

## Product Bulletin



The Unifuse™ monolithic, single-fusion couplers are highly stable for multi-port, optical signal splitting. They have very good uniformity, low excess loss, and very low polarization sensitivity. Extremely compact, these products are produced using a unique fabrication method and designed for stand alone use or in a cascaded system.

### Single Mode Single Window Monolithic Fiber Coupler 1x3, 1x4 Narrow Band $\pm 10\text{nm}$

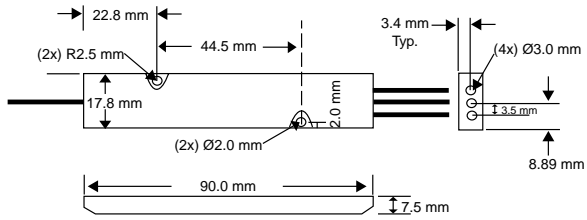
#### Key Features

- Highly compact package
- Highly reliable due to proprietary technology
- Low excess loss
- Excellent uniformity

#### Applications

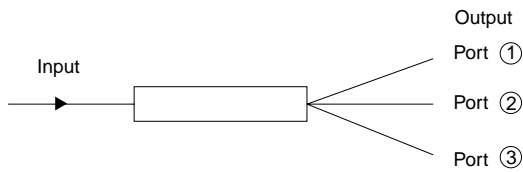
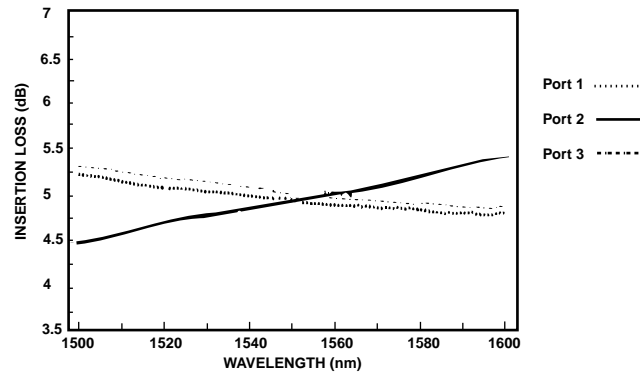
- Multi-channel telecommunication systems
- CATV and access

Package Dimensions: 1x3 Model, H-Package



Note: 3 mm cable shown

1x3 Model Wavelength Dependence



Coupling Ratio/Insertion Loss Conversion Chart for 1x3 Model

Ordering Code	Coupling Ratio	Port ① Insertion Loss Maximum	Port ② Insertion Loss Maximum	Port ③ Insertion Loss Maximum	PDL for all ports Maximum
10	45/10/45	4.0 dB	11.0 dB	4.0 dB	0.1 dB
20	40/20/40	4.5 dB	7.6 dB	4.5 dB	0.1 dB
30	35/30/35	5.0 dB	5.8 dB	5.0 dB	0.1 dB
33	33/33/33	5.3 dB	5.3 dB	5.3 dB	0.1 dB
40	30/40/30	5.7 dB	4.5 dB	5.7 dB	0.1 dB
50	25/50/25	6.6 dB	3.6 dB	6.6 dB	0.1 dB
60	20/60/20	7.4 dB	2.7 dB	7.4 dB	0.1 dB
70	15/70/15	9.2 dB	2.0 dB	9.2 dB	0.1 dB
80	10/80/10	11.0 dB	1.4 dB	11.0 dB	0.1 dB
90	5/95/5	14.8 dB	0.6 dB	14.8 dB	0.15 dB
96	2/96/2	19.5 dB	0.4 dB	19.5 dB	0.15 dB
98	1/98/1	22.0 dB	0.4 dB	22.0 dB	0.15 dB

## Specifications

Parameter		1x3 <sup>2</sup>	1x4
Operating wavelength		980, 1310, 1480, 1550, 1590 nm	980, 1310, 1480, 1550, 1590 nm
Insertion loss (without connectors)	Maximum	5.3 dB	6.8 dB
Excess loss (without connectors)	Typical	0.15 dB	0.3 dB
Uniformity	Maximum	0.8 dB	1.0 dB
Polarization dependent loss	Maximum	0.1 dB	0.1 dB
Optical return loss	Minimum	50 dB	50 dB
Directivity	Minimum	50 dB	50 dB
Temperature coefficient	Typical	0.003 dB/°C	0.003 dB/°C
Package dimensions -- S package (D x L)		3.0 x 54 mm	4.0 x 60 mm
-- L package (D x L)		3.6 x 70 mm	4.0 x 70 mm
-- H package (L x W x H)		90 x 17.8 x 7.5 mm	100 x 26 x 8.0 mm
Operating Temperature <sup>1</sup>		-40 to 85 °C	-40 to 85 °C
Storage Temperature <sup>1</sup>		-50 to 85 °C	-50 to 85 °C

1. -20 to +70 °C for 3.0 mm cable.

2. Asymmetrical coupling ratio is also available for 1x3 coupler, see Table of Conversion Chart for 1x3 model.

**Ordering Information**

Indicate your requirements by selecting one option from each configuration table. Please print the corresponding codes in the available boxes to form your part number. For more information on this or other products and their availability, please contact your JDS Uniphase account manager, or call 1-877-550-JDSU toll free in the U.S. and Canada, or visit [www.jdsuniphase.com](http://www.jdsuniphase.com).

**Sample: SMMC23100S211**

**SMMC**

Code	Wavelength
2	1550 nm
4	1480 nm
5	1310 nm
7	980 nm
L	1590 nm

Code	Ports
3	1x3
5	1x4

Code	Coupling Ratio (see ordering code on previous page)
00	even
10	45/10/45
20	40/20/40
:	:
96	2/96/2
98	1/98/1

**0**

Code	Package
S	250 μm fiber
L	900 μm loose tube
H	3.0 mm cable

Code	Fiber Type
2	Corning SMF-28
A	Corning PureMode HI-1060
F	Corning PureMode HI-980

Code	Fiber Length
1	1 meter <sup>1</sup>
2	2 meters
3	3 meters
4	0.5 meter
5	1.5 meters

Code	Connector <sup>2</sup>
0	No connector <sup>1</sup>
1	FC/PC
2	FC/SPC
3	FC/APC
4	SC/SPC
5	SC/APC
7	D4
8	ST
9	FC/UPC
A	SC/UPC
B	LC/PC
D	MU

1. Standard.
2. Insertion loss and return loss depend on connector type.

SMF-28 is a registered trademark of Corning Incorporated.  
 PureMode is a registered trademark of Corning Incorporated.  
 ST is a registered trademark of Lucent Technologies.

