Fused Coupler, Single Window



Key Features

- Wide wavelength coverage over multiple bands
- High power handling
- Wide range of regular parts available "to go"
- Proven reliability

Applications

- Passive optical networks
- CATV
- Network expansion
- Fixed attenuation (select configuration option 0)

The single window fused coupler splits or combines light with high performance over a wide bandwidth. These components are manufactured with a highly automated process to achieve consistent quality and reliability.

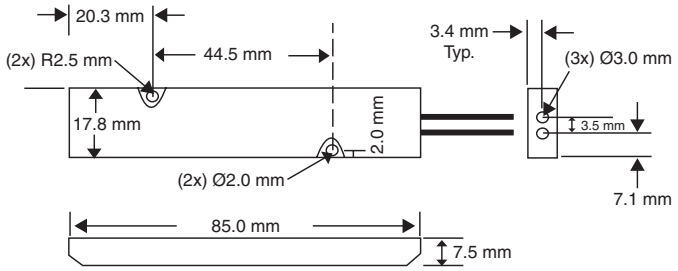
Regular parts are available with a wide variety of tap ratios, operating wavelengths, housing and connector options and can therefore be readily specified in a wide variety of applications, enabling rapid design cycles and new project builds. Reliability is assured through qualification to Telcordia GR-1221.

Compliance

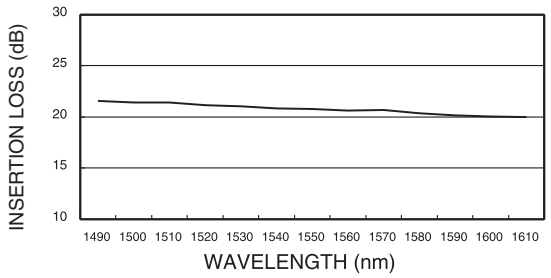
- Telcordia GR-1221

Dimensions Diagram: 1x2 Model, H-Package

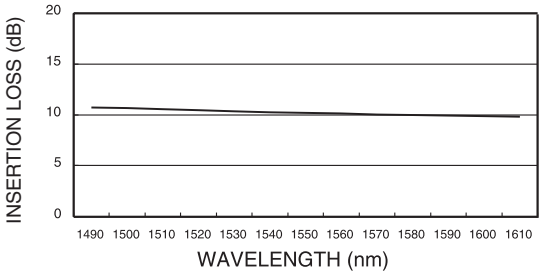
(Specifications in mm unless otherwise noted. 3mm cable shown.)



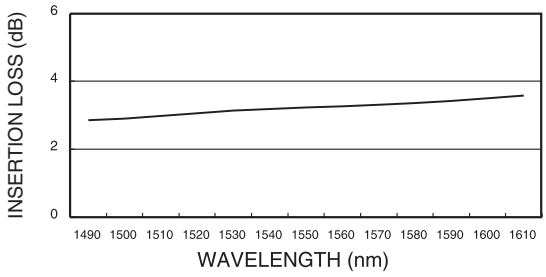
Wavelength Stability: 1550 nm 1/99 Port 2 (1%)



Wavelength Stability: 1550 nm 10/90 Port 2 (10%)



Wavelength Stability: 1550 nm 50/50 Port 2 (50%)



Qualification and Reliability Tests

Parameter	Specifications
High temperature storage test	85 °C for 2,000 hours
Damp heat test	50 °C/90% RH for 2,000 hours
Water immersion test	43±2 °C, pH of 5.5±0.5 for 7 days
Vibration test	10 to 2,000 Hz, 20 g's, 3 axes
Shock test	3 axes, 40 g's, 11 ms, 5 blows each direction
Impact test	1.8 meters height, 8 times
Fiber torsion test	180° twist, 5 times both directions, 5 N force
Fiber pulling test	5 N for 1 minute

