

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

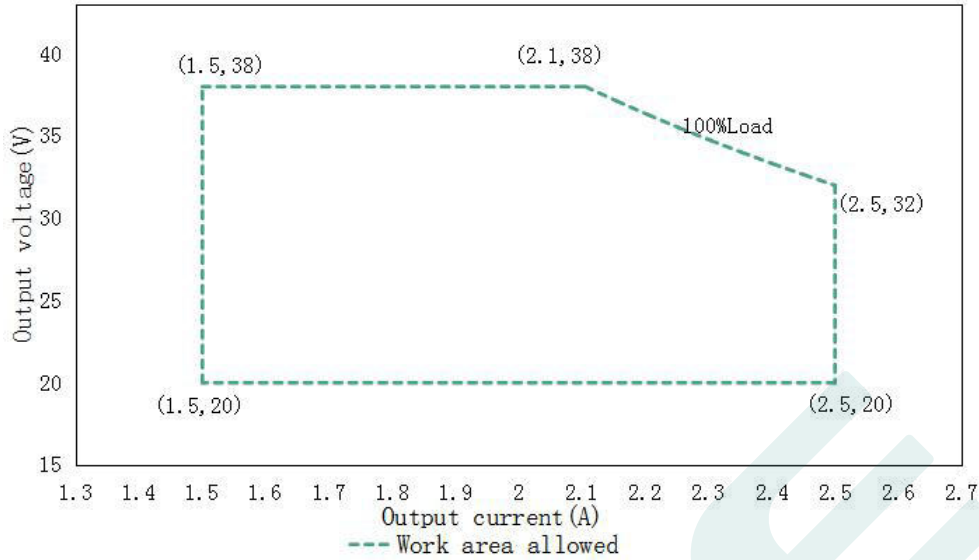
| Safety categories | Standard |
|----------------------|---|
| Safety | GB19510.1、GB19510.14、EN61347-1、EN61347-2-13、IEC61347-1、IEC61347-2-13、AS/NZS61347.1、AS61347.2.13、EN 62384; |
| EMC | EN 55015、EN 61000-3-2 、GB/T 17743、GB17625.1、 EN 61000-3-3 |
| Surge leve | Differential mode L-N ±4KV (2 ohm) ,common 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.

