



## 50W DC Class 2 Power Supply DS50W Aluminum Case Series 100-277V



Efficiency	higher than 85%
Power Factor	>95%
Case TC*	85°C Max
Protection	Input / Output
Storage	-40°C / +85°C
Humidity	95% RH max
IP Rating	IP 66
Class	Class 2 power supply
Dimming	0-10V
Optional Dimming	Phase Dimming



### FEATURES

- UL8750, EN61347, UL1310, UL48, cUL, CE, TUV, KAMA, CQC compliant
- FCC Part 15/18 Class B and EN55015 compliant
- Meet the RoHS directive; IP66 compliant,
- Suitable for high-temperature, high-dust location
- Suitable for indoor or outdoor applications
- Suitable in standard electrical junction boxes
- Compact, lightweight
- Single output, ranged from 4VDC up to 114VDC
- Active PFC reduces power consumption
- Isolation between primary and secondary
- Exceeds California Title 24 requirements



### ENVIRONMENTAL SPECIFICATIONS

1. Operating temperature: -30 to +60°C
2. Storage temperature range: -40 to +85°C
3. Humidity (non-condensing): 5% - 95%RH
4. Cooling: Free air cooling Convection
5. Vibration Frequency: 5-55Hz/2g, 30 minutes
6. Impact resistance: 1g/s
7. MTBF: 560,000 hours at full load and 40°C ambient conditions
8. Life 120,000 hours at full load and 40°C ambient conditions
9. EMC:
  - Compliant to CISPR 22 CLASS B, CISPR 14-1 CLASS B, GB4343. 1-2003, GB17625.1-2003
  - Continuous interference voltage test conforming to GB4343-2003+A1, CISPR 14-1: 1997, EN55014-1:1997-5
  - Intermittent interference voltage test conforming to GB4343-2003+A1, CISPR 14-1: 1997, EN55014-1:1997-5
  - Interference power test conforming to GB4343-2003+A1, CISPR 14-1:1997, EN55014-1:1997-6
  - Harmonic currents test conforming to GB4343-2003+A1, CISPR 14-1:EN 61000-3-2:1995
  - RF Electromagnetic Field Immunity test conforming to GB/T13926.3, IEC61000-4-3, PrEN55014-2 Section 6.5
  - Electrical fast transient/burst immunity test conforming to GB/T13926.4, IEC61000-4-4, PrEN55014-2 section 6.2
  - Voltage dips and short interrupts immunity test conforming to IEC61000-4-11
  - Voltage variations immunity test conforming to IEC61000-4-11
  - Electrostatic discharge immunity test conforming to IEC61000-4-11

\* Under confirmed thermal condition



## ELECTRICAL SPECIFICATIONS

- Input range: 90-305 VAC (Maximum voltage range: 90-305 VAC)
- Frequency: 47- 63HZ
- Power Factor: > 95% at full load, Total harmonic distortion(THD): <20% more than 80% load
- Inrush current: <30A at 25°C, 120V, cold start
- Input current: 0.6A at 120V
- Efficiency: 92% (typical), 91% (maximum), at full load, 220V
- Maximum power: 50W
- Current accuracy: ±3%, Load regulation accuracy: ±4%
- Start-up time: <1 s, Output overshoot: <10%
- Leakage current: 300uA (typical)
- Hold up time: half cycle
- Output over-voltage protection function
- Output over-current protection
- Output short circuit protection: auto-recovery
- Turn-on overshoot in the output current: < 10%.
- Ripple & Noise: < 20% Peak-peak 20MHz Bandwidth.
- Optional DC Dimming control: 0-10Vdc, 2mA, 2-wire.
- Optional RD Dimming control: 3-wire 50KΩ Resistance Dimming.
- Leakage current: 400uA (typical).
- Hold up time: half cycle.
- Output over-voltage protection function: Less than 1.3 times the maximum output voltage.
- Output over-current protection: Less than 1.1 times the maximum output current.
- Output short circuit protection: Unlimited short-circuit, or long-term short-circuit, self-recovery after withdrawal.
- Energy Star: No-load power consumption less than the fixed type constant current 0.5W (at 120V input).

