

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

DONE

SBS SERIES LED DRIVER

DL-60W-V38A-SBS SPEC

V1.0

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
- Guaranteed Lifetime : 5 years



Applications

Explosion-proof lighting



Model list

Model NO.	Input voltage	Output power	Output voltage	The default current	Eff.	T.H.D	PF
DL-60W-V38A-SBS	100-277Vac 50/60Hz	60W	20-38Vdc	1.8A	≥ 89.5%	≤10%	≥0.95

- Note :**
1. Test conditions of the above parameters: Ta=25 °C, 230Vac input, full load for 30 minutes.
 2. The output power decreases gradually when the input is less than 90 ±10%Vac, and when the input is 100-277Vac, the rated power is 60W, which should be paid special attention to in application.
- Please refer to the input voltage VS output power curve for details.

Input characteristics

Parameter	Min	Typ.	Max	remark
Rated input voltage	100Vac	230Vac	277Vac	
Input voltage range	90Vac		305Vac	
Input frequency	47Hz	50/60Hz	63Hz	
Power factor	-	0.95	-	Full load, rated input voltage
T.H.D.	-	10%	-	100% load, 230Vac input
T.H.D.	-	20%	-	65% PRI 100% load, 100-277Vac input
Input current	-	-	0.8A	Full load, 100Vac input
Maximum input surge current	-	-	70A	230Vac input, cold start (25 °C)

Output characteristics

Parameter	Min	Typ.	Max	remark
Rated current DL-60W-V38A-SBS	-	1.58A	-	
Output current range DL-60W-V38A-SBS	1.05A	-	1.9A	
Output voltage range DL-60W-V38A-SBS	20V	-	38V	Constant power output range:32-38VDC
Rated power(100-277Vac)	-	60W	-	The reduction begins when the input voltage is less than 90 ±10% Vac.
Maximum output no-load voltage DL-60W-V38A-SBS	-	-	55V	
Efficiency@100Vac DL-60W-V38A-SBS	87%	89.5%	-	100% load @ 100Vac

Output characteristics

Parameter	Min	Typ.	Max	Note
Efficiency@230Vac DL-60W-V38A-SBS	88%	89.5%	-	100% load @ 230Vac
Accuracy of output current	-6%	-	+6%	100% load
Line regulation	-5%	-	+5%	100% load
Load regulation	-5%	-	+5%	100% load
Starting time	-	-	1000ms	load@100-277Vac

Note: ①the output current range is limited by the input and output voltages, please refer to the Imurv work area for details.

②the accuracy range of output current is $\pm 7\%$ at input voltage 100-180Vac and $\pm 5\%$ at input voltage 180-277Vac.

Dimming characteristics

Dimming function		Min	Typ.	Max	Instructions
Potentiometer dimming	Potentiometer resistance value	0K Ω	-	100K Ω	-
	Dimming output range	30%	-	100%	-

Protection

Protection	description
Input undervoltage protection	When the input voltage is less than $90 \pm 10\%$ Vac, the output power decreases gradually, as detailed in the reduction curve.
Output overload protection	Protection mode: hiccup restart mode, which can be automatically restored after the load abnormal condition is removed.
Output short circuit protection	Hiccup mode, which can be automatically restored after the abnormal condition is removed.
Over-temperature protection	Self-recoverable; when the shell temperature is higher than $90 \text{ }^\circ\text{C}$, the random shell temperature increases and the output power decreases.
Output overvoltage protection	Protection mode: hiccups or clamps in a certain output of the highest voltage state, the product is not damaged, when troubleshooting, the power supply works normally

Note:

1. If not specified, all specification parameters are measured under the condition of 230Vac (50Hz) input, rated load and ambient temperature of $25 \text{ }^\circ\text{C}$.
2. Including setting error, linear adjustment and load adjustment

Environmental characteristics

Environmental categories	Parameter
Working temperature	-40 ~ + 50 °C @ 100-277Vac (refer to "Service Life Curve")
Working humidity	20 ~ 90% RH,Non-condensation
Storage temperature、humidity	-40~+80°C, 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°C)