Insertion Loss

Coupling Ratio	Attenuation	Grade	Signal Path Insertion Loss (Min./Max.)	Tap Path (or Attenuator Path) Insertion Loss (Min./Max.)
1%	20 dB	1	NA/0.2 dB	17.4/21.5 dB
1%	20 dB	2	NA/0.3 dB	15/22 dB
2%	17 dB	1	NA/0.2 dB	16.4/19 dB
2%	17 dB	2	NA/0.3 dB	15.3/18.2 dB
3%	15 dB	1	NA/0.3 dB	14.5/17.5 dB
3%	15 dB	2	NA/0.4 dB	12.8/19.5 dB
5%	13 dB	1	NA/0.4 dB	11.8/14.6 dB
5%	13 dB	2	NA/0.5 dB	10.6/18.9 dB
10%	10 dB	1	0.4/0.6 dB	9.6/10.8 dB
10%	10 dB	2	0.3/0.8 dB	8.3/12 dB
20%	7 dB	1	0.9/1.2 dB	6.5/7.4 dB
20%	7 dB	2	0.8/1.3 dB	6.2/8 dB
30%	5.2 dB	1	1.4/1.8 dB	4.9/5.6 dB
30%	5.2 dB	2	1.3/2 dB	4.5/6.1 dB
33%	4.8 dB	1	1.6/2.1 dB	4.4/5.2 dB
33%	4.8 dB	2	1.4/2.3 dB	4/5.7 dB
40%	4 dB	1	2/2.5 dB	3.7/4.4 dB
40%	4 dB	2	1.8/2.8 dB	3.3/4.8 dB
50%	3 dB	1	2.7/3.4 dB	2.7/3.4 dB
50%	3 dB	2	2.6/3.6 dB	2.6/3.6 dB

Specifications

Parameter (50/50 coupling ratio)		Grade 1	Grade 2
Center wavelength		1310, 1480, 1550, 1590 nm	1310, 1480, 1550, 1590 nm
Insertion loss (without connectors)	Maximum	3.4 dB	3.6 dB
Excess loss (without connectors)	Typical	0.1 dB	0.3 dB
Uniformity	Maximum	0.6 dB	1.0 dB
Polarization dependent loss	Maximum	0.1 dB	0.15 dB
Optical return loss	Minimum	50 dB	50 dB
Directivity	Minimum	55 dB	55 dB
Temperature coefficient	Typical	0.002 dB/°C	0.002 dB/°C
Package dimensions			
S package (D x L)		3.0 x 54 mm	3.0 x 54 mm
L package (D x L)		3.6 x 70 mm	3.6 x 70 mm
H package (L x W x H)		85 x 17.8 x 7.5 mm	85 x 17.8 x 7.5 mm
Operating temperature [1]		-40 to 85 °C	-40 to 85 °C
Storage temperature [1]		-50 to 85 °C	-50 to 85 °C

1. 20 to 70 °C for 3.0 mm cable

Ordering Information

For more information on this or other products and their availability, please contact your local JDSU account manager or JDSU directly at 1-800-498-JDSU (5378) in North America and +800-5378-JDSU worldwide or via e-mail at customer.service@jdsu.com.

Sample: FFC-CKS11B110

FFC- □ □ □ □ B 1 □ □

Code	Passband Wavelength
3	1480±40 nm
4	1310±40 nm
C	1550±40 nm
L	1590±40 nm

Code	Coupling Ratio
1	1%
2	2%
3	3%
5	5%
A	10%
C	20%
E	30%
F	33%
H	40%
K	50%

Code	Housing
H	Ø 3.0 mm cable
L	Ø 900 µm fiber
S	Ø 250 µm fiber

Code	Configuration
0	1x1 (attenuator)
1	1x2
2	2x2

Code	Grade
1	Grade 1
2	Grade 2

Code	Bandwidth
B	Broadband

Code	Fiber Type
1	Corning SMF-28

Code	Pigtail Length
0	0.5 meter
1	1 meter
2	2 meters
3	3 meters
4	4 meters
5	5 meters
6	6 meters
7	7 meters
8	8 meters
9	9 meters
A	10 meters

Code	Connectors
0	NONE
1	FC/PC
2	FC/SPC
3	FC/APC
4	SC/SPC
5	SC/APC
6	BICONIC
7	D4
8	ST
9	FC/UPC
A	SC/UPC
B	LC
C	MU

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