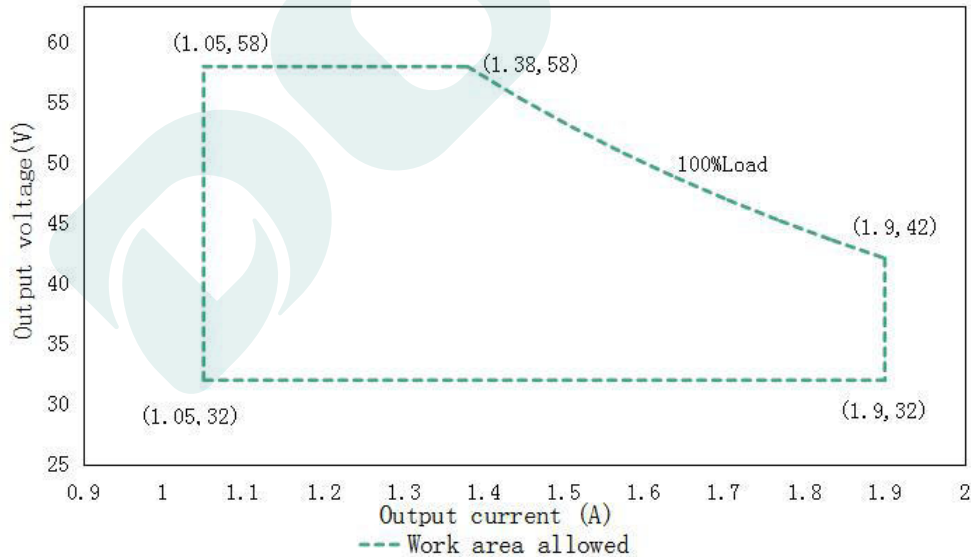
I-V Working area

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



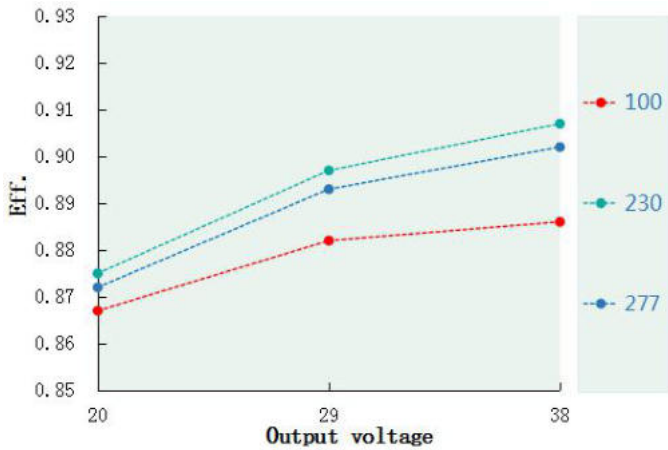
| Load | Output | | | | | | | | |
|----------------------|--------|------|------|-------|------|------|-------|-------|------|
| Load working Voltage | 20V | 22V | 24V | 27V | 30V | 32V | 34V | 36V | 38V |
| Io_MAX | 2.5A | 2.5A | 2.5A | 2.5A | 2.5A | 2.5A | 2.35A | 2.22A | 2.1A |
| Po_MAX | 50W | 55W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

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

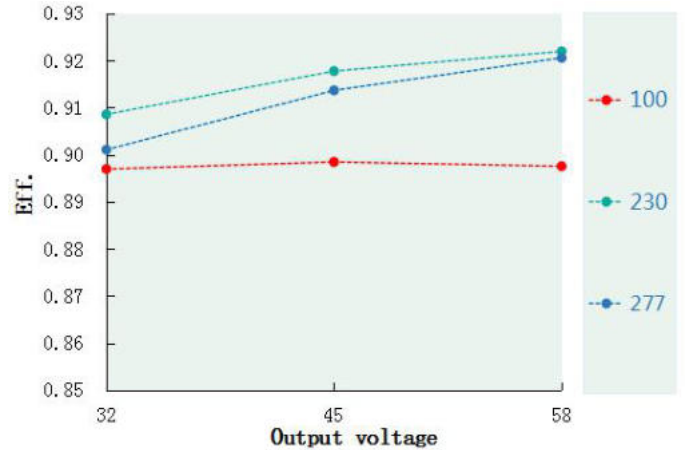


| 负载 | 输出 | | | | | | | | |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 负载工作电压 | 32V | 35V | 39V | 42V | 45V | 49V | 52V | 55V | 58V |
| 电源电流 Io_MAX | 1.9A | 1.9A | 1.9A | 1.9A | 1.9A | 1.63A | 1.54A | 1.45A | 1.38A |
| 电源功率 Po_MAX | 60.8W | 66.5W | 74.1W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

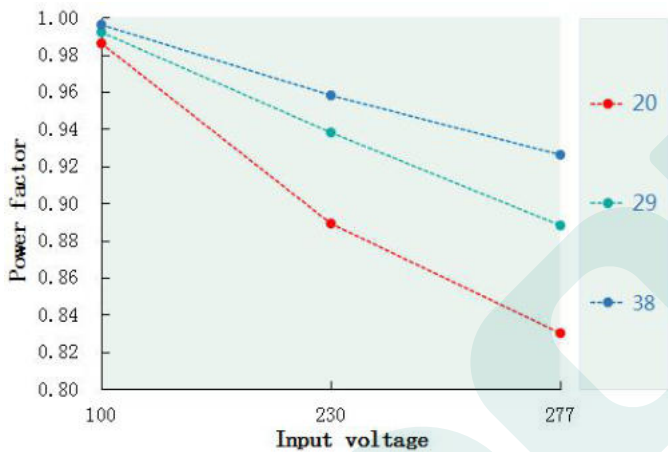
Eff. VS Output voltage(DL-80Z-V38A-SBS)



