

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-40Z-A-SBS SPEC V1.2

Features

- Class I type for insulation
- Input voltage range: 100-277Vac ~ 50/60 Hz
- Efficiency :89%(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
- Function selection:
 Output current is adjusted by external potentiometer
- 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-40Z-V38A-SBS	100-277Vac 50/60Hz	40W	20-38Vdc	1.2A	≥89%	≤10%	≥0.95
DL-40Z-V58A-SBS	100-277Vac 50/60Hz	40W	32-58Vdc	0.9A	≥89%	≤10%	≥0.95

- Note :**
1. Test conditions: Ta=25°C , 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 40W 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	-	-	0.5A	@100Vac input ,with full load
Inrush current	-	-	70A	@230Vac input, cold start (25°C)

Output characteristics

Parameter	Min	Typ.	Max	remark
Rated current				
DL-40Z-V38A-SBS	-	1.05A	-	
DL-40Z-V58A-SBS	-	0.7A	-	
Output current range				
DL-40Z-V38A-SBS	0.5A	-	1.3A	
DL-40Z-V58A-SBS	0.35A	-	0.95A	
Output voltage range				
DL-40Z-V38A-SBS	20V	-	38V	Constant power:32-38V
DL-40Z-V58A-SBS	32V	-	58V	Constant power:42-58V
Rated power(100-277Vac)	-	40W	-	Decrease to a half once input voltage being less than 90±10Vac
No-load voltage				
DL-40Z-V38A-SBS	-	-	55V	
DL-40Z-V58A-SBS	-	-	75V	
Efficiency@100Vac				
DL-40Z-V38A-SBS	85%	87%	-	@100Vac input ,with full load
DL-40Z-V58A-SBS	85%	87%	-	

Output characteristics

Parameter	Min	Typ.	Max	Note
Efficiency@230Vac DL-40Z-V38A-SBS DL-40Z-V58A-SBS	87%	89%	-	@230Vac input ,with full load
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;

Dimming characteristics

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

Protection

Protection	description
under-voltage protection	When the input voltage is less than 90±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℃ , 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℃;
2. Including setting error, linear adjustment rate and load adjustment rate;

Environmental

Environmental categories	Parameter
Working temperature	-40 ~ +55°C @100-200Vac (refer to "Life Curve ")
Max.Case Temp.	-40 ~ 85°C
Working humidity	20 ~ 90% 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

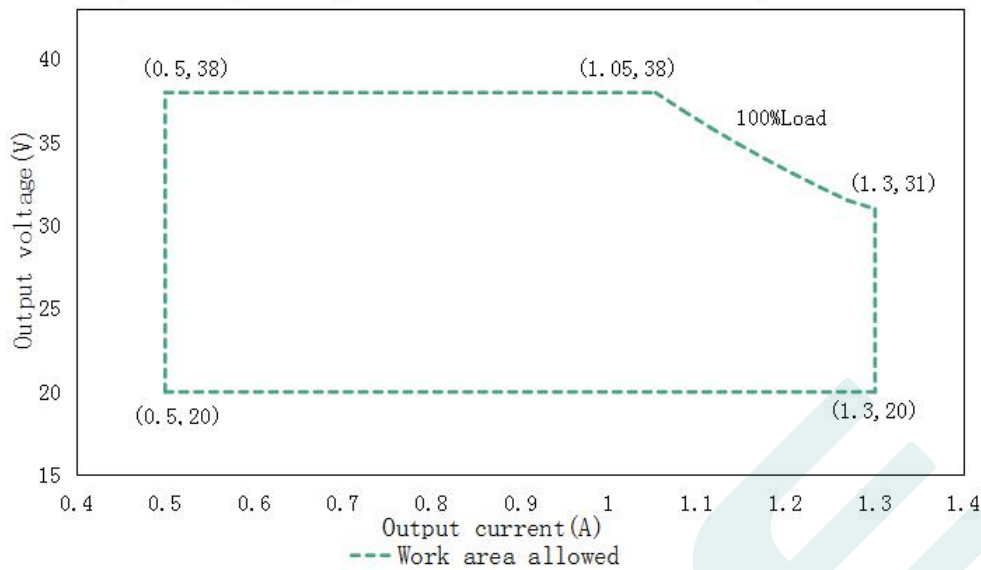
Safety categories	Standard
Safety	GB19510.1、GB19510.14、EN61347-1、EN61347-2-13、IEC61347-1、IEC61347-2-13、AS/NZS61347.1、AS61347.2.13、EN 62384;
EMC	EN 55015、EN 61547、EN 61000-3-2 、GB/T 17743、GB17625.1、 EN 61000-3-3
Surge leve	Differential mode L-N ±4KV (2 ohm) ,common mode L, N-PE± 6KV (12 ohm); Refer to 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 / 500VDC; I/P-O/P:100MΩ / 500VDC / 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.

