

# LD-Series

Electronic Dimmer Controls

**PRODUCT WEBPAGE**

*request sample, configure part*



The LD-Series represents a dynamic breakthrough in dashboard technology, with its programmable circuitry, superior design, and unparalleled performance that affords seamless integration into most any dash panel. A variety of options, along with superior performance, functionality, and aesthetics assure compliance with the most stringent customer requirements.

**1**  
Pole

**2-10**  
Amps

**12-24**  
VDC

## Typical Applications

- On/Off-Highway Equipment
- Agricultural Equipment
- Construction Equipment

# Tech Specs

## Electrical

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contact Rating      | 9-16VDC, 2-10Amp.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Terminals           | 6.3mm (0.250" TAB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Contacts            | solid-state load switching                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Output              | PWM 200 Hz.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| EMI/EMC             | SAE J1113 and SAE J1455<br>Conducted Transient Emissions<br>RF Conducted Emissions<br>Conducted Susceptibility:<br>Test pulse #1<br>Test pulse #2<br>Test pulse #3a, #3b<br>Load Dump: Test Pulse #5<br>Power lead Disturbance<br>(Power Dips)<br>AF Conducted Immunity<br>Direct RF Injection (DRFI)<br>Abnormal Vehicle Operating<br>Conditions<br>RF Radiated Emissions<br>Radiated Immunity-Absorber<br>Lined Chamber<br>Electrostatic Discharge:<br>Shipping / handling Electrostatic<br>Discharge: Human Static<br>Discharge |
| Dielectric Strength | 000V @ 60 Hz was applied for<br>each unit for 1 minute                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Reverse Polarity    | 24VDC for 5 minutes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

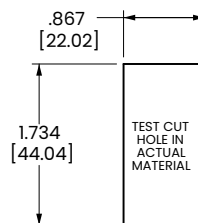
## Physical

|                 |                                            |
|-----------------|--------------------------------------------|
| Function        | Incremental for continuous<br>dimming      |
| Operation       | Momentary                                  |
| Lighted         | LED's internally dimmed                    |
| Base            | PBT Polyester V-0 flammability             |
| Rocker          | Polycarbonate or Nylon 6/6<br>Glass filled |
| Bracket         | PBT Polyester V-0 flammability             |
| Connector       | Nylon 6/6 toughened                        |
| Actuation Force | 300 gm ± 50 gm                             |
| Weight          | 52 grams                                   |

## Environmental

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating Temp.     | -40°C to + 85°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Vibration           | Resonance Search<br>Individual resonance<br>searches were conducted<br>with vibration applied along<br>each of the three mutually<br>perpendicular axes.<br>24-50 Hz 0.40DA<br>50-2000 Hz ± 10 G's peak<br>Random Vibration<br>The random vibration endurance<br>test conditions were sequentially<br>conducted in each of the three<br>mutually perpendicular axes, 1hr/<br>axis<br>Freq. (Hz) PSD (G <sup>2</sup> /Hz) 9.36 grms<br>24 Hz 0.06<br>60 Hz 0.50<br>100 Hz 0.025<br>1000 Hz 0.025<br>2000 Hz 0.025<br>During the test, all units were<br>operated at a load current of 2A<br>with 12.5VDC. |
| Salt Spray          | Per Mil-Std 202F, Method 101D, Test<br>Condition A. Duration 96 hrs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Dust                | Per Mil-Std 810C, Method 510.2. Air<br>velocity 300 ± 200 Feet/Min., Test<br>Duration 16 Hr.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Moisture Resistance | Per Mil-Std 202F, Method 106E.<br>Test Criteria-pre and post test<br>operation of switch.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## Mounting Specifications



MOUNTING HOLE

**Panel Thickness Range**  
Acceptable Panel Thickness  
.030 to .156 (.76mm to 3.96mm)  
Recommended:  
.030, .062, .093, .125 and .156

|                    |    |   |   |   |   |   |   |   |   |   |    |    |   |    |    |
|--------------------|----|---|---|---|---|---|---|---|---|---|----|----|---|----|----|
| Sample Part Number | LD | 3 | 5 | 1 | C | C | 1 | - | 3 | A | A  | FE | - | 1  | FC |
| Selection          | 1  | 2 | 3 | 4 | 5 | 6 | 7 |   | 8 | 9 | 10 | 11 |   | 12 | 13 |

## Selection

LD 3 5 1 C C 1 - 3 A A FE - 1 FC

1 2 3 4 5 6 7 8 9 10 11 12 13

**LD** Electronic Dimmer Control

|          |               |          |              |
|----------|---------------|----------|--------------|
| <b>1</b> | 4A, 12 volts  | <b>A</b> | 2A, 24 volts |
| <b>2</b> | 7A, 12 volts  | <b>C</b> | 5A, 24 volts |
| <b>3</b> | 10A, 12 volts |          |              |

**1** 30 - 100% 8 positions      **A** 0 - 100% 11 positions  
**5** 10 - 100% 10 positions

1 .230 TABS (5.84 mm)

|         |          |          |          |
|---------|----------|----------|----------|
| No lamp | <b>S</b> |          |          |
|         | Red      | Amber    | Green    |
| 12V LED | <b>C</b> | <b>N</b> | <b>H</b> |
| 24V LED | <b>D</b> | <b>P</b> | <b>J</b> |

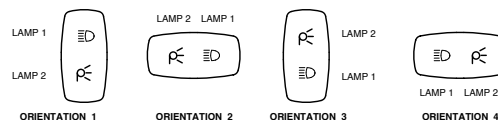
|   |       |   |       |   |      |
|---|-------|---|-------|---|------|
| 1 | Black | 2 | White | 3 | Gray |
|---|-------|---|-------|---|------|

|        |              |       |       |      |     |
|--------|--------------|-------|-------|------|-----|
|        | Laser Etched | Black | White | Gray | Red |
| Rocker | 3            | A     | B     | C    | D   |
| Paddle | 4            | J     | K     | M    | N   |

| Z     | No Lens |       |       |     |      |  |                   |
|-------|---------|-------|-------|-----|------|--|-------------------|
| Clear | White   | Amber | Green | Red | Blue |  | Lens Style        |
| 1     | -       | B     | G     | M   | T    |  | Large Transparent |
| -     | 7       | C     | H     | N   | U    |  | Large Translucent |
| 3     | -       | D     | J     | P   | V    |  | Bar Transparent   |
| -     | 9       | E     | K     | R   | W    |  | Bar Translucent   |
| 5     | A       | -     | -     | -   | -    |  | Laser Etch        |

00 No legend      FC Dim      FE Bright  
For legend options, visit us at [carlingtech.com](http://carlingtech.com)

- 0 No legend
- 1 vertical (lamp 1 on top)
- 2 horizontal (lamp 1 on right)
- 3 vertical (lamp 1 on bottom)



00 No legend      FC Dim      FE Bright  
For legend options, visit us at [carlinattech.com](http://carlinattech.com)

Notes:  
1 Custom colors are available. Consult factory.

 **Configure Complete Part Number >**

## inches [millimeters]

