In-Line Fixed Fiber Attenuator

from 0dB to 20 dB at intervals of 0.5 dB Attenuation Level

DATASHEET

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The ILFA series of In-Line Fixed Attenuators is designed for precise optical power adjustment to a desired level. Featuring a fused passthrough fiber design, it ensures high reliability, making it suitable for airborne and space applications. The attenuator provides fixed attenuation levels ranging from 0 dB to 20 dB, with 0.5 dB increments for fine-tuned power control. We offer custom configurations to meet specific application requirements, including different connector types and end-face configurations. PM Panda fiber (PM780-HP, PM980, PM1550, PM1950)

Features

- Low Insertion Loss
- High PER
- High Return Loss
- High Stability & Reliability

Applications

- Optical Power Control
- Optical Power Equalization
- Telecommunication Systems
- WDM Systems
- Fiber Optic Instruments

Specifications

Parameter		Min	Typical	Max	Unit
Center Wavelength		780, 830, 980, 1064, 1310~2000			nm
Operating Wavelength	780, 830, 980, 1064 nm		±10		nm
	1310~2000 nm		±20		
Return loss		50			dB
Power Handling				500	mW
Tensile Load				5	N
Operating temperature		-40		80	°C
Operating temperature		-40		85	°C
Dimensions		3.0x54(for bare fiber/0.9mm tube)			mm
		90x20x10(for 2.0mm/3.0mm tube)			

Attenuate Value and Its Tolerance & PDL

Attenuate Value (dB)	IL Tolerance (dB)		Min. PER (dB)			
	Premium	A grade	780nm, 830nm, 980nm,1064nm		1310-2000nm	
			Premium	A grade	Premium	A grade
1	± 0.1	± 0.2	20	18	20	18
2	± 0.2	± 0.3	20	18	20	18
3	± 0.3	± 0.4	20	18	20	18
5	± 0.7	± 0.8	20	18	20	18
10	± 1.0	± 1.2	20	18	20	18
15	± 1.8	± 2.2	20	18	20	18
20	± 2.5	± 3.0	18	15	18	15

Notes:

[1]. Above specifications are for device without connector.

[2]. For devices with connectors, IL will be 0.3dB higher, RL will be 5dB lower. The default connector key is aligned to slow axis. Power transmits through the connector less than 2W.

Rev 03/08/25

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Mechanical Dimension (mm)

*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

Ordering Information

	☐	☐	☐	☐☐	☐	☐	☐	☐
Prefix	**Wavelength**	**Attenuation**	**Optical Power**	**Fiber Type**	**Package**	**Fiber Buffer**	**Fiber Length**	**Connector**
ILFA-	780nm = 7 830nm = 8 980nm = 9 1060nm = 1 1310nm = 3 1410nm = 4 1550nm = 5 1990nm = 9 2000nm = 2 Special = 0	1dB = 1 2dB = 2 3dB = 3 5dB = 5 10dB = 10 15dB = 15 20dB = 20 Special = 0	0.5W = 1 1W = 2 5W = 5 10W = 9	*Select below* Special = 00	3x54 Tube = 1 Special = 0	0.9mm Tube = 3 Bare Fiber = 1 Special = 0	1.0 m = 1 0.5 m = 2 Special = 0	FC/APC = 3 FC/PC = 2 Special = 0

Fiber Type Selection Table:

01	**SMF-28**	34	**PM1550**	71	**MM 50/125µm**
02	**SMF-28e**	35	**PM1950**	72	**MM 62.5µm**
03	**Corning XB**	36	**PM1310**	73	**105/125µm**
04	**SM450**	37	**PM400**	74	**FG105LCA**
05	**SM1950**	38	**PM480**	75	**FG50LGA**
06	**SM600**	39	**PM630**	76	**STP 50/125**
07	**780HP**	40	**PM850**	77	**IRZS23**
08	**SM800**	41	**PM980**	78	**IRZS32**
09	**SM980**	42	**PM780**		
10	**Hi1060**	43			
11	**SM400**	44	**PM405**		
12		45	**PM460**		
13		46			

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