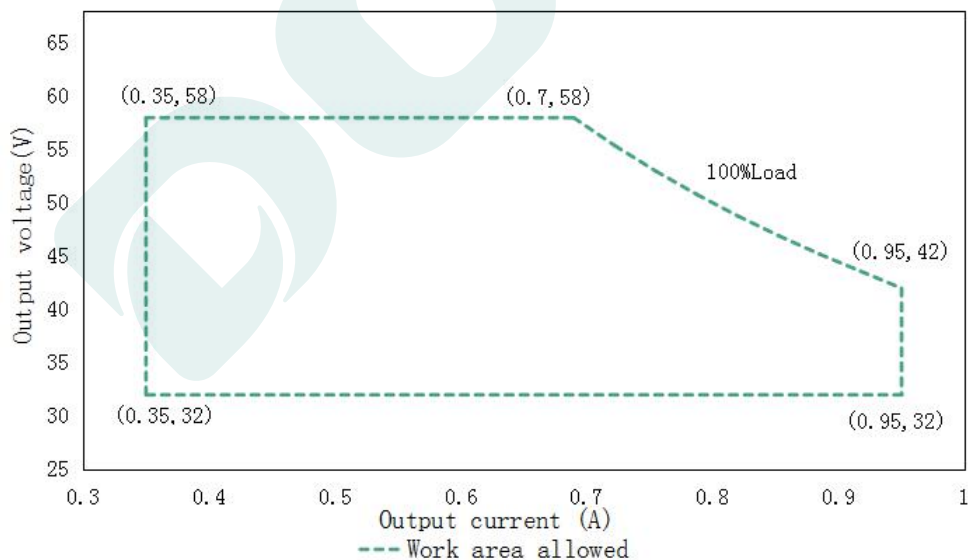
I-V Working area

Output voltage VS output current of DL-40Z-V38A-SBS (input: 100-277Vac)



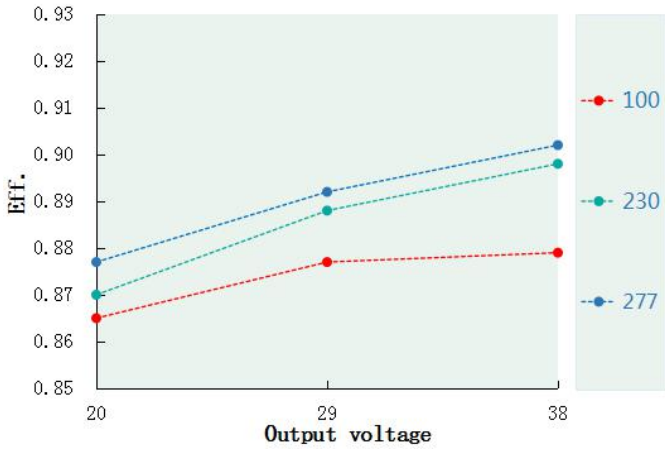
Load	Output								
Load working Voltage	20V	23V	26V	28V	30V	32V	34V	36V	38V
Io_MAX	1.3A	1.3A	1.3A	1.3A	1.3A	1.25A	1.17A	1.11A	1.05A
Po_MAX	26W	29.9W	33.8W	36.4W	39W	40W	40W	40W	40W

Output voltage VS output current of DL-40Z-V58A-SBS (input: 100-277Vac)

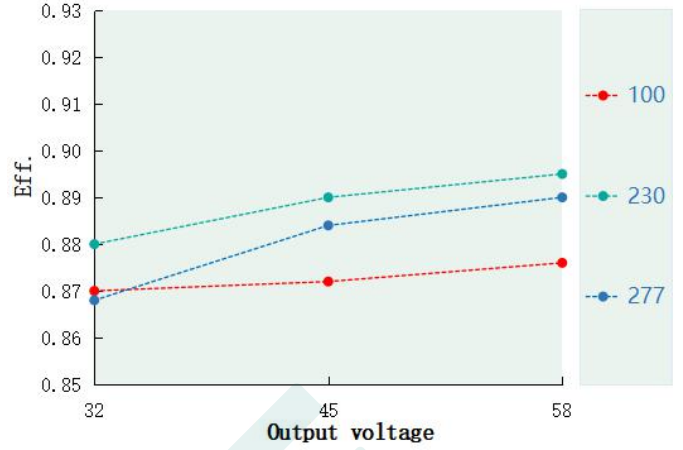


负载	输出								
负载工作电压	32V	35V	38V	41V	44V	47V	50V	54V	58V
电源电流 Io_MAX	0.95A	0.95A	0.95A	0.95A	0.91A	0.85A	0.8A	0.74A	0.69A
电源功率 Po_MAX	30.4W	33.25W	36.1W	38.95W	40W	40W	40W	40W	40W