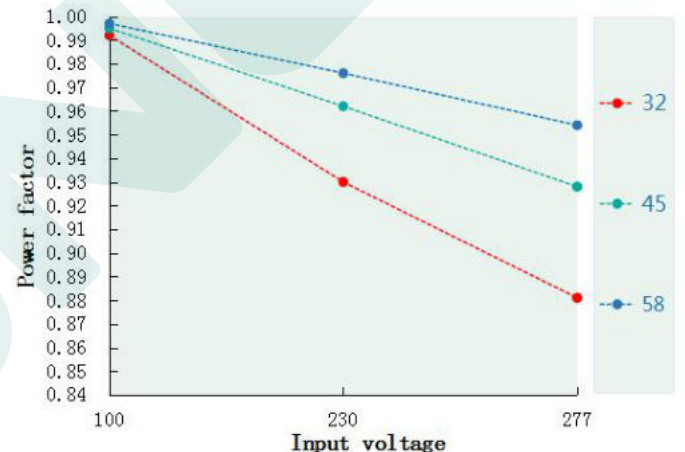
Eff. VS Output voltage(DL-80Z-V58A-SBS)



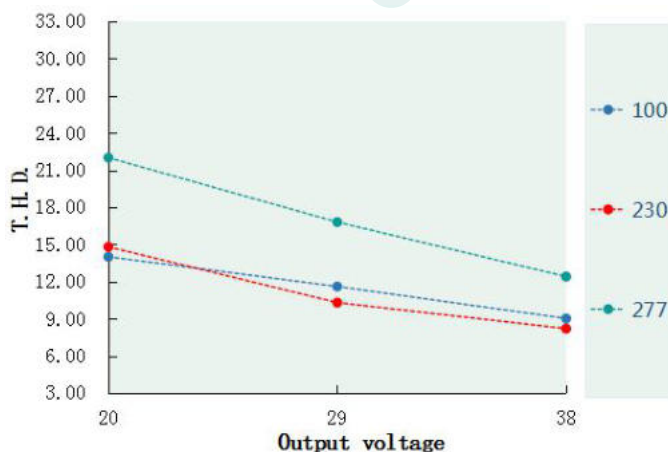
Power factor VS Input voltage(DL-80Z-V38A-SBS)



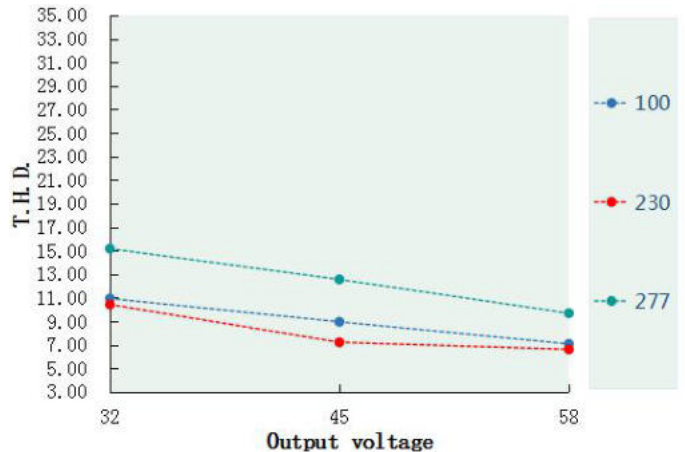
Power factor VS Input voltage(DL-80Z-V58A-SBS)



