

Attenuator, Fused Fiber



Key Features

- Environmentally stable
- High performance
- Broadband coverage
- Compact size
- Custom parts available

Applications

- Power management in optical networks
- Wavelength division multiplexing (WDM) system channel balancing
- Receiver protection
- Test equipment

The JDSU fused fiber attenuator is a compact, fused component that decreases optical power in telecommunications equipment, passive telephony, or cable television (CATV) networks and test equipment.

JDSU proprietary manufacturing technology provides high performance parts that are optimized to the required operating wavelength, narrowband, or broadband - along with low polarization and temperature dependence.

Regular parts are available in a wide variety of operating wavelengths, tap ratios, fiber types, housing and connector options. Our extensive selection enables rapid design cycles and new project builds.

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Optical Performance Specifications (C band and L band)

Parameter	Specification											
Operating wavelength range												
C band	1528 to 1563 nm											
L band	1570 to 1605 nm											
Attenuation	20 dB	17 dB	15 dB	13 dB	10 dB	7 dB	5.2 dB	4 dB	3 dB	2 dB	1 dB	
Available grade	A/B	A/B	A/B	A/B	A/B	A/B	A/B	A/B	A/B	A/B	A/B	A/B
Attenuation tolerance ($\pm$ dB)	1.4/2.4	1.0/1.5	0.9/1.4	0.8/1.2	0.6/1.0	0.5/0.8	0.3/0.5	0.3/0.5	0.2/0.4	0.2/0.4	0.2/0.4	0.2/0.4
WDL ¹ (dB)	Max.	.25/.35	.22/.30	.18/.26	.15/.20	.13/.18	.12/.15	.10/.15	.10/.15	.10/.15	.10/.15	.10/.15
PDL ² (dB)	Max.	.20/.25	.15/.20	.14/.20	.12/.20	.10/.15	.10/.15	.10/.15	.09/.11	.08/.10	.08/.10	.08/.10
TDL ³ (dB)	Max.	.20/.20	.15/.15	.15/.15	.15/.15	.13/.13	.10/.10	.10/.10	.10/.10	.10/.10	.10/.10	.10/.10
Available housing option	3, 4, 5, 6											
Fiber type code	1 (Corning SMF-28 - telecoms)											

1. Change in insertion loss over the operating wavelength range.
2. Change in insertion loss over all input polarization states.
3. Change in insertion loss from -5 °C to 75 °C.

Optical Performance Specifications (C + L band and S band)

Parameter	Specification											
Operating wavelength range												
C + L band	1528 to 1605 nm											
S band	1425 to 1500 nm											
Attenuation	20 dB	17 dB	15 dB	13 dB	10 dB	7 dB	5.2 dB	4 dB	3 dB	2 dB	1 dB	
Available grade	A/B	A/B	A/B	A/B	A/B	A/B	A/B	A/B	A/B	A/B	A/B	A/B
Attenuation tolerance ($\pm$ dB)	2.4/2.8	1.3/2.4	1.2/1.9	1.1/1.5	0.9/1.2	0.8/1.1	0.6/0.8	0.3/0.5	0.3/0.5	0.3/0.5	0.3/0.5	0.3/0.5
WDL ¹ (dB)	Max.	.90/1.20	.60/1.00	.50/.90	.45/.80	.40/.60	.37/.55	.35/.50	.30/.45	.25/.40	.25/.40	.25/.40
PDL ² (dB)	Max.	.20/.25	.15/.20	.14/.20	.12/.20	.10/.15	.10/.15	.10/.15	.09/.11	.08/.10	.08/.10	.08/.10
TDL ³ (dB)	Max.	.20/.20	.15/.15	.15/.15	.15/.15	.13/.13	.10/.10	.10/.10	.10/.10	.10/.10	.10/.10	.10/.10
Available housing option	3, 4, 5, 6											
Fiber type code	1 (Corning SMF-28 - telecoms)											

1. Change in insertion loss over the operating wavelength range.
2. Change in insertion loss over all input polarization states.
3. Change in insertion loss from -5 °C to 75 °C.

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Specifications

Parameter	Specification
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Optical return loss	Minimum	50 dB
Directivity	Minimum	55 dB
Operating temperature ¹		-40 to 75 °C
Storage temperature		-40 to 85 °C

1. For connectorised component, operating temperature range is -5 to 75 °C.

Housing Option

Code	Description	1 x 1 Dimensions (mm)	Pigtail
3	Regular	3.0 (Ø) x 55 (L)	Primary coated fiber
4	Ø 0.9 mm slim	3.0 (Ø) x 65 (L)	Ø 0.9 mm loose-tube
5	Ø 0.9 mm semi-ruggedized	5.0 (Ø) x 80 (L)	Ø 0.9 mm loose-tube
6	Ø 0.3 mm fully-ruggedized	80 (L) x 10 (W) x 8 (H)	Ø 3.0 mm fan-out sleeving

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: AFF-CK30AB110

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Code	Passband Wavelength
1	C+L band
C	C band
L	L band
S	S band

Code	Attenuation
1	20 dB
2	17 dB
3	15 dB
5	13 dB
A	10 dB
C	7 dB
E	5 dB
H	4 dB
K	3 dB
P	2 dB
R	1 dB

Code	Housing
3	Regular
4	Ø 0.9 mm slim
5	Ø 0.9 mm semi-ruggedized
6	Ø 0.3 mm fully-ruggedized

Code	Configuration
0	1 x 1

Code	Grade
A	A grade
B	B grade

Code	Device Type
B	Broadband

Code	Fiber Type
1	Corning SMF-28 (telecoms)

Code	Pigtail Length (Minimum)
0	0.5 meter
1	1 meter

Code	Connector
0	No connector
1	FC/PC
3	FC/APC
5	SC/APC
9	FC/UPC
A	SC/UPC
B	LC ¹

1. Not available for housing option 6

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