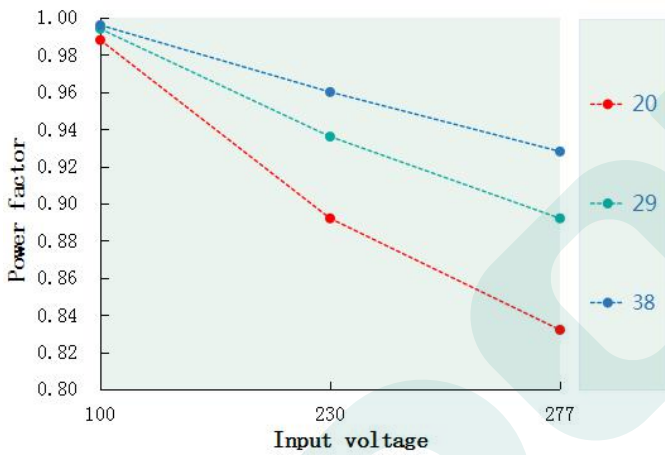
Eff. VS Output voltage(DL-40Z-V38A-SBS)



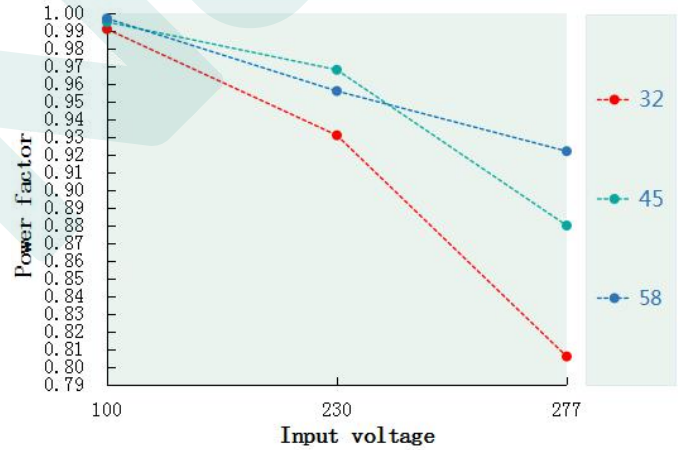
Eff. VS Output voltage(DL-40Z-V58A-SBS)



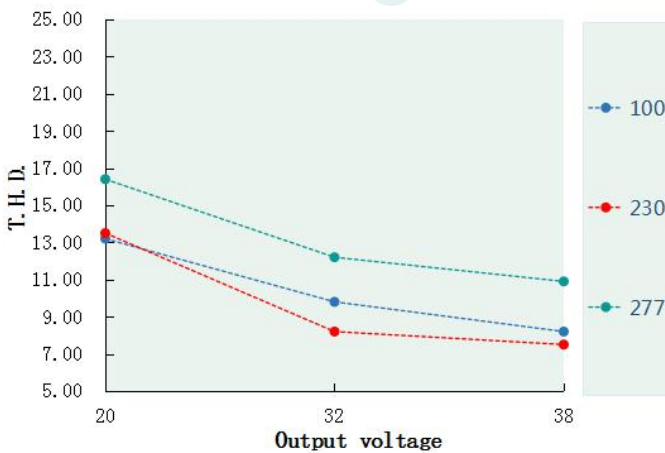
Power factor VS Input voltage(DL-40Z-V38A-SBS)