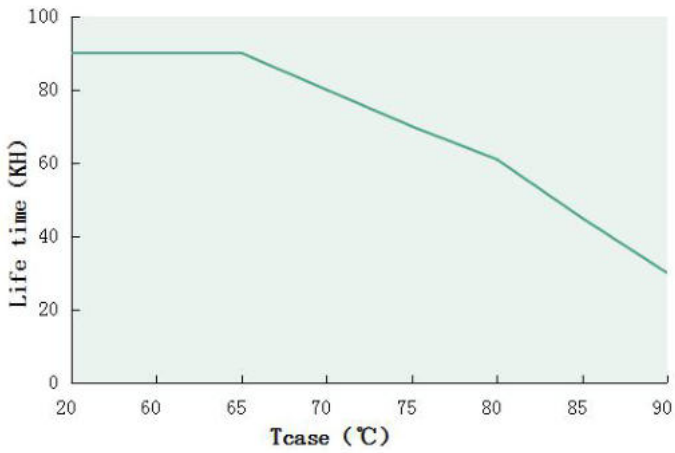
T.H.D. VS Output voltage(DL-80Z-V38A-SBS)



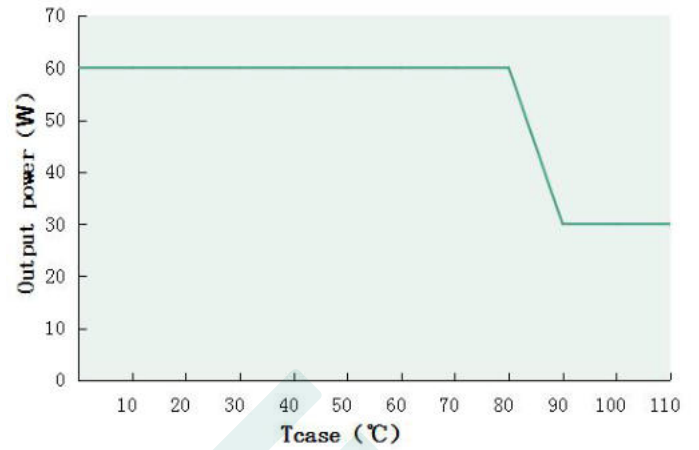
T.H.D. VS Output voltage(DL-80Z-V58A-SBS)



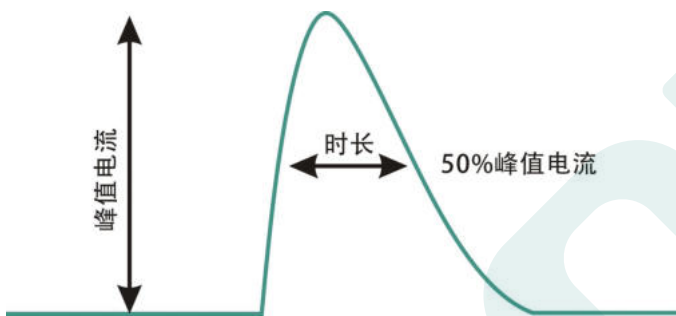
Tcase VS Lifetime(DL-80Z-V38/V58A-SBS)



