The LDD series are the industrial standard for OEM laser diode drivers and are ideal for high power applications where economy is important and performance cannot be compromised. Compact size is possible due to the low-loss Zero Voltage Switching inverter and incorporation of planar magnetics. The LDD is virtually wire free.

Power factor is greater than 0.99 (1Ø models) and conducted emissions meet stringent European regulations. No additional line filters required to meet EN 55011 emission requirements.

The LDD series is designed with multiple safe guards to protect your expensive laser diodes. Rise and fall times are strictly controlled to reduce high voltage transients which could damage the laser diode.

ADVANTAGES

• Ideal for OEM applications
• Safe turn-on/turn-off
• Compact design
• Power factor correction (1Ø models)
• Auxiliary +15V/-15V/+5V
• Low conducted emissions, low leakage
• ROHS Compliant

Configurations:

• Output current to 300A
• Maximum output voltage to 200V
• Analog or RS232 interface
• Universal input for all world voltages
• CE and safety agency approved
• Available handheld controller
### LDD CW Laser Diode Drivers

<table>
<thead>
<tr>
<th>Model</th>
<th>Poutmax</th>
<th>Ioutmax</th>
<th>Input Voltage</th>
<th>Size (L x W x H)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDD-100-XX-YY</td>
<td>100 Watts</td>
<td>50 amps</td>
<td>100 to 240VAC ± 10%</td>
<td>7.5” x 5.8” x 2.6”</td>
</tr>
<tr>
<td>LDD-150-XX-YY</td>
<td>150 Watts</td>
<td>60 amps</td>
<td>100 to 240VAC ± 10%</td>
<td>19 x 14.7 x 6.6 cm</td>
</tr>
<tr>
<td>LDD-250-XX-YY</td>
<td>250 Watts</td>
<td>80 amps</td>
<td>100 to 240VAC ± 10%</td>
<td>9.9” x 7.3” x 2.6”</td>
</tr>
<tr>
<td>LDD-600-XX-YY</td>
<td>600 Watts</td>
<td></td>
<td>200-240VAC ± 10%</td>
<td>13” x 8.5” x 3.4”</td>
</tr>
<tr>
<td>LDD-1000-XX-YY</td>
<td>1000 Watts</td>
<td>100 amps</td>
<td>200-240VAC ± 10%</td>
<td>17” x 16.6” x 3.4”</td>
</tr>
<tr>
<td>LDD-1500-XX-YY</td>
<td>1500 Watts</td>
<td></td>
<td>200-240VAC ± 10%</td>
<td>13” x 8.5” x 3.4”</td>
</tr>
<tr>
<td>LDD-2500-XX-YY</td>
<td>2500 Watts</td>
<td>150 amps</td>
<td>200-240VAC ± 10%</td>
<td>17” x 16.6” x 3.4”</td>
</tr>
<tr>
<td>LDD-3000-XX-YY</td>
<td>3000 Watts</td>
<td>200 amps</td>
<td>200-480VAC ±10% 3Ø</td>
<td>17.3” x 16.6” x 4.25”</td>
</tr>
<tr>
<td>LDD-6000-XX-YY</td>
<td>6000 Watts</td>
<td>250 amps</td>
<td>200-480VAC ±10% 3Ø</td>
<td>17.3” x 16.6” x 10.8”</td>
</tr>
</tbody>
</table>

**Specifications**

**INPUT**
- Voltage: See table above
- Power Factor: >.98 (LDD-6000:~t80%)

**INTERFACE**
- Connector: 15 Pin “D” Sub Female
- Current Program: 0-10V for 0-Max Current
- Current Monitor: 0-10V for 0-Max Current
- Voltage Monitor: 0-10V for 0-Max Voltage
- (Optional RS232 interface available)

**PERFORMANCE**
- Rise/Fall Time: >10msec standard (faster rise times available)
- Current Regulation: <0.5% of Maximum output current
- Current Ripple: <0.5% of maximum output current
- Current Overshoot: <1% of maximum output current
- Power Limit: Limited to maximum power with power fold-back circuit

