Features

- High coupled power
- Peak wavelength 1550 nm
- 3 dB bandwidth >40 nm
- Cut off frequency > 150 MHz
- Operating temperature range 0°C to 70°C
- Hermetically sealed TO package in pigtailed or receptacle housing with FC, ST or SC connector

Specifications (100mA forward current, 25°C)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Min</th>
<th>Typical</th>
<th>Max</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak Wavelength</td>
<td>λ</td>
<td>1520</td>
<td>1550</td>
<td>1580</td>
<td>nm</td>
</tr>
<tr>
<td>Spectral width FWHM</td>
<td>Δλ</td>
<td>40</td>
<td>-</td>
<td>-</td>
<td>nm</td>
</tr>
<tr>
<td>Coupled power to 62.5 μm fiber</td>
<td>Po</td>
<td>-</td>
<td>300</td>
<td>-</td>
<td>μW</td>
</tr>
<tr>
<td>Coupled power to 50 μm fiber</td>
<td>Po</td>
<td>100</td>
<td>-</td>
<td>-</td>
<td>μW</td>
</tr>
<tr>
<td>Coupled power to 9 μm fiber</td>
<td>Po</td>
<td>-</td>
<td>300</td>
<td>-</td>
<td>μW</td>
</tr>
<tr>
<td>Forward voltage</td>
<td>V_F</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>V</td>
</tr>
<tr>
<td>Rise/fall time (10% to 90%)</td>
<td>tr/τf</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>ns</td>
</tr>
<tr>
<td>Cut off frequency (Iop=100 mA, 20mA p-p)</td>
<td>B</td>
<td>150</td>
<td>-</td>
<td>-</td>
<td>Mb/s</td>
</tr>
</tbody>
</table>

Absolute Maximum Ratings

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Min.</th>
<th>Max.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating temperature</td>
<td>To</td>
<td>0</td>
<td>+65</td>
<td>°C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>T_stg</td>
<td>-40</td>
<td>+85</td>
<td>°C</td>
</tr>
<tr>
<td>Reverse voltage</td>
<td>V_R</td>
<td>-</td>
<td>2</td>
<td>V</td>
</tr>
<tr>
<td>Forward current</td>
<td>Iop</td>
<td>-</td>
<td>150</td>
<td>mA</td>
</tr>
<tr>
<td>Lead Soldering Temperature (10sec)</td>
<td>T_L</td>
<td>-</td>
<td>260</td>
<td>°C</td>
</tr>
</tbody>
</table>

Ordering Information

- Connector type
  - Receptacle: SC, FC or ST
  - Pigtail: SC, FC, ST, LC, MU
- Flange type
  - B for Board Mount
  - P for Panel Mount
  - U for UP Mount
  - X for None, S for Sugar Cube
- Fiber size
  - M1 for 50/125um
  - M2 for 62.5/125um
  - S1 for 9/125um

R0 for receptacle
PG for pigtail 100cm
S D 1 5-4
1550nm ELED Module

Pin Connections

Dimension
Pigtail Type

BM

PM

UPM

SC

FC

ST

MU

LC

SMA

2013-08
1550nm ELED Module

Receptacle Type

FC-PM

FC-BM

ST-BM

ST-PM

SC
Sugar Cube

Pin Connections

<table>
<thead>
<tr>
<th>PIN No.</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ANODE</td>
</tr>
<tr>
<td>2</td>
<td>CATHODE</td>
</tr>
<tr>
<td>3</td>
<td>ANODE</td>
</tr>
<tr>
<td>4</td>
<td>ANODE</td>
</tr>
</tbody>
</table>

Dimension (ST Receptacle)  Unit  mm

Units:mm
1550nm ELED Module

1550nm ELED Module Power-Iop Curve

Operating Current (Iop) = 120 mA

<table>
<thead>
<tr>
<th>Tcase [degC]</th>
<th>Sample 1</th>
<th>Sample 2</th>
<th>Sample 3</th>
<th>Sample 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>1540.08</td>
<td>1542.78</td>
<td>1538.73</td>
<td>1541.46</td>
</tr>
<tr>
<td>65</td>
<td>1554.59</td>
<td>1550.16</td>
<td>1557.52</td>
<td>1555.42</td>
</tr>
</tbody>
</table>

\[\frac{\Delta \lambda}{\Delta T} [\text{nm/degC}] \]

\[\frac{(\Delta \lambda_{25\text{degC}})}{\Delta T} [\text{ppm/degC}] \]

Mean \((\frac{\Delta \lambda}{\Delta T}) = 0.342 \text{ nm/degC}\)
Mean \((\frac{(\Delta \lambda_{25\text{degC}})}{\Delta T}) = 221.71 \text{ ppm/degC}\)
1550nm ELED Module

1550 ELED Optical Spectrum

--- LED Test ---

Peak........... 1545.6nm -20.37dBm FWHM(2.35a)... 60.045nm
Mean W1 (20dB)... 1531.9nm Pk Dens(1nm).... -17.0dBm
Mean W1 (FWHM)... 1544.074nm Total Power... 0.86dBm
20dB Width..... 162.0nm

![Graph of 1550 ELED Optical Spectrum]

Res: 1.0nm / Avg: Off / Smplg: 501 / WBW: 1kHz / Sm: Off / Intvl: Off / Att Off