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

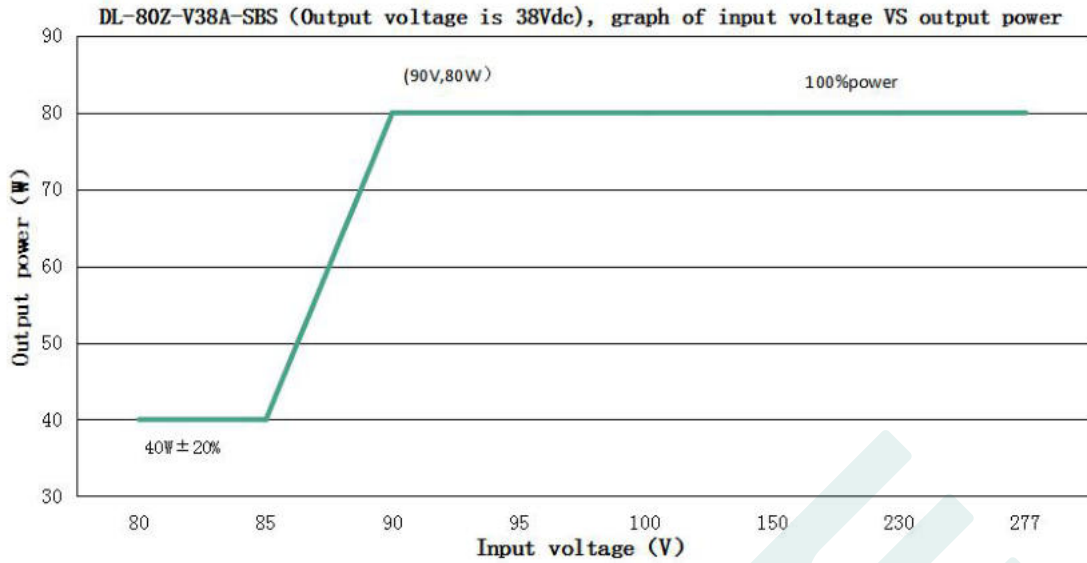


Surge curve(DL-80Z-V38/V58A-SBS)



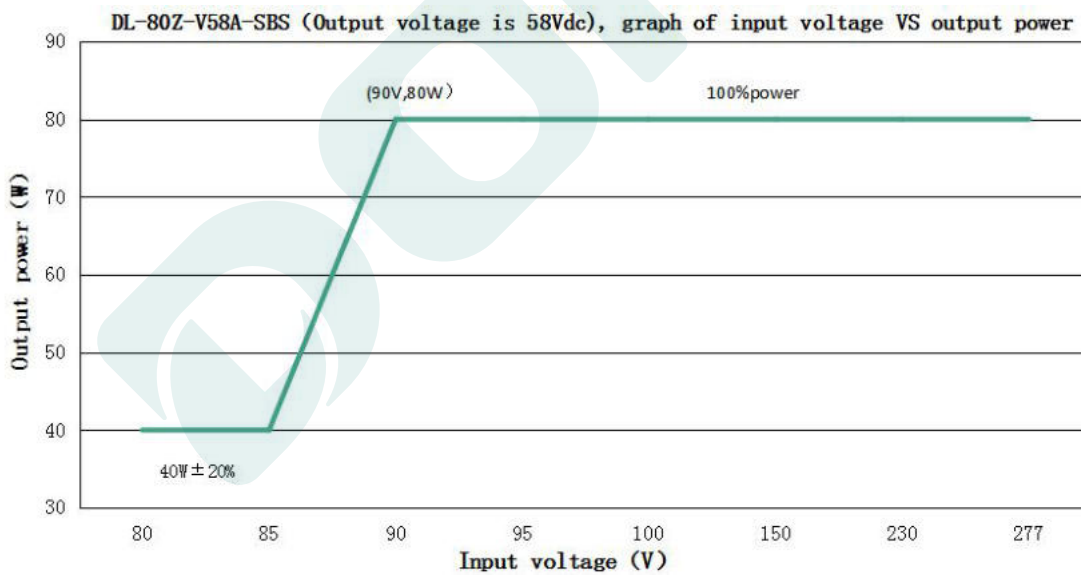
| 输入电压 | 峰值电流 | T (@50%峰值电流) |
|--------|-------|--------------|
| 120Vac | 25.6A | 1.72us |
| 230Vac | 58.8A | 1.7us |
| 277Vac | 66.2A | 1.96us |

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 |
|---------------|-------|-------|-------|--------|--------|--------|--------|--------|
| Iout | 1.05A | 1.05A | 1.05A | 2.1A | 2.1A | 2.1A | 2.1A | 2.1A |
| Pout | 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 |
|---------------|-------|-------|-------|--------|--------|--------|--------|--------|
| Iout | 0.69A | 0.69A | 0.69A | 1.38A | 1.38A | 1.38A | 1.38A | 1.38A |
| Pout | 40W | 40W | 40W | 80W | 80W | 80W | 80W | 80W |

