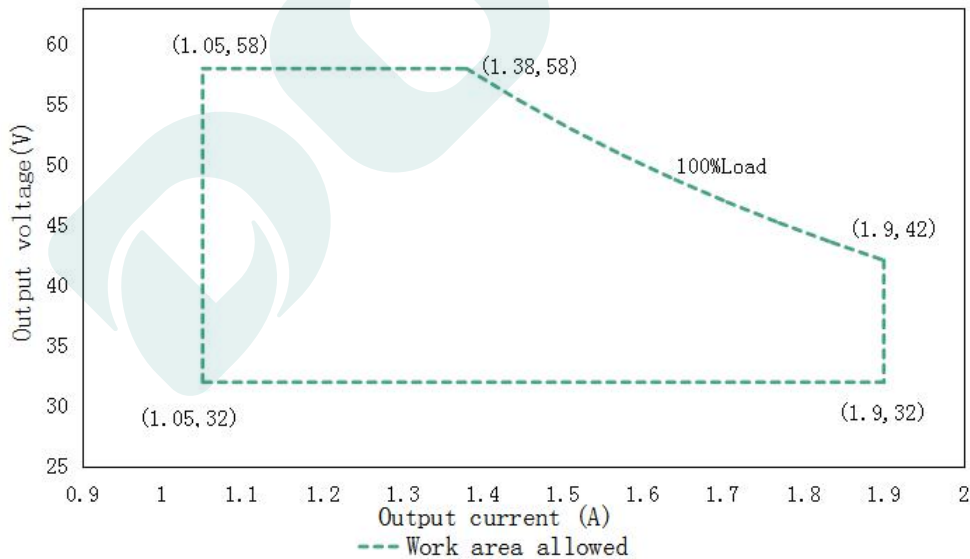
I-V Working area

Output voltage VS output current of DL-80Z-V38A-SBS (input: 100-277Vac)



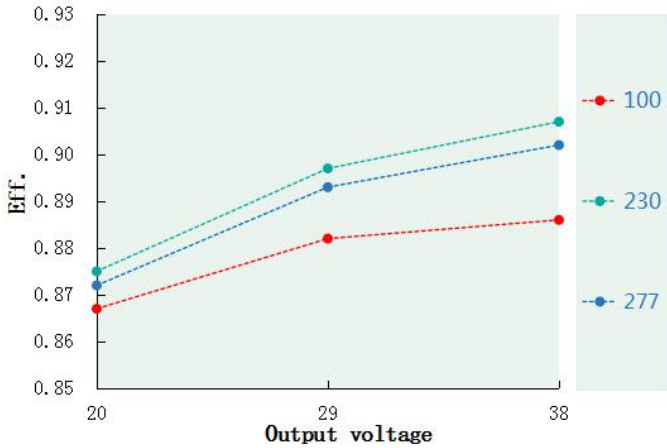
Load	Output								
Load working Voltage	20V	22V	24V	27V	30V	32V	34V	36V	38V
Io_MAX	2.5A	2.5A	2.5A	2.5A	2.5A	2.5A	2.35A	2.22A	2.1A
Po_MAX	50W	55W	60W	67.5W	75W	80W	80W	80W	80W

Output voltage VS output current of DL-80Z-V58A-SBS (input: 100-277Vac)

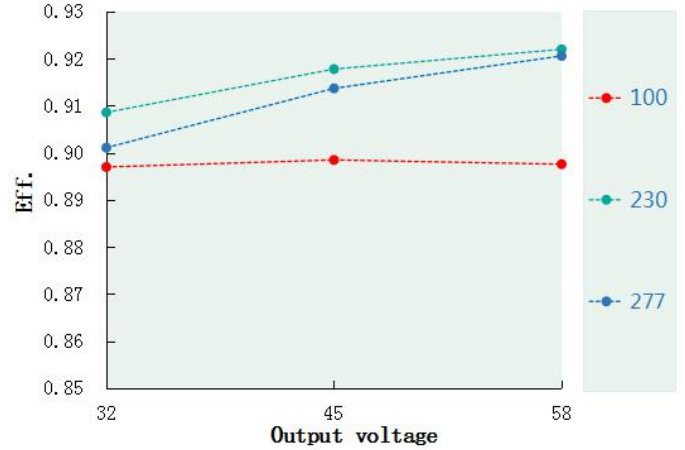


负载	输出								
负载工作电压	32V	35V	39V	42V	45V	49V	52V	55V	58V
电源电流 Io_MAX	1.9A	1.9A	1.9A	1.9A	1.9A	1.63A	1.54A	1.45A	1.38A
电源功率 Po_MAX	60.8W	66.5W	74.1W	67.5W	79.8W	80W	80W	80W	80W

