SC OptiCam® Pre-Polished Fiber Optic Connectors

**Specifications**

SC pre-polished fiber optic connectors shall be TIA/EIA-604 FOCSI-3 compliant and contain a factory-terminated fiber, eliminating field polishing and adhesive. SC pre-polished connectors shall have an average insertion loss of 0.3dB per mated pair for multimode and singlemode fiber. SC pre-polished connectors shall captivate fiber and buffer in one action allowing for up to two re-terminations with no degradation in performance.

**Technical Information**

- **Standards requirements:** TIA/EIA-604 FOCSI-3 compliant; exceeds TIA/EIA-568-B.3 requirements
- **Fiber compatibility:** 62.5/125µm OM1, 50/125µm OM2, 10Gig™ 50/125µm laser optimized OM3/OM4 and 9/125µm OS1/OS2
- **Fiber cable type:** 900µm tight-buffered cable only
- **Fiber cable size:** 1.6mm – 2.0mm and 3.0mm jacketed cable with optional boots
- **Ferrule type:** Zirconia ceramic or composite ferrule with a pre-polished fiber stub
- **Insertion loss:** Ceramic: 0.3dB average (multimode and singlemode) Composite: 0.3dB average (multimode)
- **Return loss:** Ceramic: >20dB (multimode), >26dB (10Gig™ multimode), >50dB (singlemode) Composite: >20dB (multimode)

**Key Features and Benefits**

- **SC OptiCam® Connectors**
  - **Factory pre-polished fiber stub endface**
    - Eliminates inconsistent and time-consuming field polishing to deliver required optical performance; reduces termination time (less than half the time of field polish connectors) and the number of installation tools required
  - **Dual cam design with fiber and buffer clamps**
    - Secures both the fiber and the buffer during the camming step to facilitate consistent termination results; reduces the termination time compared to conventional termination methods
    - Allows up to two re-terminations to achieve optimum termination results; reduces the number of rejected connectors and terminations to provide yield rates approaching 100% for lower installed costs
  - **Translucent housing assembly**
    - Facilitates inspection of the fiber termination quality; results in rapid installations, improved termination yields, and lower installed costs
  - **Non-optical disconnect**
    - Maintains data transmission under tensile loads for jacketed cable
  - **Mechanical cable retention**
    - Consistently provides higher than industry standard cable retention; requires no adhesive, speeding installation
  - **Choice of Zirconia ceramic or composite ferrules**
    - Provides material option with comparable performance to meet application requirements; zirconia ceramic provides the highest durability for repeated matings

**OptiCam® Termination Tool**

- **Universal termination tool**
  - Secures both fiber and buffer in one action for all OptiCam® Connectors with connector specific cradles (included); ensures fast, consistent, and optimal terminations
- **Integrated visual termination indicator (VTI)**
  - Offers visual indication of proper termination after the cam step has been completed; virtually eliminates operator error to deliver a higher yield for a lower installed cost

**Applications**

SC fiber optic connectors are widely used in fiber optic backbone and horizontal applications for high-speed data transmission. Typical applications for SC OptiCam® Connectors include maintenance or emergency restoration of fiber networks and retrofit/initial install in both behind-the-wall (BTW) and in the permanent side of panelized interconnect and cross-connect.

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SC OptiCam® Pre-Polished Fiber Optic Connectors

Performance Information

<table>
<thead>
<tr>
<th>Test Parameter</th>
<th>Description</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualification test suite</td>
<td>Complete testing protocol per TIA/EIA-568-B.3 using TIA/EIA FOTPs that include mechanical, environmental and optical test sequences</td>
<td>Exceeds TIA/EIA-568-B.3 requirements</td>
</tr>
<tr>
<td>Connector intermatability</td>
<td>Dimensional and material compliance to TIA/EIA standards</td>
<td>All connectors are FOCIS compatible with TIA/EIA-604-3</td>
</tr>
<tr>
<td>Repeated mating</td>
<td>500 mate/unmate cycles Max. insertion loss: 0.75dB Min. return loss: 20dB</td>
<td>Exceeds TIA/EIA-568-B.3 test requirements: &lt;0.1dB additional insertion loss</td>
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<tr>
<td>Cable retention (straight pull): 900μm tight-buffered fiber</td>
<td>TIA/EIA-568-B.3 requirement: 0.5 lbs. load applied with &lt;0.5dB increase in insertion loss after test</td>
<td>Exceeds TIA/EIA-568-B.3 requirements: 1.0 lbs. avg. load applied with &lt;0.2dB increase in insertion loss after test 11.24 lbs. load applied with &lt;0.1dB increase in insertion loss after test*</td>
</tr>
<tr>
<td>Jacketed cable</td>
<td>11.24 lbs. load applied with &lt;0.5dB increase in insertion loss after test</td>
<td></td>
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</table>

*Jacketed cable retention tensile load may vary based on specific manufacturer’s jacketed cable diameter and aramid yarn count.

Selection Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Connector Type</th>
<th>Ferrule Material</th>
<th>Fiber</th>
<th>Ferrule Finish</th>
<th>Backbone Color</th>
<th>Boot Color</th>
<th>Average Insertion Loss*</th>
<th>Return Loss</th>
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</thead>
<tbody>
<tr>
<td>FSCMCXAQ</td>
<td>Simplex</td>
<td>Zirconia Ceramic</td>
<td>10 GbE 50/125μm (laser optimized) OM3/OM4</td>
<td>SPC Aqua</td>
<td>Aqua</td>
<td>0.3dB</td>
<td>&gt;26dB</td>
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<tr>
<td>FSCDMCXAQ</td>
<td>Duplex</td>
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<td>Simplex</td>
<td>Zirconia Ceramic</td>
<td>50/125μm OM2</td>
<td>SPC Black</td>
<td>Black</td>
<td>0.3dB</td>
<td>&gt;20dB</td>
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<tr>
<td>FSCDMC5BL</td>
<td>Duplex</td>
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<tr>
<td>FSCMPC5BL</td>
<td>Simplex</td>
<td>Composite</td>
<td>62.5/125μm OM1</td>
<td>SPC Electric</td>
<td>Ivory</td>
<td>0.3dB</td>
<td>&gt;20dB</td>
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<tr>
<td>FSCMC6BL</td>
<td>Simplex</td>
<td>Zirconia Ceramic</td>
<td>9/125μm OS1/OS2</td>
<td>UPC Blue</td>
<td>Blue</td>
<td>0.3dB</td>
<td>&gt;50dB</td>
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<td>FSCSCBU</td>
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*All connector insertion loss values calculated from tests taken with precision launch jumper assemblies per TIA/EIA-FOTP-171.

Dimensions are in inches [Dimensions in brackets are in millimeters].

For more information
Visit us at www.panduit.com

Contact Customer Service by email: cs@panduit.com or by phone: 800.777.3300

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