Fiber Coupled Laser Module

Application
Industrial areas / Medical / Biochemical

Property
Wavelength Range = 850nm
PMMA Fiber Cable

Introduction
Egismos is producing high stability and quality fiber coupled laser modules that are successfully applied in industry, biochemistry and medical equipment. Fiber coupled laser module series is distinguished by its small size, high transmission rate and competitive price.

Laser Specification:

<table>
<thead>
<tr>
<th>Specifications(T=25℃)</th>
<th>Symbol</th>
<th>FC850SC5-P500A1M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Mode</td>
<td>Multi-mode</td>
<td></td>
</tr>
<tr>
<td>Wavelength</td>
<td>nm</td>
<td>Typ 850</td>
</tr>
<tr>
<td>Optical out power</td>
<td>mW</td>
<td>Typ 3</td>
</tr>
<tr>
<td>Operating Voltage</td>
<td>V</td>
<td>Typ 3.0</td>
</tr>
<tr>
<td>Operating Current</td>
<td>mA</td>
<td>Typ 20</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>℃</td>
<td>Typ 25</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>℃</td>
<td></td>
</tr>
<tr>
<td>Storage Humidity</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Proof Test</td>
<td>kpsi</td>
<td></td>
</tr>
<tr>
<td>Housing Material</td>
<td></td>
<td>Brass</td>
</tr>
<tr>
<td>Mean time to failure(MTTF)</td>
<td>hrs</td>
<td>&gt;8,000</td>
</tr>
<tr>
<td>Numerical Aperture(N.A.)</td>
<td></td>
<td>0.5</td>
</tr>
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</table>
**Fiber Patch Cable Specification**

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Symbol</th>
<th>FC850SC5-P500A1M</th>
<th>FC850SC5-P1KA1M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiber Pigtail Length</td>
<td>m</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Fiber Core Diameter</td>
<td>D(µm)</td>
<td>500 ±10</td>
<td>1000 ±15</td>
</tr>
<tr>
<td>Core Non-Circularity</td>
<td>%</td>
<td>≤ 5</td>
<td>≤ 5</td>
</tr>
<tr>
<td>Fiber Core Material</td>
<td></td>
<td>PMMA</td>
<td>PMMA</td>
</tr>
<tr>
<td>Attenuation Values</td>
<td>dB/km</td>
<td>≤ 200@570nm</td>
<td>≤ 200@570nm</td>
</tr>
<tr>
<td>Core/Cladding Concentricity</td>
<td>µm</td>
<td>≤ 25</td>
<td>≤ 50</td>
</tr>
<tr>
<td>Cladding Diameter</td>
<td>µm</td>
<td>650±10</td>
<td>1100±15</td>
</tr>
<tr>
<td>Cladding Non-Circularity</td>
<td>%</td>
<td>≤ 2</td>
<td>≤ 2</td>
</tr>
<tr>
<td>Coating Diameter</td>
<td>µm</td>
<td>800±30</td>
<td>1300±50</td>
</tr>
<tr>
<td>Connector(Optional)</td>
<td></td>
<td>SMA905</td>
<td>SMA905</td>
</tr>
<tr>
<td>Fiber Bend Radius</td>
<td>mm</td>
<td>≥ 8D</td>
<td>≥ 8D</td>
</tr>
<tr>
<td>Jacket Diameter</td>
<td>mm</td>
<td>1.8 mm</td>
<td>1.8 mm</td>
</tr>
<tr>
<td>Cable Jacket</td>
<td>mm</td>
<td>3 (PVC)</td>
<td>3 (PVC)</td>
</tr>
</tbody>
</table>

**Specification Chart**

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Dcc no: EG-QS-T-RD-ST-0028  Form no: EG-QR-T-QA-0003  Date: 2016.01.15
### Mean Time to Failure (MTTF)

Mean time to failure (MTTF) is the length of time a device or other product is expected to last in operation. MTTF is one of many ways to evaluate the reliability of pieces of hardware or other technology. It’s important to note, however, that the mean time to failure metrics provided by companies regarding specific products or components may not have been collected by running one unit continuously until failure. Instead, MTTF data is often collected by running many units, even many thousands of units, for a specific number of hours.

### Numerical Aperture

In optics, the numerical aperture (NA) of an optical system is a dimensionless number that characterizes the range of angles over which the system can accept or emit light. By incorporating index of refraction in its definition, NA has the property that it is constant for a beam as it goes from one material to another provided there is no optical power at the interface. The exact definition of the term varies slightly between different areas of optics. Numerical aperture is commonly used in microscopy to describe the acceptance cone of an objective (and hence its light-gathering ability and resolution), and in fiber optics, in which it describes the range of angles within which light that is incident on the fiber will be transmitted along it.

### Bend Radius

Bend radius, which is measured to the inside curvature, is the minimum radius one can bend a pipe, tube, sheet, cable or hose without kinking it, damaging it, or shortening its life. The smaller the bend radius, the greater is the material flexibility.

Specifications are subject to change without notice.