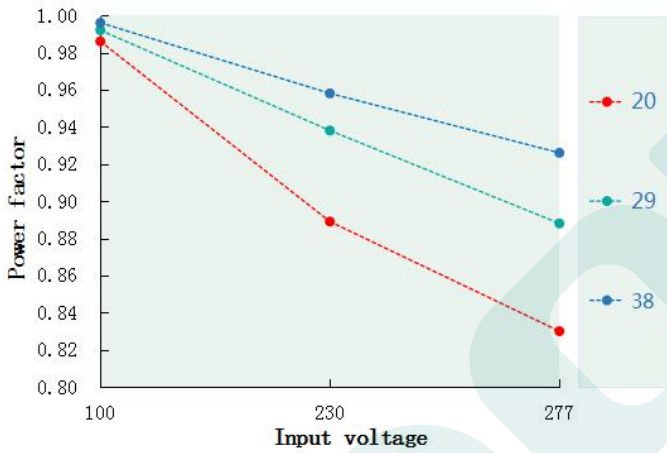
Eff. VS Output voltage(DL-80Z-V38A-SBS)



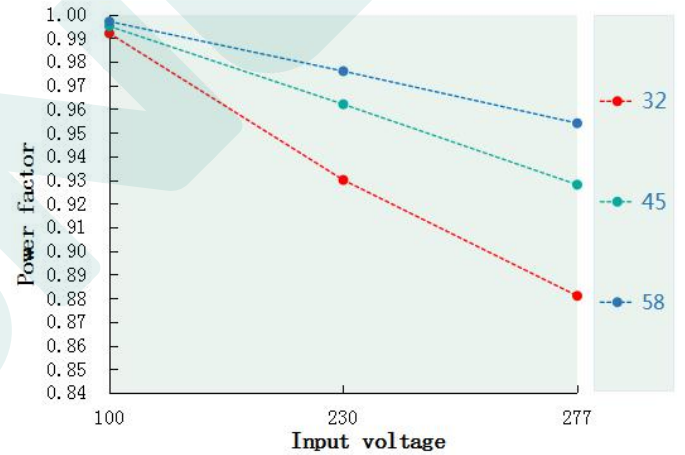
Eff. VS Output voltage(DL-80Z-V58A-SBS)



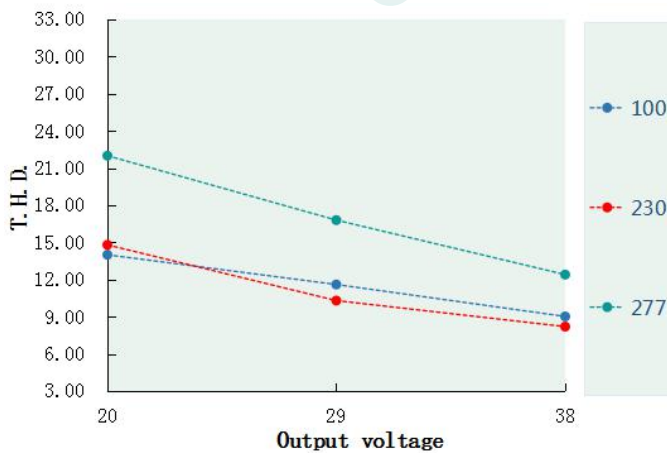
Power factor VS Input voltage(DL-80Z-V38A-SBS)



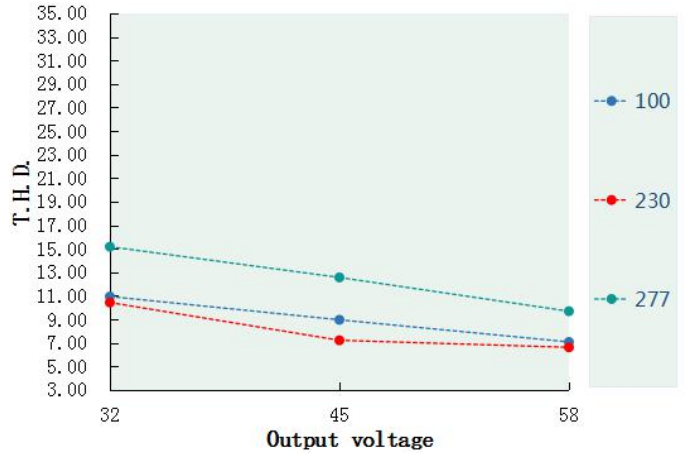
Power factor VS Input voltage(DL-80Z-V58A-SBS)



