

50-150 Watts

DLG Series



- AC Input LED Driver
- Constant Voltage & Current Operation
- High Power Factor
- High Efficiency
- Water Proof to IP67
- 90-305 VAC Input Voltage Range
- 3 Year Warranty

Specification

Input

Input Voltage	• 90-305 VAC, see derating curve
Input Frequency	• 47-63 Hz
Input Current	• 50 W: 1.0 A at 115 VAC, 0.5 A at 230 VAC, 75 W: 1.2 A at 115 VAC, 0.6 A at 230 VAC, 100 W: 1.4 A at 115 VAC, 0.7 A at 230 VAC, 150 W: 2.0 A at 115 VAC, 1.0 A at 230 VAC
Inrush Current	• 65 A at 230 VAC, cold start +25 °C
Power Factor	• >0.94 at 230 VAC, full load
Earth Leakage Current	• DLG50/75: 500 µA max at 230 VAC DLG100/150: 750 µA max at 230 VAC
No Load Input Power	• 0.6 W max at 230 VAC
Input Protection	• DLG50/75 T2.5A/300V fuse fitted in line, DLG100 T3.15A/300V fuse fitted in line, DLG150 T4A/300V fuse fitted in line

Output

Output Voltage	• See table
Minimum Load	• No minimum load required
Start Up Delay	• 1.5 s max at 115 VAC
Hold Up Time	• DLG50/75: No hold up DLG100/150: 16 ms minimum
Line Regulation	• ±0.5%
Load Regulation	• ±1.0% in constant voltage mode, ±5.0% in constant current mode
Turn On Overshoot	• 5% max
Transient Response	• 5% maximum deviation, recovery to within 1% in 10 ms for a 50% load change
Ripple & Noise	• DLG50/75 ⁽¹⁾ DLG100/150: 150 mV pk-pk up to 36 V output, 200 mV for 48 V output, 240 mV for ≥54 V output (see note 2)
Overvoltage Protection	• 110-142%, recycle mains to reset, only on DLG100 & DLG150 versions
Overtemperature Protection	• Unit shuts down, recycle mains to reset
Overload Protection	• 105% maximum, auto recovery
Short Circuit Protection	• Trip and restart (hiccup mode)
Temperature Coefficient	• 0.04%/°C

General

Efficiency	• See table
Isolation	• 3750 VAC Input to Output 1880 VAC Input to Ground 500 VAC Output to Ground
Switching Frequency	• DLG50/70: 40-80 kHz DLG100/150: PWM 60-80 kHz, PFC 55-133 kHz
MTBF	• >200 kHrs to MIL-HDBK-217F at 25 °C, GB

Environmental

Operating Temperature	• DLG50/70: -40 °C to +60 °C (see derating curve), DLG100/150: -30 °C to +70 °C (see derating curve)
Operating Humidity	• 5-100% RH, non-condensing
Storage Temperature	• -40 °C to +80 °C
Operating Altitude	• 3000 m
Vibration	• 10-500 Hz, 2 g, 10 mins/cycle, 6 cycles in each of 3 axes

EMC & Safety

Emissions	• EN55015, class B conducted and radiated
Harmonic Currents	• EN61000-3-2, class A EN61000-3-2, class C for loads >80%
Voltage Flicker	• EN61000-3-3
ESD Immunity	• EN61000-4-2, 8 kV air and 4 kV contact, Perf Criteria A
Radiated Immunity	• EN61000-4-3, level 2 Perf Criteria A
EFT/Burst	• EN61000-4-4, level 2 Perf Criteria A
Surge	• EN61000-4-5, installation class 3, Perf Criteria A
Conducted Immunity	• EN61000-4-6, level 2 Perf Criteria A
Dips & Interruptions	• EN61000-4-11, 30% 10 ms, 60% 100 ms, 100% 5000 ms, Perf Criteria A, B, B
Safety Approvals	• EN61347, UL8750, CE Mark DLG100/150: IEC60950-1, EN60950-1, UL60950-1

Notes

1. DLG50/70 use a topology which results in increased levels of mains frequency related ripple. Contact technical sales for details.