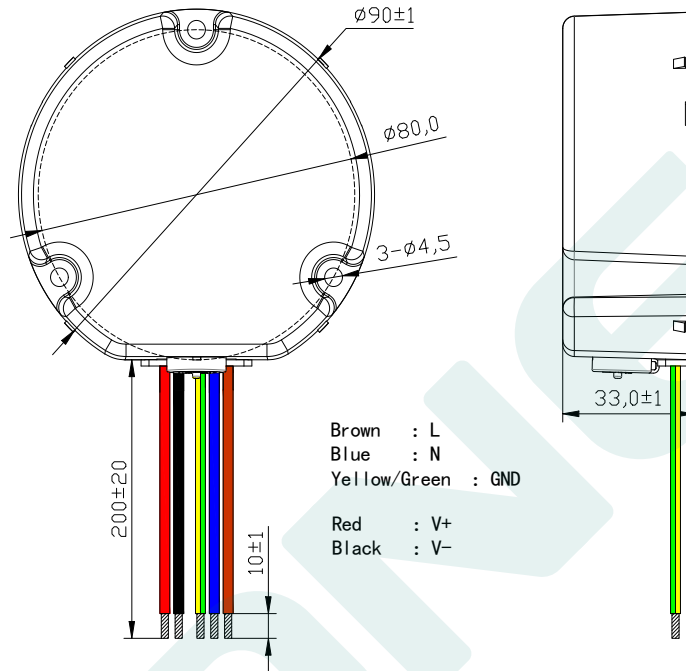
Note:

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

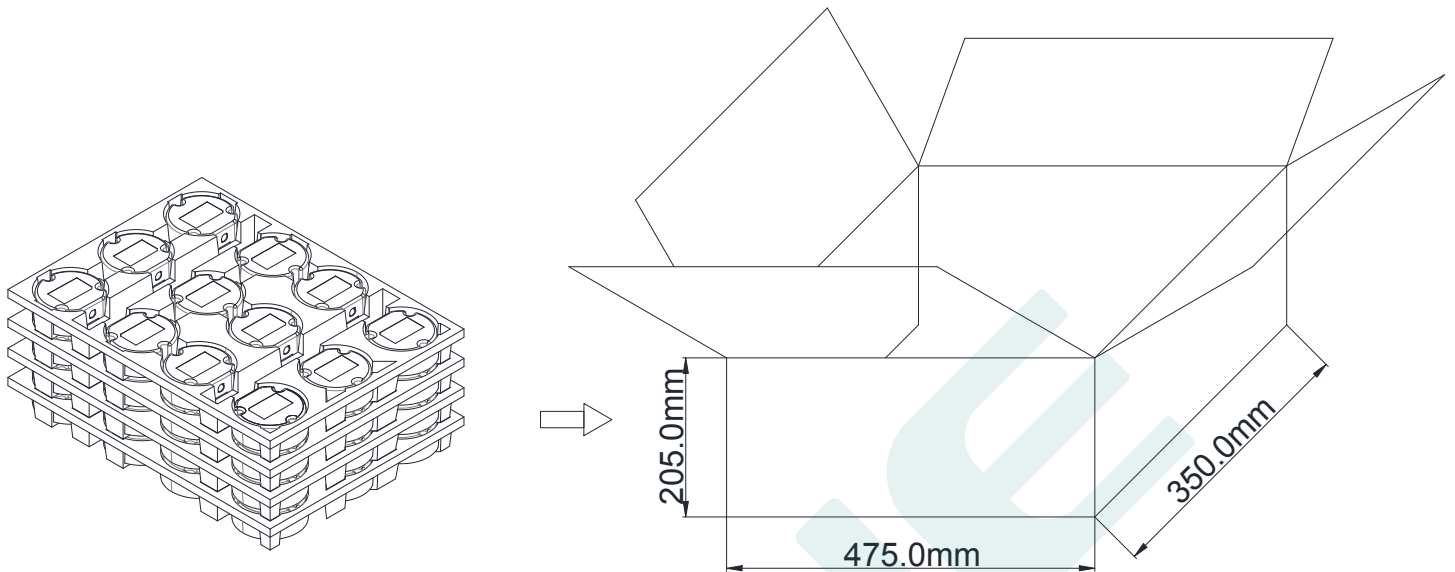


Weight

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 |  2023.11.01 13:57:18 +08'00'  LQ 2023.11.02 11:35:08 +08'00' |
| | | | |
| | | | |
| | | | |

MANUFACTURER

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