850nm VCSEL MM Module

Features
- High coupled power
- Peak wavelength 850nm
- Low threshold current 3mA
- High speed τ_r, τ_f < 0.3ns
- Operating temperature range 0°C to 70°C
- Hermetically sealed To -46 package in pigtailed or receptacle housing with FC, ST or SC connector

Applications
- Gigabit Ethernet

Specifications (T=25°C)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Test Conditions</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>I_{op}=12mA</td>
<td>830</td>
<td>850</td>
<td>860</td>
<td>nm</td>
</tr>
<tr>
<td>Spectral width FWHN</td>
<td>∆λ</td>
<td>P_0</td>
<td>-</td>
<td>-</td>
<td>0.85</td>
<td>nm</td>
</tr>
<tr>
<td>Threshold current</td>
<td>I_{th}</td>
<td></td>
<td>-</td>
<td>3</td>
<td>6</td>
<td>mA</td>
</tr>
<tr>
<td>Threshold current temperature variation (0 to 70°C)</td>
<td>-</td>
<td>-</td>
<td>-1</td>
<td>-</td>
<td>1</td>
<td>mA</td>
</tr>
<tr>
<td>Coupled power (62.5/125μm fiber)</td>
<td>P_0</td>
<td>12mA</td>
<td>0.5</td>
<td>0.7</td>
<td>-</td>
<td>mW</td>
</tr>
<tr>
<td>Slope efficiency</td>
<td>SE</td>
<td>P_0</td>
<td>-</td>
<td>0.25</td>
<td>-</td>
<td>mW/mA</td>
</tr>
<tr>
<td>Slope efficiency temperature dependence</td>
<td>SE</td>
<td>P_0</td>
<td>-</td>
<td>-0.15</td>
<td>-</td>
<td>%/°C</td>
</tr>
<tr>
<td>Monitor Current (PD)</td>
<td>I_m</td>
<td>P_0</td>
<td>0.03</td>
<td>0.1</td>
<td>-</td>
<td>mA</td>
</tr>
<tr>
<td>Forward voltage</td>
<td>V_f</td>
<td>P_0</td>
<td>1.7</td>
<td>1.9</td>
<td>2.2</td>
<td>V</td>
</tr>
<tr>
<td>Series Resistance</td>
<td>R_s</td>
<td>P_0</td>
<td>-</td>
<td>30</td>
<td>-</td>
<td>Ω</td>
</tr>
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</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>Continuous forward current (LD)</td>
<td>I_{op}</td>
<td>-</td>
<td>15</td>
<td>mA</td>
</tr>
<tr>
<td>Continuous reverse voltage (LD)</td>
<td>V_{RL}</td>
<td>-</td>
<td>10</td>
<td>V</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>T_{O}</td>
<td>0</td>
<td>85</td>
<td>°C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>T_{std}</td>
<td>-40</td>
<td>100</td>
<td>°C</td>
</tr>
<tr>
<td>Lead soldering temperature (10 sec)</td>
<td>T_{L}</td>
<td>-</td>
<td>260</td>
<td>°C</td>
</tr>
</tbody>
</table>

Ordering Information

- Fiber length
- R0 for receptacle
- PG for pigtail 100cm
- Connector type
- Receptacle: SC, FC or ST
- Pigtail: SC, FC, ST, LC, MU or SMA
- Flange type
- B for Board Mount
- P for Panel Mount
- U for UP Mount
- X for None

Grade
- 1,2 for coupled power level (please see the specs above)
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Pin Connections

**BOTTOM VIEW**

Dimension

**Pigtail Type**

- **BM**
  - Ø18
  - 13.5
  - 9.4

- **PM**
  - Ø18
  - 12
  - 8

- **UPM**
  - Ø18
  - 0.5
  - 8.6

**Scissors**

**FC**

**ST**

**MU**

**LC**

**SMA**
850nm VCSEL MM Module

Receptacle Type

FC-PM

FC-BM

ST-BM

ST-PM

SC