Safety and EMC

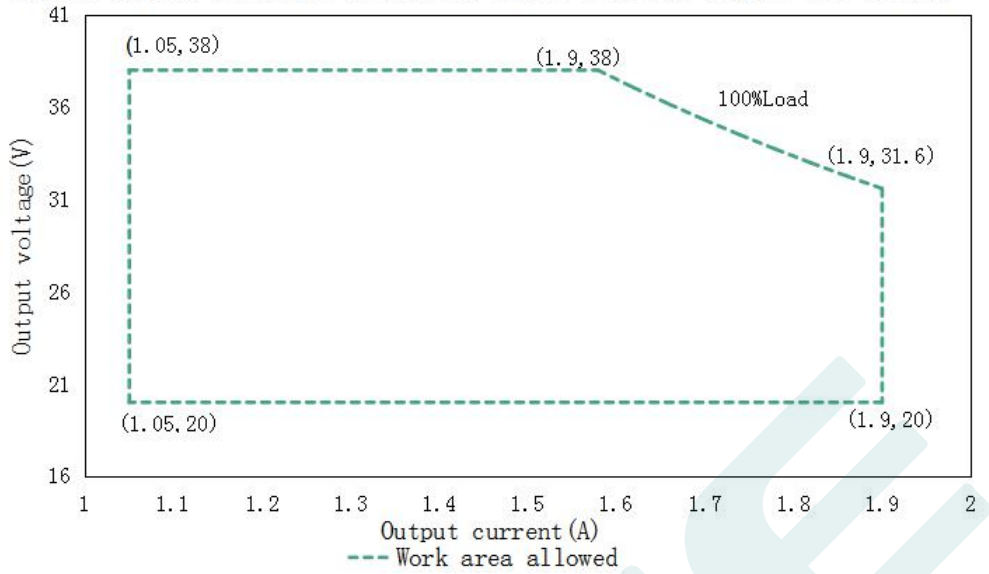
Safety categories	Standard
Safety	GB19510.1、GB19510.14、EN61347-1、EN61347-2-13、IEC61347-1、IEC61347-2-13、AS/NZS61347.1、AS61347.2.13、EN 62384;
EMC	EN 55015、EN 61000-3-2 、GB/T 17743、GB17625.1、 EN 61000-3-3
Surge level	Differential mode Lmurn ±4KV (2 Ω), common mode Lmaine N-ground ±6 KV (12 Ω), lightning residual voltage < 2.5kV; Ref. IEC61000-4-5 2014
High-pot test	I/P-O/P:3.75KVac I/P-PE :1.5KVac O/P-PE : 0.5KVac I/P-DIM:3.75KVac O/P-DIM:1.5KVac
Insulation impedance	I/P-PE:100MΩ / 1000VDC; 25°C/ 70% RH
Leakage current	<0.7mA@277Vac

Note:

1The power supply is used as a component and terminal equipment, and the EMC is affected by the whole set of equipment, and the terminal equipment manufacturer needs to re-confirm the whole set of equipment by EMC.

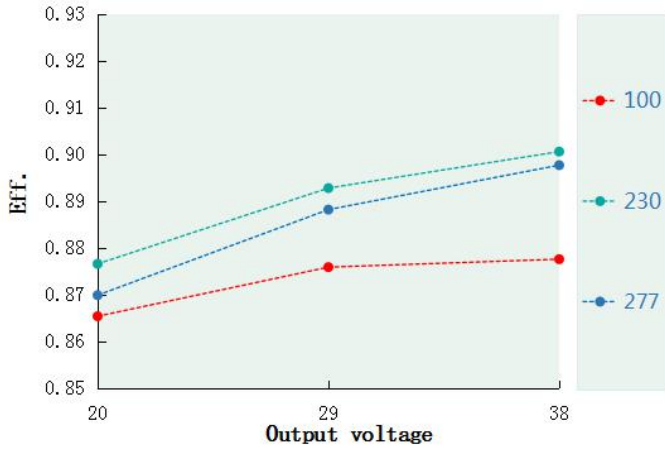
I-V Working area

Output voltage VS output current of DL-60W-V38A-SBS (input: 100-277Vac)

