

## 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

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### 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 <sup>(1)</sup> 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)
Oversvoltage 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 <sup>(1)</sup>	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 <sup>(3)</sup>
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 <sup>(3)</sup>
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 <sup>(3)</sup>
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 <sup>(3)</sup>

### Notes

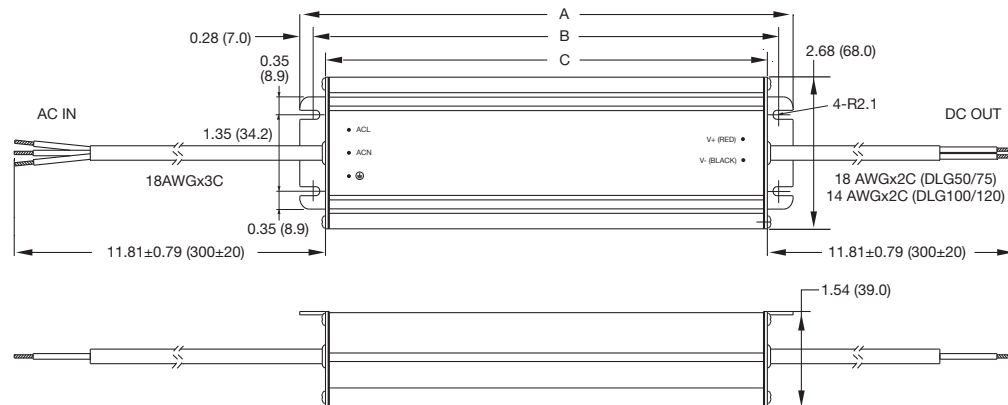
1. Typical efficiency at full load and 230 VAC input.
2. Measured using 12" twisted pair with 0.1 μF and 47 μF capacitors in parallel at 20 MHz bandwidth.

3. Not UL8750 approved.

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

^ Available from Newark. See pages 291-296.

### Mechanical Details



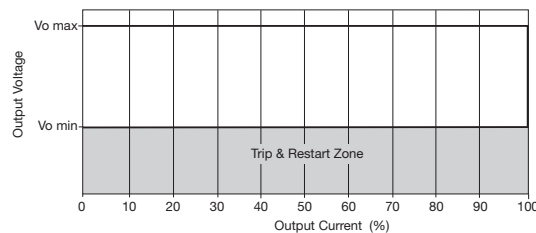
	DLG50/70	DLG100/150
A	6.93 (176.0)	8.74 (222.0)
B	6.38 (162.0)	8.19 (208.0)
C	6.03 (153.2)	7.83 (199.0)

### 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