**ENVIRONMENT**
- Operating Temp: 0 to 40°C
- Storage: -20 to 85°C
- Humidity: 0 to 90% non-condensing
- Cooling: Forced air

**REGULATORY**
- LDD-100, LDD-150: EN60601
- LDD-150/250/400: EMC 60950, EN55022
- LDD-600/1000/1500: EN60601
- LDD-3000: EN60950, EN55022
- LDD-6000: EMC EN 61326

**AUXILIARY OUTPUTS**
- +5V @ 100mA
- +15V @ 200mA
- -15V @ 100mA

**Note:** Performance cannot be guaranteed below 25% of rated output current.

XX = maximum required output current, YY = maximum required compliance voltage

Maximum compliance voltage for LDD-2500 = 50V.
## LDD-INTERFACE
**CONNECTOR TYPE: 15 PIN D-SUB FEMALE**

<table>
<thead>
<tr>
<th>Pin #</th>
<th>Pin Name</th>
<th>Functional Voltage Levels</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Enable (input)</td>
<td>High = RUN = +5V to +15V Low = OFF = 0V</td>
<td>The Enable function turns the output section of the power supply ON and OFF. When the power supply is enabled, current is delivered to the load as programmed via Iprogram(+), Pin 7. Rise times resulting from Enable are approximately 25msec.</td>
</tr>
<tr>
<td>3</td>
<td>Interlock (Input)</td>
<td>Open = OFF Connect to GND = RUN</td>
<td>The Interlock function can be connected to external interlock switches such as door or over-temp switches.</td>
</tr>
<tr>
<td>4,9, 15</td>
<td>GND</td>
<td>0-10V = 0-Voutmax (note:2)</td>
<td>Interface Return</td>
</tr>
<tr>
<td>5</td>
<td>Vout Monitor (output)</td>
<td>0-10V = 0-Voutmax (note:2)</td>
<td>The output voltage of the supply can be monitored by Vout Monitor. See note below</td>
</tr>
<tr>
<td>6</td>
<td>Iout Monitor (output)</td>
<td>0-10V = 0-Ioutmax</td>
<td>The output current of the supply can be monitored by Iout Monitor.</td>
</tr>
<tr>
<td>7</td>
<td>Iprogram (input)</td>
<td>0-10V = 0-Ioutmax</td>
<td>The power supply output current is set by applying a 0-10V analog signal to Iprogram(+) .</td>
</tr>
<tr>
<td>8</td>
<td>Pulse Control (input)</td>
<td>TTL High = On TTL Low = Off Default = On (LDD-2500/3000/6000 only)</td>
<td>The output of the LDD-2500/3000/6000 may be pulsed by applying a TTL signal to Pulse Control, pin 8. The amplitude of the output current pulse is determined by the current level programmed via Pin 7, Iprogram(+). Rise fall times of &lt;1msec are typical. Contact Lumina Power for faster rise and fall times.</td>
</tr>
<tr>
<td>10, 11</td>
<td>+5V (output)</td>
<td>Auxiliary 100mA</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>-15V (output)</td>
<td>Auxiliary 100mA</td>
<td></td>
</tr>
<tr>
<td>13, 14</td>
<td>+15V (output)</td>
<td>Auxiliary 200mA</td>
<td></td>
</tr>
</tbody>
</table>

1. Always disable power supply (pin 1 low) prior to applying the mains voltage.

2. Pin 5 If maximum compliance voltage is less than 10V, Vout Monitor will read output voltage directly. If maximum compliance voltage is greater than 10V, then Vout Monitor will be scaled such that 0-10V = 0-Voutmax.

3. Applying a program voltage greater than 10.5 volts to Pin 7 (I-program) will latch power supply. Output current will not exceed 105% of rating.
LDD CW Laser Diode Drivers

Outline Drawings

LDD-100/150/250

Designed by www.fastdatasheets.com
LDD CW Laser Diode Drivers

LDD-600/1000/1500

Designed by www.fastdatasheets.com
LDD CW Laser Diode Drivers

LDD-2500
LDD CW Laser Diode Drivers

LDD-6000