matrix, inc.
Precision Thinking

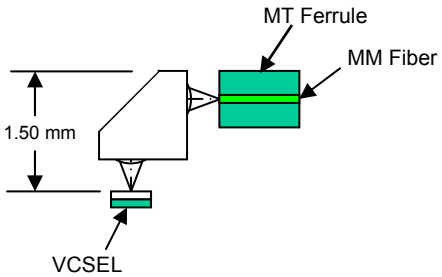
# matrix' High Temp 12 Channel VCSEL to Fiber Coupler

## Features

- Low Profile Right Angle Coupler
- For VCSEL and Detectors Arrays
- Mates between MT Ferrule Connector and VCSEL/Detector Package Window
- Anti-Reflection (AR) Coating Available
- Custom Lens and Array Sizes Available

*The low profile fiber array coupler is designed to mate 12 fibers in a reduced profile MT ferrule to a linear array of Vertical Cavity Surface Emitting Lasers (VCSEL). The right angle feature reduces board clearance requirements by eliminating the fiber optic bend radius. Typical installations incorporate both lasers and detectors with a single coupler (6/6). Made from injection molded Ultem, provides higher temperature operation than polycarbonates.*

| | |
|---|---|
| **Type:** | **Right Angle** |
| **Number of lenses:** | **2 x 12** |
| **Insertion Loss** | **<2.5dB (typ. 1.35dB)** |
| **Cross Talk:** | **>50 dB** |
| **Lens Position Tolerance** | **.005mm** |
| **Temp. Range:** | **-40°C to +150 °C** |
| **Dimensions:** | **W2.6 x L6.4 x H1.5mm** |




## Specifications

| | |
|---|---|
| Operating Wavelength: | 850 nm (nominal) |
| VCSEL Array: | |
| Emitting Area: | 15 x 15 mm |
| Optical Fiber: | |
| Numerical Aperture: | 0.200 |
| Core Diameter: | 50.0 um |
| Center-to-Center: | 250 um |
| Lens Array Size: | 1 x 12 |
| Material: | Ultem PEI |
| Output: | 90° from Input; Reduced Profile MT Ferrule |

| Feature | | 12ch Focuser for VCSEL coupling (change direction by using total internal reflection) |
|---|---|---|
| Comment | | without guid holes (VCSEL side) |
| Specification | IL | <=2.5dB (typ.1.35 dB) |
| | XT | >=50dB |
| | Error of centre | <=5um circle |
| | Total Error | <=10um |
| Condition of measuring | Light source | 850nm VCSEL (12um, Divergence <30°) |
| | Coupling Distance | VCSEL to Lens: 0.3mm Lens to Fiber: 0.5mm |
| | Other Condition | non active alignment for fiber side active alignment for VCSEL side |
| Application | | Parrallel transceiver, Interconnect |

**matrix, incorporated**
**One Catamore Boulevard**
**East Providence, RI 02914**
***Tel:* 1-401-434-3040**
***Fax:* 1-401-434-3822**
***www.matrixincorporated.com***