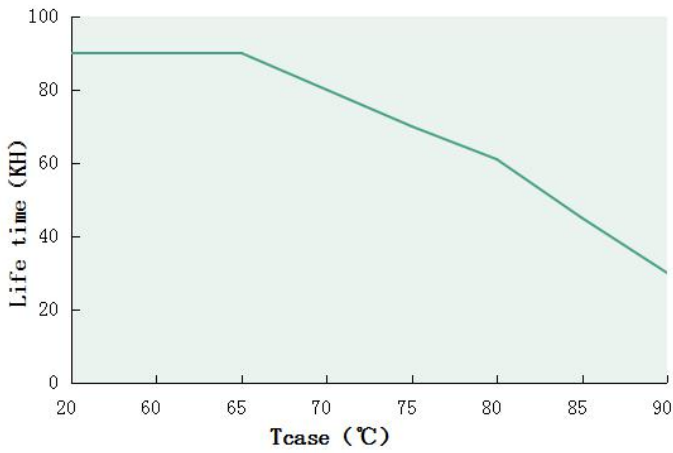
T.H.D. VS Output voltage(DL-80Z-V38A-SBS)



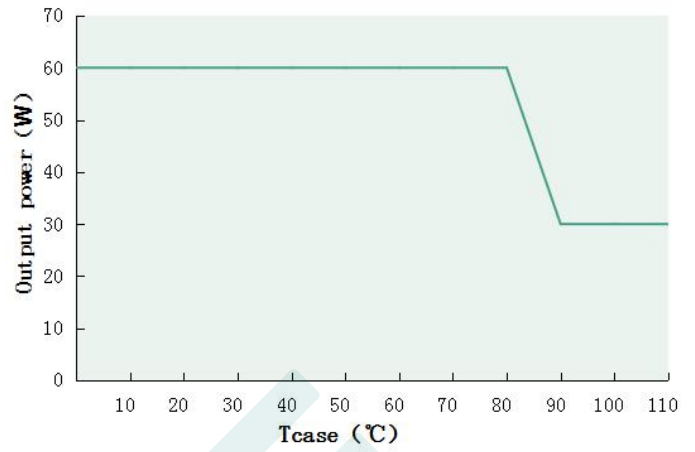
T.H.D. VS Output voltage(DL-80Z-V58A-SBS)



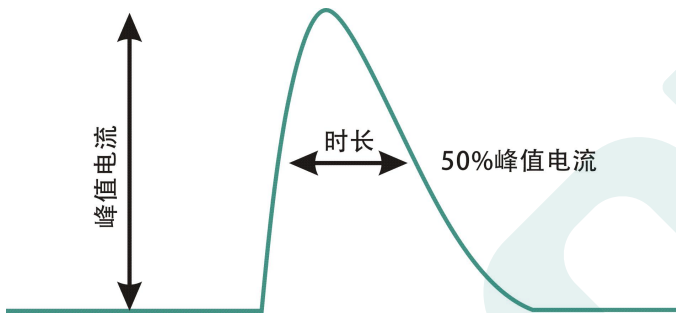
Tcase VS Lifetime(DL-80Z-V38/V58A-SBS)



Output power VS Tcase (DL-80Z-V38/V58A-SBS)