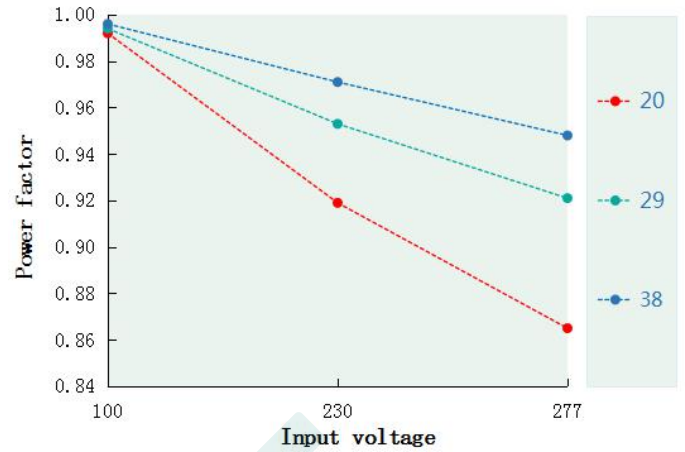


Load	Output								
Load working Voltage	20V	22.25V	24.5V	26.75V	29V	31.25V	33.5V	35.75V	38V
Io_MAX	1.9A	1.9A	1.9A	1.9A	1.9A	1.9A	1.79A	1.68A	1.58A
Po_MAX	38W	42.275W	46.55W	50.825W	55.1W	59.375W	60W	60W	60W

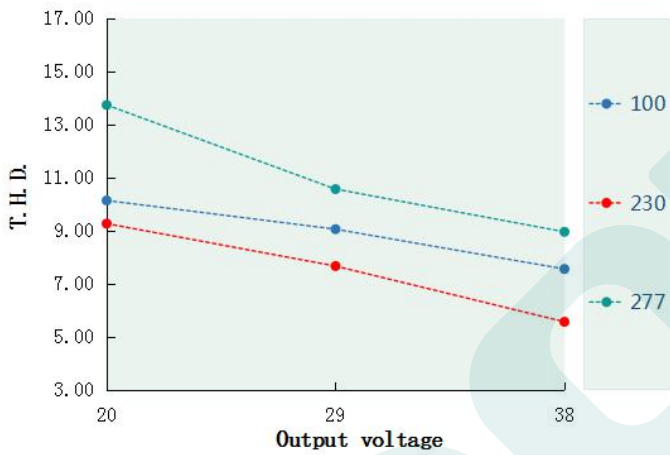
Eff. VS Output voltage(DL-60W-V38A-SBS)



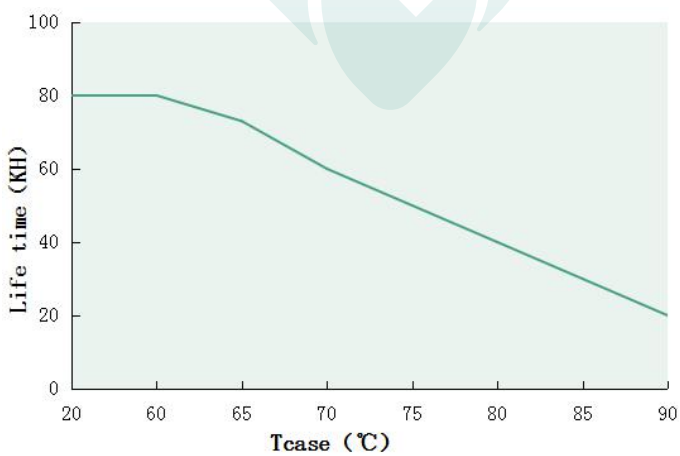
Power factor VS Input voltage(DL-60W-V38A-SBS)



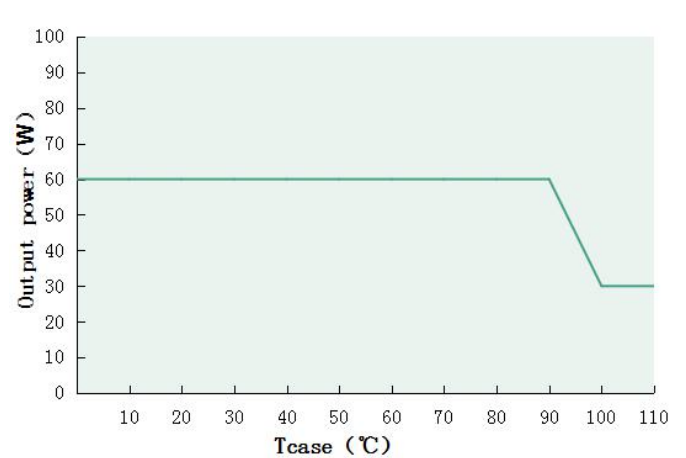
T.H.D. VS Output voltage(DL-60W-V38A-SBS)