Models and Ratings

DLG50-150 **XP**

Output Power	Output Voltage	Output Current	Output Voltage Range in Constant Current Mode	Efficiency ⁽¹⁾	Model Number
50 W	12.0 V	4.20 A	8.5-12.0 V	84.0%	DLG50PS12†^
50 W	24.0 V	2.10 A	19.0-24.0 V	86.0%	DLG50PS24†^
50 W	36.0 V	1.40 A	26.0-36.0 V	88.0%	DLG50PS36†^
50 W	48.0 V	1.05 A	35.0-48.0 V	88.0%	DLG50PS48†^
59 W	12.0 V	4.90 A	8.5-12.0 V	84.0%	DLG75PS12†^
75 W	24.0 V	3.15 A	19.0-24.0 V	86.0%	DLG75PS24†^
74 W	30.0 V	2.45 A	22.0-30.0 V	87.0%	DLG75PS30
75 W	36.0 V	2.10 A	26.0-36.0 V	88.0%	DLG75PS36†^
67 W	48.0 V	1.40 A	35.0-48.0 V	88.0%	DLG75PS48†^
75 W	54.0 V	1.40 A	37.0-54.0 V	88.0%	DLG75PS54
100 W	12.0 V	8.30 A	9.0-12.0 V	88.0%	DLG100PS12†^
100 W	15.0 V	6.60 A	10.0-15.0 V	88.0%	DLG100PS15 ⁽³⁾
100 W	24.0 V	4.20 A	14.0-24.0 V	90.0%	DLG100PS24†^
100 W	30.0 V	3.30 A	22.0-30.0 V	90.0%	DLG100PS30
100 W	36.0 V	2.80 A	26.0-36.0 V	90.0%	DLG100PS36†^
100 W	48.0 V	2.10 A	34.0-48.0 V	90.5%	DLG100PS48†^
100 W	57.0 V	1.75 A	43.0-57.0 V	90.5%	DLG100PS57 ⁽³⁾
132 W	12.0 V	11.00 A	9.0-12.0 V	88.0%	DLG150PS12†^
150 W	15.0 V	10.00 A	11.0-15.0 V	88.0%	DLG150PS15 ⁽³⁾
150 W	24.0 V	6.30 A	14.0-24.0 V	90.0%	DLG150PS24†^
150 W	30.0 V	5.00 A	22.0-30.0 V	90.0%	DLG150PS30
150 W	36.0 V	4.20 A	26.0-36.0 V	90.0%	DLG150PS36†^
150 W	48.0 V	3.20 A	33.0-48.0 V	90.0%	DLG150PS48†^
150 W	54.0 V	2.80 A	38.0-54.0 V	90.0%	DLG150PS54 ⁽³⁾

Notes

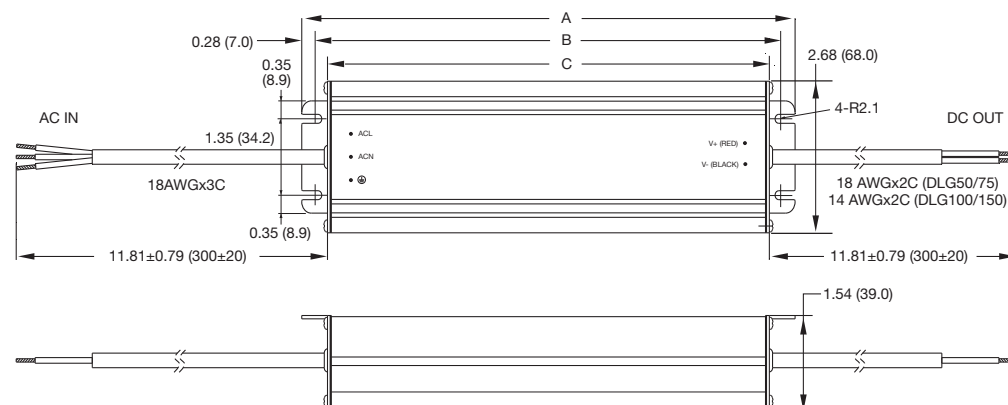
1. Typical efficiency at full load and 230 VAC input.
 2. Measured using 12" twisted pair with 0.1 μ F and 47 μ F capacitors in parallel at 20 MHz bandwidth.

3. Not UL8750 approved.

† Available from Farnell & element14. See pages 284-290.

^ Available from Newark. See pages 291-296.

Mechanical Details



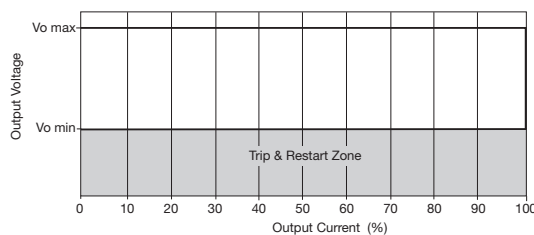
	DLG50/70	DLG100/150
A	6.93 (176.0)	8.74 (222.0)
B	6.38 (162.0)	8.19 (208.0)
C	6.03 (153.2)	7.83 (199.0)

Notes

1. All dimensions shown in inches (mm).
 2. Weight: DLG50/75: 1.98 lbs (900 g)
 DLG100/150 2.29 lbs (1040 g)
 3. Tolerance: ±0.02 (0.5)

Application Notes

Constant Voltage / Constant Current Curve



Derating Curve