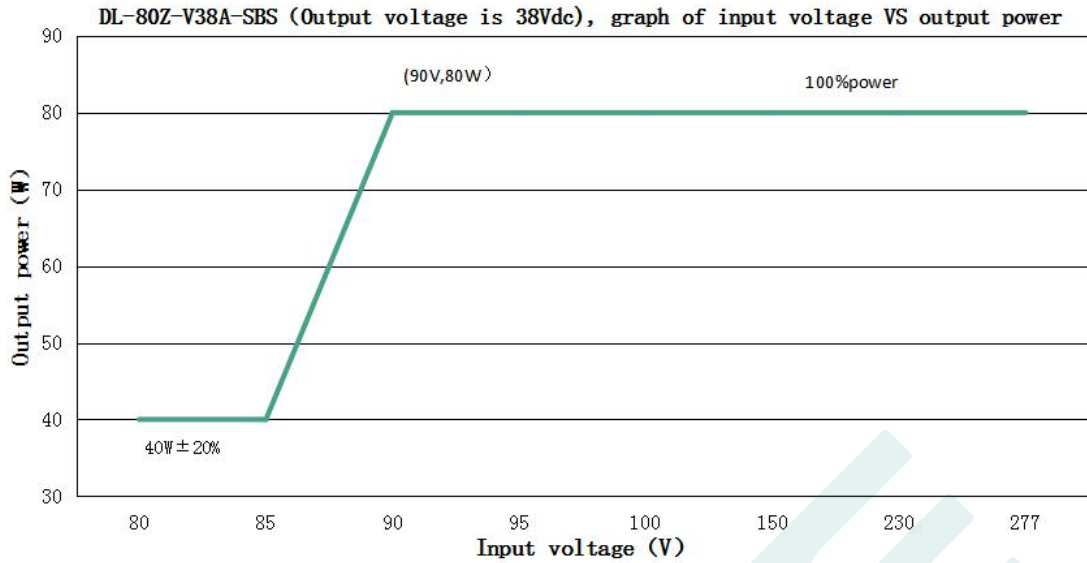


Surge curve(DL-80Z-V38/V58A-SBS)



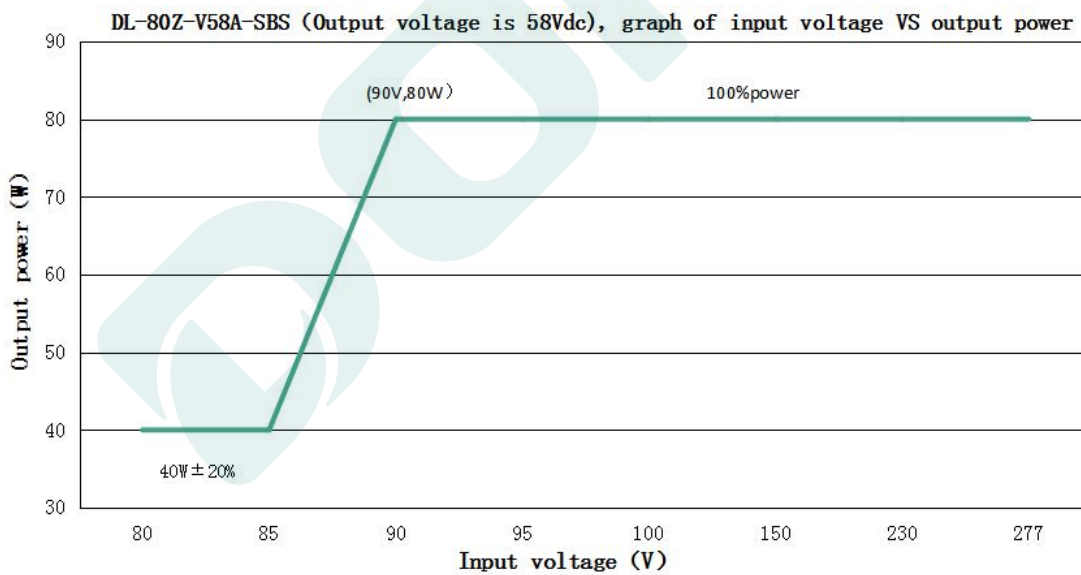
输入电压	峰值电流	T (@50%峰值电流)
120Vac	25.6A	1.72us
230Vac	58.8A	1.7us
277Vac	66.2A	1.96us

Output power VS Input voltage



DL-80Z-V38A-SBS (For output 38Vdc, the rated output current & power under different input voltage)

Input Voltage	80Vac	85Vac	90Vac	100Vac	120Vac	180Vac	230Vac	277Vac
I _{out}	1.05A	1.05A	1.05A	2.1A	2.1A	2.1A	2.1A	2.1A
P _{out}	40W	40W	40W	80W	80W	80W	80W	80W



DL-80Z-V58A-SBS (For output 58Vdc, the rated output current & power under different input voltage)

Input Voltage	80Vac	85Vac	90Vac	100Vac	120Vac	180Vac	230Vac	277Vac
I _{out}	0.69A	0.69A	0.69A	1.38A	1.38A	1.38A	1.38A	1.38A
P _{out}	40W	40W	40W	80W	80W	80W	80W	80W