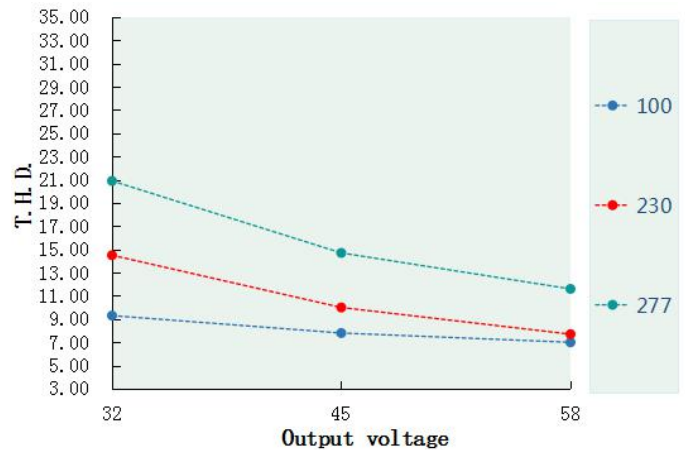
Power factor VS Input voltage(DL-40Z-V58A-SBS)



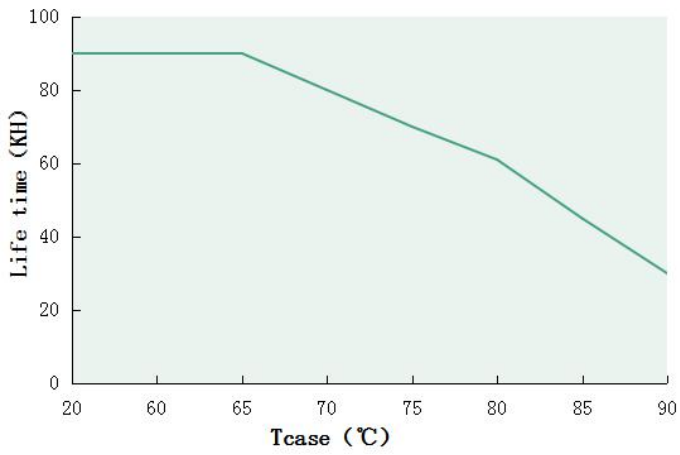
T.H.D. VS Output voltage(DL-40Z-V38A-SBS)



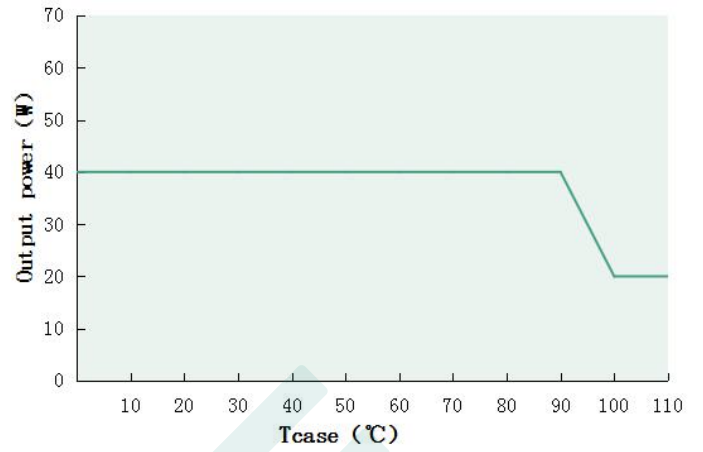
T.H.D. VS Output voltage(DL-40Z-V58A-SBS)



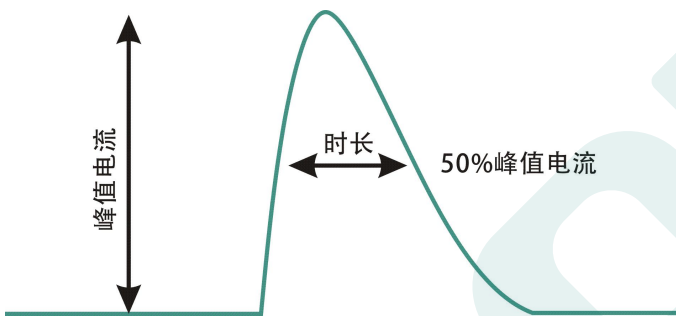
Tcase VS Lifetime(DL-40Z-V38/V58A-SBS)



Output power VS Tcase (DL-40Z-V38/V58A-SBS)

