OSI Laser Diode, Inc.’s High Power SMF coupled laser modules are designed to meet the performance demands of the optical test equipment marketplace. The high peak optical power SCW Series lasers serve 1310nm through 1650nm wavelengths and are available in fully hermetic laser welded packages. These packaged lasers can include both TEC and temperature sensing thermistors and back facet monitors for superior wavelength stability over a wide temperature range.

Characteristics w/TEC: \( T_a = -30^\circ \text{C} \) to 70\(^\circ\) C; \( T_{id} = +25^\circ\) C
w/o TEC: \( T_a = +25^\circ\) C

Conditions: \( P_w = 10 \mu\text{s} \); D/C = 1%
Fiber: SMF 28e; 1 meter min. fiber length for unconnectorized parts
1 meter +/- 0.1 for connectorized pigtails

### Parameters

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Symbol</th>
<th>1330 Series</th>
<th>1530 Series</th>
<th>1630 Series</th>
<th>1650 Series</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optical Power (Fiber)</td>
<td>( P )</td>
<td>Min: 180</td>
<td>Typ: 180</td>
<td>Max: 180</td>
<td>Min: 180</td>
<td>Typ: 180</td>
</tr>
<tr>
<td>Forward Current</td>
<td>( I_f )</td>
<td>1000</td>
<td></td>
<td>1000</td>
<td></td>
<td>1200</td>
</tr>
<tr>
<td>Threshold Current</td>
<td>( I_{th} )</td>
<td>30</td>
<td></td>
<td>30</td>
<td></td>
<td>45</td>
</tr>
<tr>
<td>Forward Voltage</td>
<td>( V_f )</td>
<td>2</td>
<td></td>
<td>2</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Center Wavelength</td>
<td>( \lambda )</td>
<td>1290</td>
<td>1310</td>
<td>1330</td>
<td>1530</td>
<td>1550</td>
</tr>
<tr>
<td>Spectral Width</td>
<td>( \Delta \lambda )</td>
<td>8</td>
<td></td>
<td>10</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Cooling Capacity**</td>
<td>( \Delta T )</td>
<td>45</td>
<td></td>
<td>45</td>
<td></td>
<td>45</td>
</tr>
<tr>
<td>TEC Voltage**</td>
<td>( V_{tec} )</td>
<td>1.2</td>
<td>1.6</td>
<td>1.2</td>
<td>1.6</td>
<td>1.2</td>
</tr>
<tr>
<td>TEC Current**</td>
<td>( I_{tec} )</td>
<td>600</td>
<td>800</td>
<td>600</td>
<td>800</td>
<td>600</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>( T_{op} )</td>
<td>-30</td>
<td>70</td>
<td>-30</td>
<td>70</td>
<td>-30</td>
</tr>
<tr>
<td>Storage Temperature Range</td>
<td>( T_{sig} )</td>
<td>-40</td>
<td>85</td>
<td>-40</td>
<td>85</td>
<td>-40</td>
</tr>
</tbody>
</table>

**Cooled Modules Only

Reliability data available upon request

Wavelengths: 1310nm, 1550nm, 1625nm and 1650nm
High Peak Optical Power (Pulsed) 180mW
RoHS Compliant
Singlemode
Typical Applications*:
- OTDR Instruments
- Spectroscopy
- Photon Counting
- Optical and LOS Sensors
- Talk Sets

*Options: Temperature controlled or uncooled versions available. Custom packaging available
14-pin Butterfly Package and 14-pin DIP Package F Series and G Series

<table>
<thead>
<tr>
<th>F Series (Floating Thermistor)</th>
<th>G Series (Ground Thermistor)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pin</td>
<td>Function</td>
</tr>
<tr>
<td>1</td>
<td>cooler anode (+) *</td>
</tr>
<tr>
<td>2,3,4,6,7,8,13</td>
<td>no connection</td>
</tr>
<tr>
<td>5</td>
<td>laser anode (+), ground</td>
</tr>
<tr>
<td>9</td>
<td>laser cathode (-)</td>
</tr>
<tr>
<td>10</td>
<td>ground</td>
</tr>
<tr>
<td>11,12</td>
<td>thermistor *</td>
</tr>
<tr>
<td>14</td>
<td>cooler cathode (-) *</td>
</tr>
</tbody>
</table>

*Cooled Package Only. No connection for uncooled pkg.

14-pin Butterfly Package

Part Numbering Diagram

Products can be ordered directly from OSI Laser Diode Inc. or its representatives. For a complete listing of representatives, visit our website at [www.laserdiode.com](http://www.laserdiode.com)

When ordering, refer to the information below.

**Personal Hazard and Handling Precautions:**

Handle optical fiber with normal care, avoiding stretch, tension, twist, kink or bend abuse. ESD precautions apply.

Normal aversion reactions will protect from radiation hazards to the eye associated with devices of this kind. 1310nm lasers are Class 3R; higher wavelengths are Class 1 lasers when operated at rated conditions. IEC 3B for all CW models.

**Warranty:**

Please refer to your product purchase agreement for complete details or check with your Laser Diode sales representative.

**Notice:**

OSI Laser Diode Inc. reserves the right to make changes to the products or information contained herein without notice. No liability is assumed as a result of their use or application.