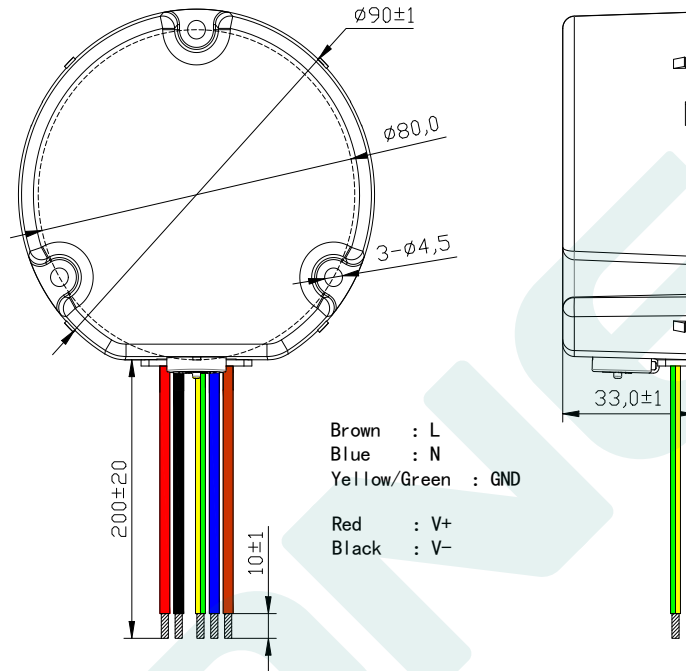
Note:

1. When the input voltage is below 90±10Vac, the output power decreases to 40W±20%.

Mechanical specification

Size (mm) $\varnothing 90 \times H33 \text{mm}$

Dimension drawing
DL-80Z-V38/58A-SBS

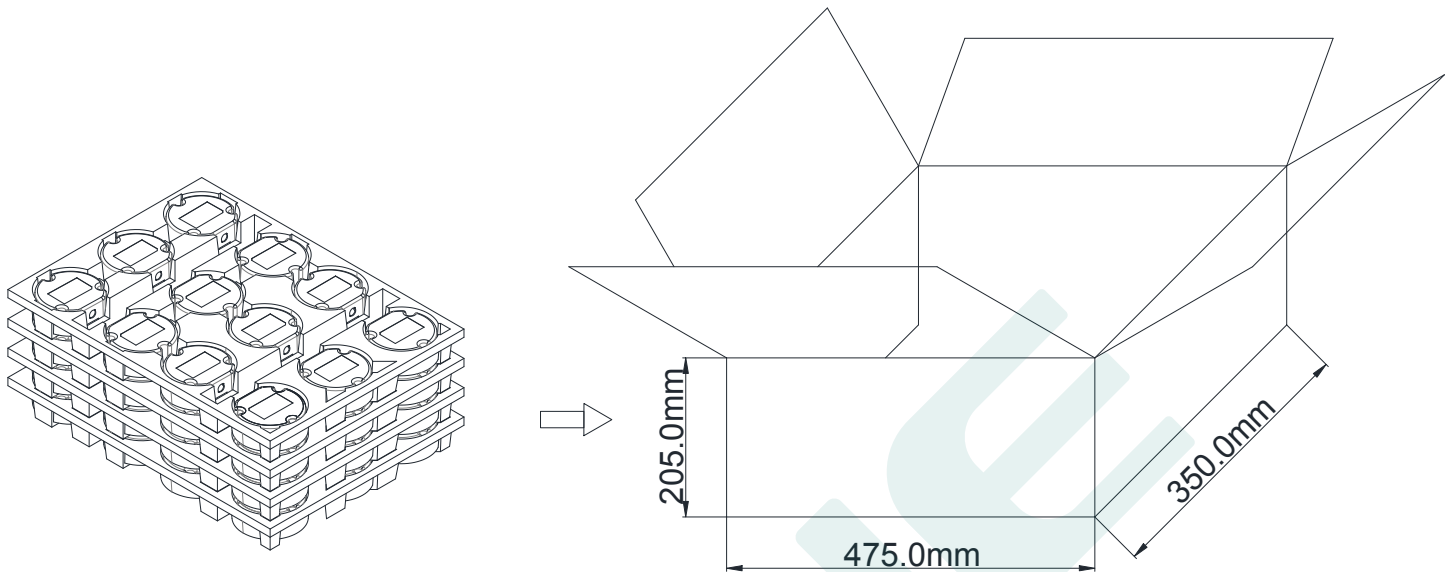


Weight

Weight 368 g

Packaging

Packaging (mm) L475*W350*H205



Note: One Carton 4 layers and 12 pcs each layer, total 48pcs/carton.

Note:

1. According to the qualified certificate of the LED DRIVER, that with English label is for sale in Europe, America and India.
2. That with Chinese label are used for Chinese market.

Version

DATE	DESCRIPTION	REV.	CHECK
2023.5.13	Initial version.	V1.0	
2023.9.25	Added 58V output models	V1.1	

MANUFACTRUER

EDIT

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