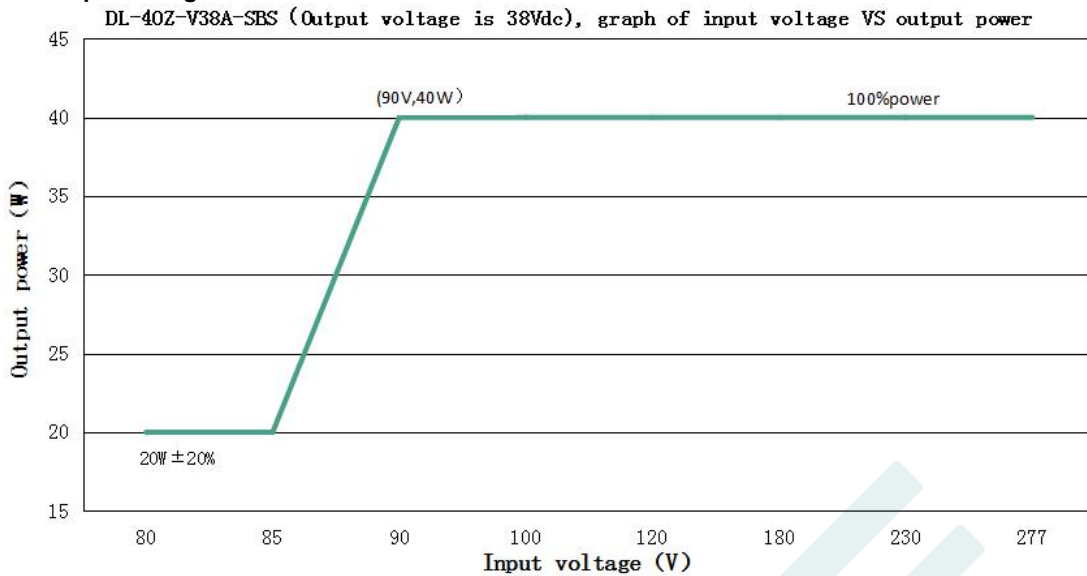


Surge curve(DL-40Z-V38/V58A-SBS)



Input voltage	Peak current	T(@50% Peak current)
120Vac	22.7A	8.1us
230Vac	44.1A	6.1us
277Vac	49.8A	7.5us

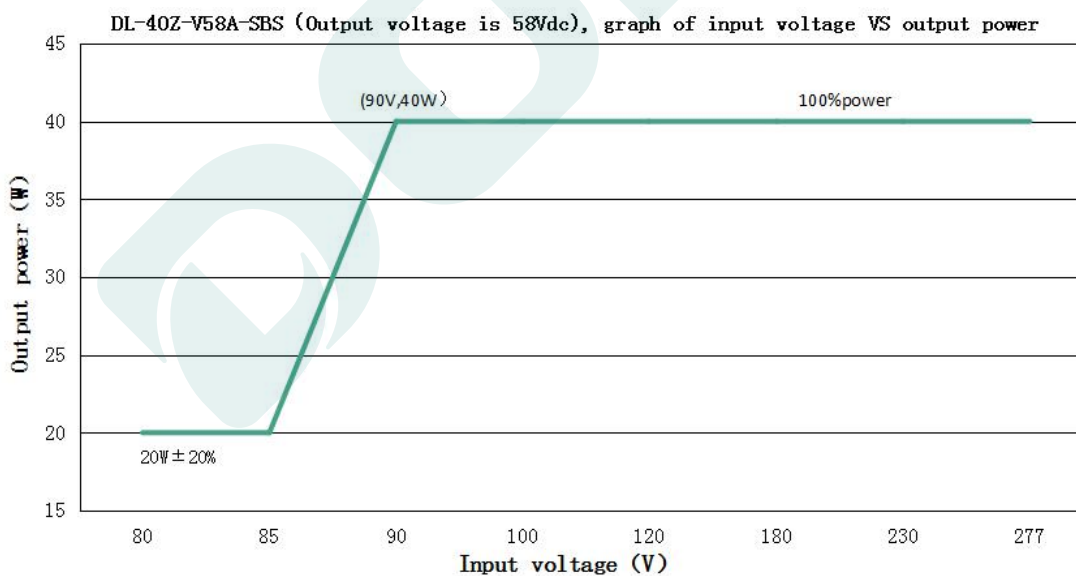
Output power VS Input voltage



DL-40Z-V38A-SBS (For output 38Vdc, the rated output current & power under different input voltage)

Input Voltage	80Vac	85Vac	90Vac	95Vac	100Vac	150Vac	230Vac	277Vac
Iout	0.53A	0.53A	1.053A	1.053A	1.053A	1.053A	1.053A	1.053A
Pout	20W	20W	40W	40W	40W	40W	40W	40W