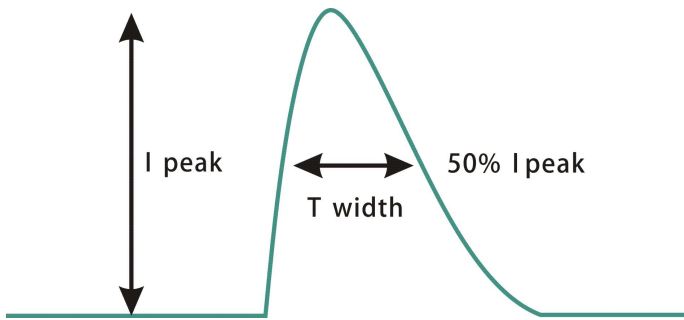
Tcase VS Lifetime(DL-60W-V38A-SBS)



Output power VS Tcase (DL-60W-V38A-SBS)

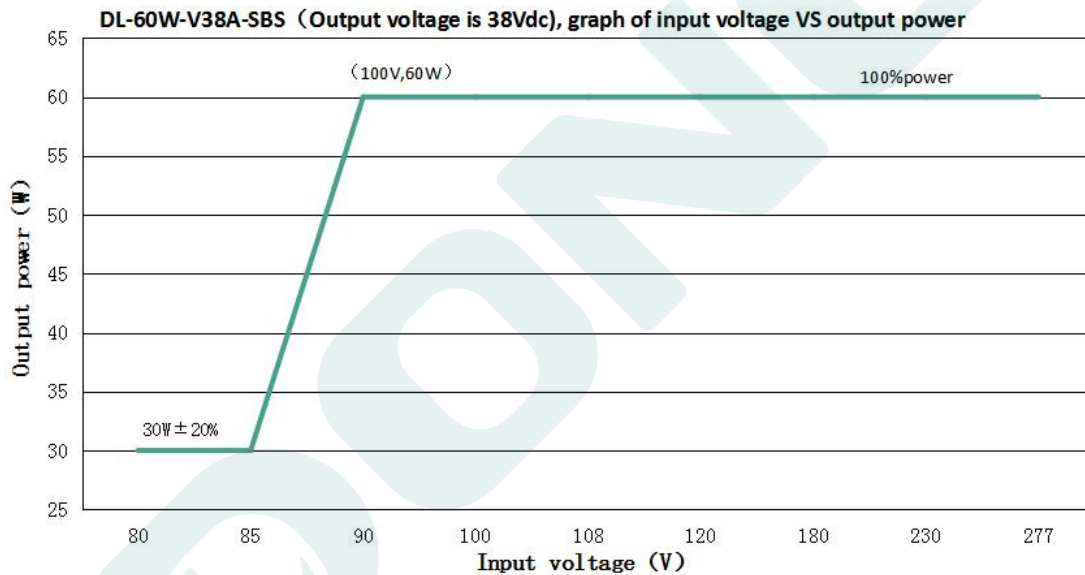


Input surge current(DL-60W-V38A-SBS)



Input voltage	Peak current	T (@ 50% peak current)
100Vac	28A	1.52us
230Vac	66A	1.64us
277Vac	82.8A	1.62us

Output power VS Input voltage



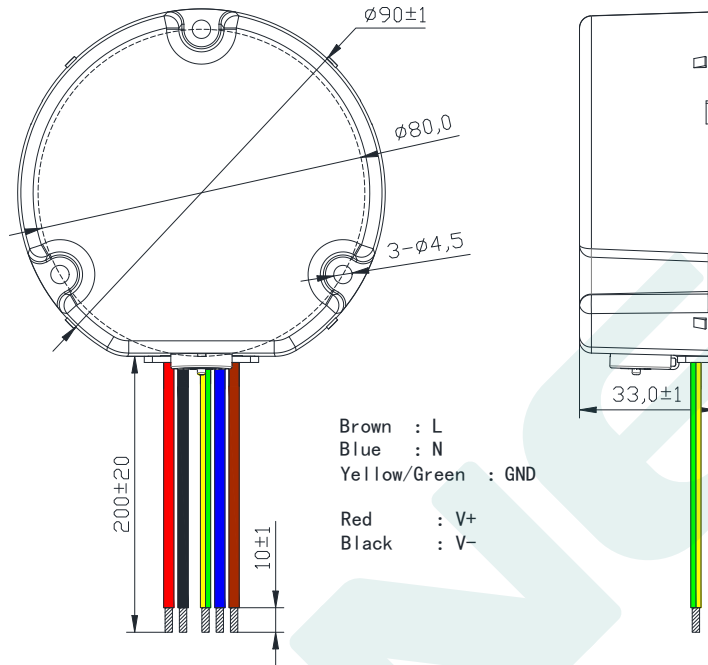
DL-60W-V38A-SBS (For output 38Vdc, the rated output current & power under different input voltage)

