Datasheet
VM100–850M

100 Gbit/s VCSEL
Multi–Mode Fiber–Coupled Module (850 nm) for high order modulation

Product Code: VM100–850M

Product Description
Ultrahigh-speed transmitter module for test purpose with integrated 850nm VCSEL fiber coupled to an OM3 multimode fiber for optical output. The module is designed as engineering sample for high speed test applications. Bitrates beyond 100G have been demonstrated with high order modulations: 4–PAM [1], DMT [2] and multi–CAP [3]. Multi mode and single mode VCSEL versions are available.

Features
- OM3 MMF Pigtail (50 µm core, 1 m length)
- FC/PC optical output connector
- Anritsu V electrical connector
- Multi Mode and Single Mode VCSEL versions

Applications
- Research and development
- 100G testing (4–PAM, DMT, multi–CAP)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>VM100–850M–MM</th>
<th>VM100–850M–SM</th>
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</thead>
<tbody>
<tr>
<td>VCSEL type</td>
<td>Multi mode</td>
<td>Single mode</td>
</tr>
<tr>
<td>Emission Wavelength</td>
<td>850 nm (available 835 – 865 nm)</td>
<td>850 nm (available 835 – 865 nm)</td>
</tr>
<tr>
<td>Data rate</td>
<td>Up to 100 Gbit/s</td>
<td>Up to 100 Gbit/s</td>
</tr>
<tr>
<td>Peak Output Power</td>
<td>4 mW</td>
<td>1 mW</td>
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</tbody>
</table>

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VM100–850M-MM: Multi mode VCSEL version

Optical spectrum

L–I–V Diagram

VM100–850M–SM: Single mode VCSEL version

Optical spectrum

L–I–V Diagram
4-PAM [1]

![Graph showing BER vs. Bit Rate for PAM-4 SM VCSEL and PAM-4 MM VCSEL](chart1.png)

DMT [2]

![Bar chart showing VCSEL capacity for MM-VCSEL and SM-VCSEL over 100m](chart2.png)

Multi-CAP [3]

![Graph showing Bit rate vs. MMF Length and Log(BER) vs. MMF Length](chart3.png)

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References


Mechanical dimensions

Schematic diagram

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