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



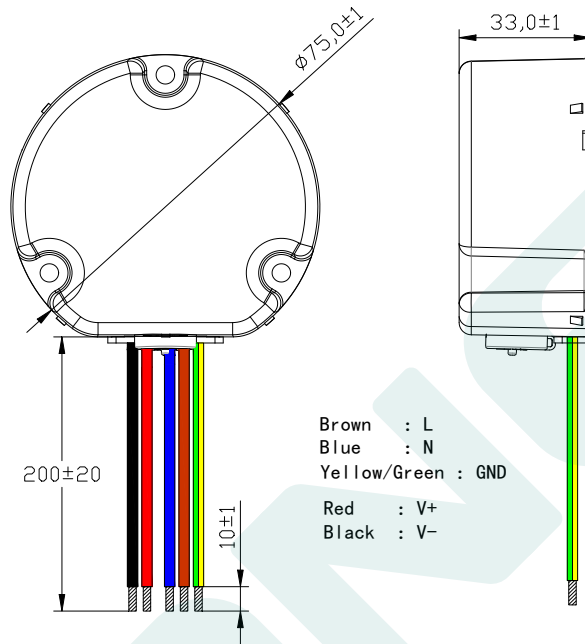
DL-40Z-V58A-SBS (For output 58Vdc, the rated output current & power under different input voltage)

Input Voltage	80Vac	85Vac	90Vac	95Vac	100Vac	150Vac	230Vac	277Vac
Iout	0.35A	0.35A	0.7A	0.7A	0.7A	0.7A	0.7A	0.7A
Pout	20W	20W	40W	40W	40W	40W	40W	40W

Mechanical specification

Size (mm) $\varnothing 75 \times H33 \text{mm}$

Dimension drawing
DL-40Z-V38/58A-SBS

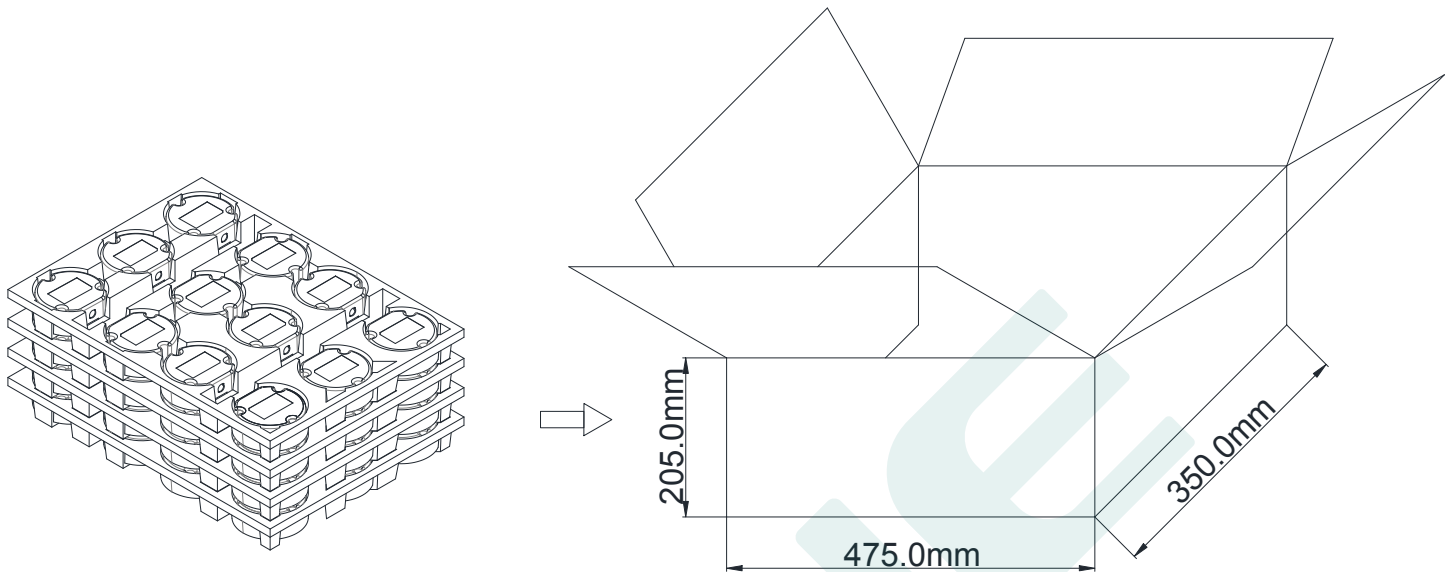


Weight

Weight 300 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
2023.8.12	Initial version.	V1.0	
2023.10.24	Added 58V output models	V1.1	
2024.5.11	Change the efficiency VS output voltage chart	V1.2	

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