EVANESCENCE BASED VARIABLE SPLIT RATIO FIBER SPLITTER/COUPLER

Features
- Variable splitting ratio
- Low insertion loss
- Broad bandwidth
- Good uniformity
- Small package
- High directivity

Applications
- Optical amplifiers
- Fiber lasers
- Power monitoring
- Fiber gyroscopes
- Coherent communications

Product Description
Variable split ratio fiber splitters provide splitting ratios tunable from 0% to 100% with negligible optical loss. The device consists of two side-polished fibers mated to induce evanescent field coupling. The coupling ratio is controlled by adjusting the distance between the cores of the two side-polished fibers. PM fiber models with customer specified birefringence axis alignment are available.

Figure 1: Reference Dimensional Drawing
Ordering Information For Custom Parts

Part Number  VBS-22-\(W\)-\(a/b\)-F-XY-JD-L

\(W\) = Wavelength:
1310, 1550 nm

\(a/b\) = Fiber core and cladding:
9/125 for single mode
7/125 or 8/125 for PM

F = Fiber type:
S = Single Mode
P = Polarization Maintaining

\(L\) = Length, in meters (1 m standard)

JD = Jacket diameter
1 = 0.9 mm (standard)

XY = Connector code:
3S = Super NTT-FC/PC
3U = Ultra NTT-FC/PC
3A = Angled NTT-FC/PC
8 = AT&T-ST
SC = SC

SCA = Angled SC
LC = LC
LCA = Angled LC
MU = MU
X = No Connector

See table 6 of the OZ Standard Tables data sheet for other connectors.
https://www.ozoptics.com/ALLNEW_PDF/DTS0079.pdf

Specifications

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<th>Without connectors</th>
<th>With connectors</th>
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<tr>
<td>Operation Wavelength (nm)</td>
<td>1260–1650</td>
<td></td>
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<tr>
<td>Tuning Range of Coupling Ratio (%)</td>
<td>0–100</td>
<td></td>
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<td>Insertion Loss (dB)</td>
<td>&lt;0.1</td>
<td>&lt;0.5</td>
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<td>Polarization Extinction Ratio (dB, PMF only)</td>
<td>&gt;20</td>
<td>&gt;18</td>
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Questionnaire For Custom Parts

1. What is your center wavelength and operating bandwidth?
2. What type of fiber are you using: single mode, polarization maintaining?
3. What, if any, connectors are required for each port?
4. What fiber length is required?

Specifications

Without connectors

Operation Wavelength (nm) 1260–1650
Tuning Range of Coupling Ratio (%) 0–100
Insertion Loss (dB) <0.1
Polarization Extinction Ratio (dB, PMF only) >20

With connectors

Operation Wavelength (nm) 1260–1650
Tuning Range of Coupling Ratio (%) 0–100
Insertion Loss (dB) <0.5
Polarization Extinction Ratio (dB, PMF only) >18