

Fused Coupler, Single Window, 980 nm FFCR Series



Key Features

- Ultra low-pump loss
- Minimum wastage of pump power
- High EDFA output power
- Wide range of regular parts readily available
- Proven reliability

Applications

- EDFA pump redundancy and sharing
- EDFA pump monitoring
- Fiber lasers

Compliance

- Telcordia GR-1221

The 980 nm fused coupler enables the accurate splitting and monitoring of pump power in erbium-doped fiber amplifiers. In addition, JDSU manufacturing technology provides uniquely low excess loss, along with low polarization and temperature dependence for all ports.

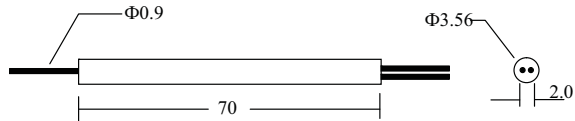
These high-performance standard parts are available with a variety of tap ratios and housing and connector options, and can therefore be specified for a wide range of applications, enabling rapid design cycles and new project builds. Standard variants for 960 nm and 1060 nm may also be selected.

2

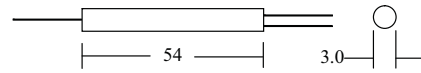
Dimensions Diagrams

Specifications in mm unless otherwise noted

1x2 Models, L-Package



1x2 Models, S-Package



Insertion Loss

Coupling Ratio	Grade	Signal Path		Tap Path	
		Insertion Loss ^{1,2} (Min./Max.) (dB)	TDL Max. (dB)	Insertion Loss ^{1,2} (Min./Max.) (dB)	TDL Max. (dB)
1%	P	NA/0.15	0.02	18.4/21.5	0.20
1%	A	NA/0.20	0.02	15.0/22.0	0.20
5%	P	NA/0.40	0.08	11.3/14.8	0.15
5%	A	NA/0.50	0.08	11.0/15.2	0.15
10%	P	NA/0.65	0.08	9.00/11.5	0.13
10%	A	NA/0.75	0.08	8.50/11.8	0.13
20%	P	NA/1.40	0.10	5.60/8.40	0.10
20%	A	NA/1.50	0.10	5.40/8.60	0.10
30%	P	NA/2.00	0.10	4.10/6.40	0.10
30%	A	NA/2.20	0.10	4.00/6.50	0.10
40%	P	NA/2.60	0.10	3.20/4.70	0.10
40%	A	NA/2.80	0.10	3.10/4.80	0.10
50%	P	2.60/3.40	0.10	2.60/3.40	0.10
50%	A	2.50/3.60	0.10	2.50/3.60	0.10

1. Insertion loss over operating wavelength range (not including PDL or connector losses).

2. In 2x2 couplers with a coupling ratio of 20 percent or lower, insertion loss is not specified for launch through second input port (P4).

Specifications

Parameter	960 nm	980 nm	1060 nm
Operating wavelength range ¹	955 to 965 nm	975 to 985 nm	1055 to 1065 nm
Return loss/directivity	Minimum	55 dB	
Pigtail tensile load	Maximum	5 N	
Optical Power handling	Maximum	4 W	
Operating temperature range		-5 to 75°C	
Storage temperature range		-40 to 85°C	
Environmental qualification		Telcordia GR-1221	
Package dimensions			
S package (D x L)		3.0 x 54 mm	
L package (D x L)		3.6 x 70 mm	
H package (L x W x H)		85 x 17.8 x 7.5 mm	

1. For wavelength within ± 5 nm of the operating wavelength range, the worst-case changes in insertion loss and WDL are shown as follows:

Tap ratio = 1%, maximum insertion loss and WDL increase = 0.65 dB.
 Tap ratio = 5%, maximum insertion loss and WDL increase = 0.50 dB.
 Tap ratio = 10%, maximum insertion loss and WDL increase = 0.40 dB.
 Tap ratio = 50%, maximum insertion loss and WDL increase = 0.20 dB.

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: FFCR51H1PN510

FFCR					N		
Code	Passband Wavelength	Code	Coupling Ratio	Code	Configuration	Code	Fiber Type
5	980 nm	1	1%	0	1x1 (attenuator)	2	Lucent BFO5635-02
8	1060 nm	5	5%	1	1x2	5	Corning Hi 1060 Flex
F	960 nm	A	10%	2	2x2		
		C	20%			Code	Pigtail Length
		E	30%	Code	Grade	0	0.5 m
		H	40%	A	Grade A	1	1 m
		K	50%	P	Grade P	2	2 m
		Code	Housing				
		H	Ø 3.0 mm cable				
		L	Ø 900 µm fiber				
		S	Ø 250 µm fiber				
						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