Input Voltage	85Vac	90Vac	100Vac	108Vac	120Vac	180Vac	230Vac	277Vac
I _{out}	0.79A	1.58A	1.58A	1.58A	1.58A	1.58A	1.58A	1.58A
P _{out}	30W	60W	60W	60W	60W	60W	60W	60W

Note:
 1. When the input voltage is lower than 90 ± 10%Vac, the output power decreases gradually, and the output power decreases to 40W ± 20% at 85Vac.

Mechanical specification

Size (mm) $\Phi 90 \times H33$

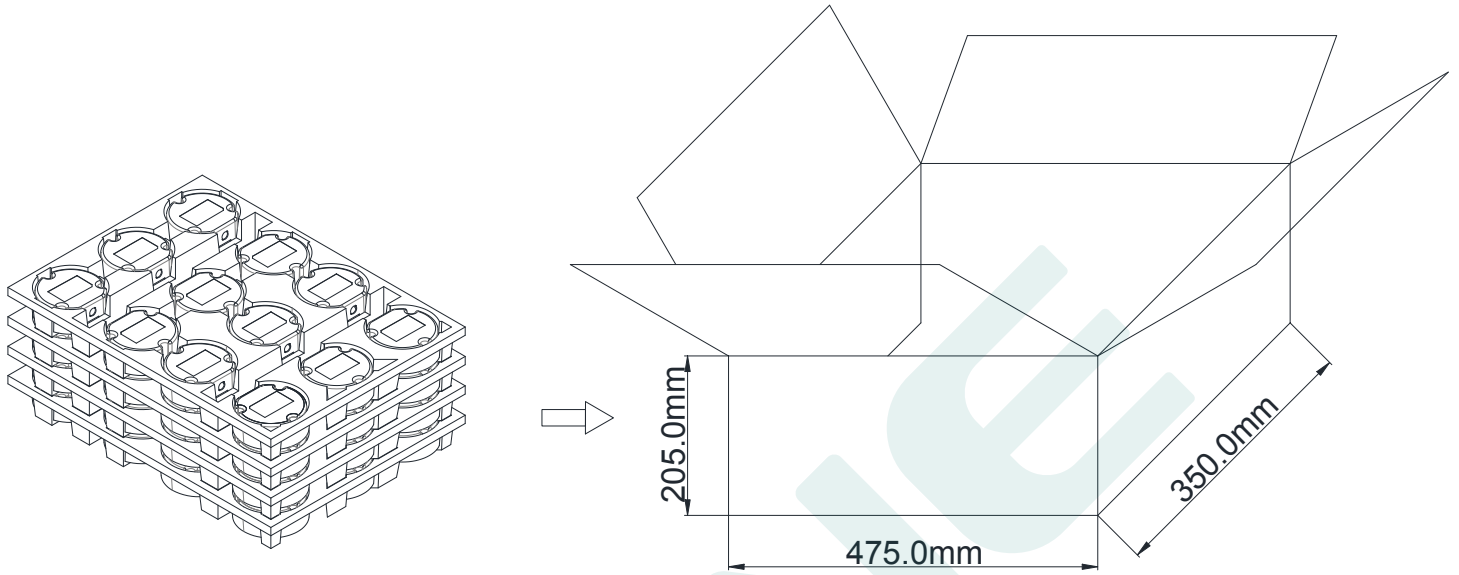


Weight

Weight 347 g

Packaging

Packaging (mm) L475*W350*H205



Remarks: a carton of 4 floors, 12 pieces per floor, a total of 48 pieces per case.

- Note:**
1. According to the certificate obtained by LED DRIVER, LED DRIVER with English label is sold in Europe, America and India. two. .
 2. The LED driver power supply with Chinese label is only used in Chinese market.

Version

DATE	DESCRIPTION	REV.	CHECK
2022.10.8	Initial version.	V1.0	

MANUFACTRUER

EDIT	CHECK	APPROVE