Super-Luminescent Light Emitting Diode Device

IPSDD0823 (840nm)

Features

- Wide Optical Bandwidth
- Very Low Spectral Ripple
- High Output Power in SM/or PM Fiber

Applications

- Broadband Light Source
- Distributed Fiber Optic Sensor (FOS)
- Biomedical Imaging Device
- OCT Diagnostic Systems

Device Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Wavelength</td>
<td>( \lambda_c )</td>
<td>830</td>
<td>840</td>
<td>850</td>
<td>nm</td>
</tr>
<tr>
<td>3dB Bandwidth</td>
<td>( \Delta \lambda_{3dB} )</td>
<td>48</td>
<td>50</td>
<td>-</td>
<td>nm</td>
</tr>
<tr>
<td>Output Power in SM Fiber</td>
<td>( P_o )</td>
<td>5</td>
<td>8</td>
<td>-</td>
<td>mW</td>
</tr>
<tr>
<td>Spectral Modulation Depth ( p-p )</td>
<td>( \Delta )</td>
<td>-</td>
<td>0.1</td>
<td>-</td>
<td>dB</td>
</tr>
<tr>
<td>Operating Current</td>
<td>( I_F )</td>
<td>-</td>
<td>200</td>
<td>300</td>
<td>mA</td>
</tr>
<tr>
<td>Back Facet Monitor</td>
<td></td>
<td></td>
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</table>

Back Facet Monitor Available upon request

Absolute Maximum Ratings

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Min.</th>
<th>Max.</th>
<th>Unit</th>
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</thead>
<tbody>
<tr>
<td>Operating Temperature</td>
<td>-20</td>
<td>70</td>
<td>ºC</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40</td>
<td>85</td>
<td>ºC</td>
</tr>
<tr>
<td>TEC Drive Current</td>
<td>-</td>
<td>1.5</td>
<td>A</td>
</tr>
<tr>
<td>TEC Drive Voltage</td>
<td>-</td>
<td>3.6</td>
<td>V</td>
</tr>
<tr>
<td>Maximum Current</td>
<td>350</td>
<td></td>
<td>mA</td>
</tr>
<tr>
<td>Thermistor Resistance</td>
<td>10kΩ</td>
<td></td>
<td>mA</td>
</tr>
<tr>
<td>Fiber Type</td>
<td></td>
<td>SMF/PMF/MMF</td>
<td></td>
</tr>
<tr>
<td>Fiber Jacket</td>
<td>250µm tight buffer with 900µm loose tube</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Package</td>
<td>14-pin DIL/14-pin BUT/8-pin BUT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead Solder Temperature</td>
<td></td>
<td>260ºC for 10 Seconds</td>
<td></td>
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</tbody>
</table>
14-Pin BUT Package

14-Pin DIL Package

<table>
<thead>
<tr>
<th>Pin</th>
<th>Function</th>
<th>Pin</th>
<th>Function</th>
<th>Pin</th>
<th>Function</th>
<th>Pin</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TEC (+)</td>
<td>8</td>
<td>NC</td>
<td>1</td>
<td>TEC (+)</td>
<td>8</td>
<td>NC</td>
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<tr>
<td>2</td>
<td>Thermistor</td>
<td>9</td>
<td>NC</td>
<td>2</td>
<td>NC</td>
<td>9</td>
<td>SLD (-)</td>
</tr>
<tr>
<td>3</td>
<td>NC</td>
<td>10</td>
<td>SLD (+)</td>
<td>3</td>
<td>NC</td>
<td>10</td>
<td>Case</td>
</tr>
<tr>
<td>4</td>
<td>NC</td>
<td>11</td>
<td>SLD (-)</td>
<td>4</td>
<td>NC</td>
<td>11</td>
<td>Thermistor</td>
</tr>
<tr>
<td>5</td>
<td>Thermistor</td>
<td>12</td>
<td>NC</td>
<td>5</td>
<td>SLD (+)</td>
<td>12</td>
<td>Thermistor</td>
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<tr>
<td>6</td>
<td>NC</td>
<td>13</td>
<td>Case</td>
<td>6</td>
<td>NC</td>
<td>13</td>
<td>NC</td>
</tr>
<tr>
<td>7</td>
<td>NC</td>
<td>14</td>
<td>TEC (-)</td>
<td>7</td>
<td>NC</td>
<td>14</td>
<td>TEC (-)</td>
</tr>
</tbody>
</table>

- If the SLD is ordered with a Back Facet Monitor, Pin 7 is PD-Cathode and Pin 8 is PD+Anode
8-Pin BUT Package

Pin Definition

<table>
<thead>
<tr>
<th>Pin</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TEC (+)</td>
</tr>
<tr>
<td>2</td>
<td>NC</td>
</tr>
<tr>
<td>3</td>
<td>NC</td>
</tr>
<tr>
<td>4</td>
<td>SLED (+)</td>
</tr>
<tr>
<td>5</td>
<td>SLED (-)</td>
</tr>
<tr>
<td>6</td>
<td>Thermistor</td>
</tr>
<tr>
<td>7</td>
<td>Thermistor</td>
</tr>
<tr>
<td>8</td>
<td>TEC (-)</td>
</tr>
</tbody>
</table>
Part Numbering System

**Model:**
IPSDDXXXX: SLD Device

**Package:**
1: 14-pin DIL  
2: 8-pin Butterfly  
3: 14-pin Butterfly

**Fiber Type:**
1: SM Fiber  
2: PM Fiber  
3: MM Fiber

**Jacket Type:**
1: 900μm  
2: 250μm tight buffer

**Connector Type:**
0: No Connector  
3: FC/APC  
4: FC/UPC  
7: SC/APC  
8: SC/UPC

**Back Facet Monitor:**
Available upon request

**Example:** IPSDD0805-1224: 850nm SLD in 14-pin DIL with 250μm tight buffered PM Fiber with FC/UPC connectors

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