Constant Current						
Model #	Outut Voltage Range	Output Constant Current	Current Accuracy	Power Factor	Output Power	Typical Efficiency
DS50W0350C	47-142V DC	350mA	±3%	95%	50W	92%
DS50W0400C	42-125V DC	400mA	±3%	95%	50W	92%
DS50W0550C	30-91V DC	550mA	±3%	95%	50W	91%
DS50W0700C	24-71V DC	700mA	±3%	95%	50W	91%
DS50W0900C	19-56V DC	900mA	±3%	95%	50W	91%
DS50W1040C	16-48V DC	1040mA	±3%	95%	50W	91%
DS50W1380C	12-36V DC	1380mA	±3%	95%	50W	90%
DS50W1850C	9-27V DC	1850mA	±3%	95%	50W	90%
DS50W2080C	8-24V DC	2080mA	±3%	95%	50W	90%
DS50W2270C	7-22V DC	2270mA	±3%	95%	50W	89%
DS50W2500C	7-20V DC	2500mA	±3%	95%	50W	89%
DS50W2770C	6-18V DC	2770mA	±3%	95%	50W	88%
DS50W3330C	5-15V DC	3330mA	±3%	95%	50W	88%
DS50W4160C	4-12V DC	4160mA	±3%	95%	50W	87%



Constant Voltage							
Model #	Output Voltage Current	Maximum Output Current	Minimum Output Current	Voltage Accuracy	Power Factor	Output Power	Typical Efficiency
DS50W142V	142V DC	350mA	20mA	±3%	95%	50W	92%
DS50W125V	125V DC	400mA	25mA	±3%	95%	50W	92%
DS50W91V	91V DC	550mA	40mA	±3%	95%	50W	91%
DS50W71V	71V DC	700mA	60mA	±3%	95%	50W	91%
DS50W56V	56V DC	900mA	80mA	±3%	95%	50W	91%
DS50W48V	48V DC	1040mA	100mA	±3%	95%	50W	91%
DS50W36V	36V DC	1380mA	120mA	±3%	95%	50W	90%
DS50W27V	27V DC	1850mA	140mA	±3%	95%	50W	90%
DS50W24V	24V DC	2080mA	150mA	±3%	95%	50W	90%
DS50W22V	22V DC	2270mA	180mA	±3%	95%	50W	89%
DS50W20V	20V DC	2500mA	200mA	±3%	95%	50W	89%
DS50W18V	18V DC	2770mA	230mA	±3%	95%	50W	88%
DS50W15V	15V DC	3330mA	260mA	±3%	95%	50W	88%
DS50W12V	12V DC	4160mA	300mA	±3%	95%	50W	87%

Note: Typical power factor measured at 220VAC input, full load. Maximum efficiency measured at 220VAC input, full load.

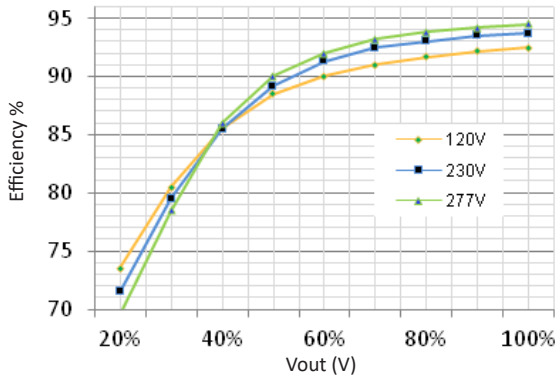
## DIMMING OPTIONS

1. Optional DC Dimming control:

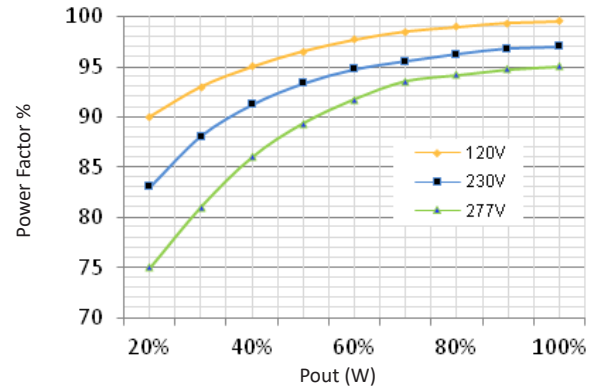
- a. 0-10V DC Dimming Mode.
- b. Input Voltage Range 0-10Vdc, Output constant current Adjustable range: 10%-MAX. When input >10V , Constant current output for maximum value. When input ≤ 0V (Include input open circuit), Constant current output for 10%.
- c. Input impedance 5KΩ, dimming response time : 20ms.
- d. Input Current: MAX. 2mA.

TECHNICAL SPECS.

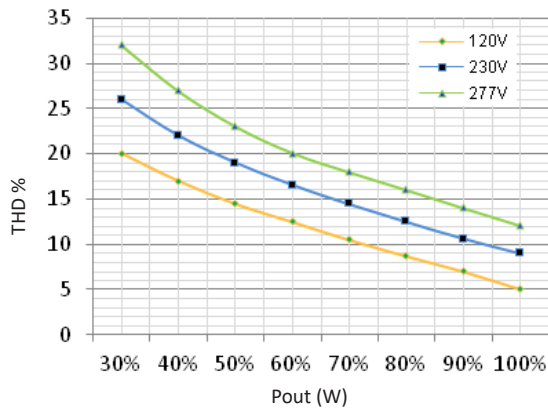
Efficiency vs. Vout at 80°C case



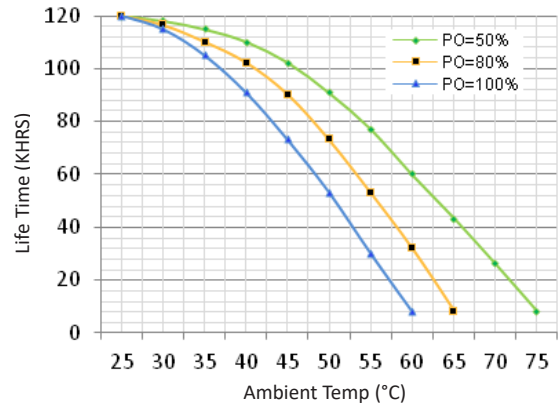
PF vs. Pout at 80°C case



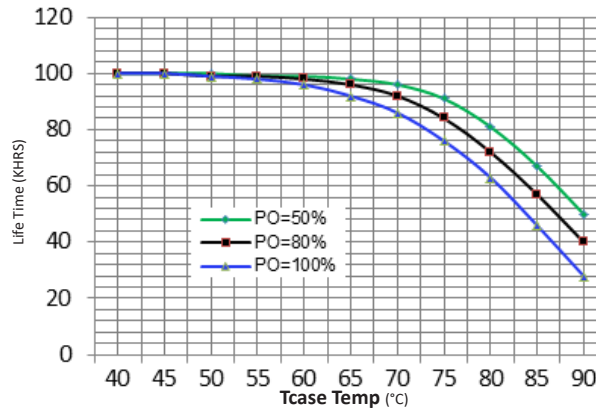
THD vs. Pout



Life Time vs. Ambient Temp



Life Time vs. Tcase Temp



INSTALLATION SPECIFICATIONS

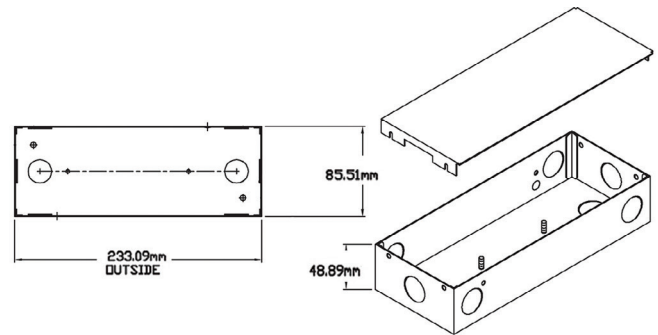
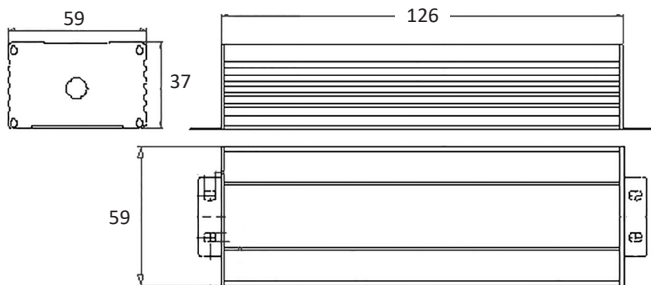
- Aluminum metal enclosure, Used with thermal conductivity and flame retardant glue potting.
- AC input for connection the three core ANSI/UL1015/AWG18 temperature 105 °C core copper wire connection, Cable Length: 150mm, Stripping on the tin: 10mm.
- DC output for connection the two core ANSI/UL1569/AWG14 temperature 105 °C core copper wire, Cable Length: 150mm, Stripping on the tin: 10mm.
- The dimmer control input is the two copper wires, ANSI/UL1569/AWG24 & temperature 105 ° C, Cable Length: 150mm, Stripping on the tin: 10mm.
- Where: 0-10V input — Purple wire, GND — Grey wire.
- This product has two Φ3.6mm mounting holes

MECHANICAL SPECS.

Available Form Factors	Dimensions
"L19"	126x59x37mm
<b>Remote Enclosure</b>	
"G2"	233.1X85.5X48.9mm
"G3"	280X103X56mm

L19

G2



G3 : -REO MODELS

