

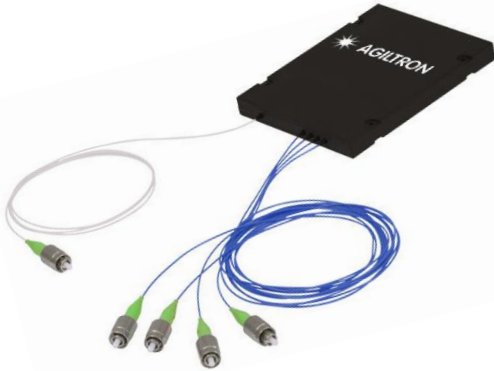
NxM Fiber Splitter/Coupler

350–2500 nm, SM, PM, MM, Large Core, Double Cladding, up to 20W



DATASHEET

[Return to the Webpage](#)



Features

- Ultra-Low PDL
- Low Excess Loss
- Low Insertion Loss
- Highly Directivity
- Stable and Reliable

Applications

- Telecommunications
- Optical Testing System
- Passive Optical Network
- Optical Power distributor



Legal notices: All product information is believed to be accurate and is subject to change without notice. Information contained herein shall legally bind Agiltron only if it is specifically incorporated into the terms and conditions of a sales agreement. Some specific combinations of options may not be available. The user assumes all risks and liability whatsoever in connection with the use of a product or its application.

Rev 07/04/26

The N×M Fiber Couplers/Splitters are fabricated by cascading 2×2 fused fiber couplers in a star or tree architecture, providing low insertion loss, excellent channel-to-channel uniformity, high optical power handling, and high polarization extinction ratio for polarization-maintaining (PM) versions. The design offers industry-leading performance over an exceptionally wide operating wavelength range from 370 to 2400 nm and a broad operating temperature range of -40 °C to +150 °C. Standard and custom port configurations are available to meet specific application requirements.

Please note that optical couplers, when used as combiners, inherently introduce losses. For example, combining two signals with a 50:50 coupler results in approximately 50% optical loss at each input. Agiltron produces a family of fiber combiners with minimal excess loss. Please search for “Fiber Combiner” at the top of our website for additional information.

Specifications (N x 4 Splitter Module)

Parameter	Grade U	Grade P	Grade A	Unit
Bandwidth	± 40			nm
Insertion Loss ^[1]	6.8	6.8	7.2	dB
Excess Loss ^[1]	0.3	0.3	0.5	dB
Uniformity	0.7	0.7	0.9	dB
PDL (SM)	0.02	0.1	0.2	dB
PER (PM)	18	20	25	dB
Optical Power	1	5	20	W
Operating Temperature	-40		85	°C
Storage Temperature	-50		85	°C
Package Type	A: 18 x 114 x 140			mm
	B: 29 x 130 x 132			
	C: 10 x 80 x 100 for 900um tube			

Specifications (N x 8 Splitter Module)

Parameter	Grade U	Grade P	Grade A	Unit
Bandwidth	± 40			nm
Insertion Loss ^[1]	10.2	10.2	11.3	dB
Excess Loss ^[1]	0.5	0.5	0.7	dB
Uniformity	1.2	1.2	1.5	dB
PDL (SM)	0.03	0.1	0.3	dB
PER (PM)	18	20	25	dB
Optical Power	1	5	20	W
Operating Temperature	-40		85	°C
Storage Temperature	-50		85	°C
Package Type	D: 43 x 322 x 480			mm
	E: 58 x 130 x 132			
	C: 10 x 80 x 100 for 900um tube			

Notes:

[1]. Without connector. Each connector adds 0.3dB and 0.5dB for short wavelength. The values are for wavelength >1310nm. For wavelength < 1310nm, the loss increase proportionally

☎ +1 781-935-1200

✉ sales@agiltron.com

🌐 www.agiltron.com

Information contained herein is deemed to be reliable and accurate as of the issue date. We reserve the right to change the design or specifications at any time without notice. Agiltron is a registered trademark of Optowares Corporation in the U.S. and other countries.

NxM Fiber Splitter/Coupler

350–2500 nm, SM, PM, MM, Large Core, Double Cladding, up to 20W



DATASHEET

Specifications (continue)

Specifications (N x 16 Splitter Module)

Parameter	Grade U	Grade P	Grade A	Unit
Bandwidth	± 40			nm
Insertion Loss ^[1]	13.6	13.6	15.1	dB
Excess Loss ^[1]	0.8	0.8	1.0	dB
Uniformity	1.6	1.6	2.0	dB
PDL (SM)	0.04	0.1	0.4	dB
PER (PM)	18	20	25	dB
Optical Power	1	5	20	W
Operating Temperature	-40		85	°C
Storage Temperature	-50		85	°C
Package Type	D: 43 x 322 x 480 F: 18 x 115 x 141 for 900um tube			mm

Specifications (N x 32 Splitter Module)

Parameter	Grade U	Grade P	Grade A	Unit
Bandwidth	± 40			nm
Insertion Loss ^[1]	17.5	17.5	18.5	dB
Excess Loss ^[1]	1.0	1.0	1.4	dB
Uniformity	2.0	2.0	2.5	dB
PDL (SM)	0.05	0.1	0.5	dB
PER (PM)	18	20	25	dB
Optical Power	1	5	20	W
Operating Temperature	-40		85	°C
Storage Temperature	-50		85	°C
Package Type	F: 18 x 115 x 141 for 900um tube			mm

Notes:

[1]. Without connector. Each connector adds 0.3dB and 0.5dB for short wavelength

+1 781-935-1200

sales@agiltron.com

www.agiltron.com

Information contained herein is deemed to be reliable and accurate as of the issue date. We reserve the right to change the design or specifications at any time without notice.
Agiltron is a registered trademark of Optowares Corporation in the U.S. and other countries.

NxM Fiber Splitter/Coupler

350–2500 nm, SM, PM, MM, Large Core, Double Cladding, up to 20W



DATASHEET

Ordering Information (Part Number)

Prefix	Wavelength	Grade	Package	Input	Output	Fiber Type	Fiber Length ^[2]	Connector ^[3]
FCNM-	980 = 9 1060 = 1 1310 = 3 1480 = 4 1550 = 5 2000 = 2 400 = A 450 = B 520 = C 650 = 6 750 = 7 850 = D Special = 0	U = 1 P = 2 A = 3 Aerospace ^[1] = A	Size A = 1 Size B = 2 Size C = 3 Size D = 4 Size E = 5 Size F = 6	1 Port = 1 2 Port = 2 4 Port = 4 8 Port = 8 12 Port = A 24 Port = B	4 Port = 04 8 Port = 08 16 Port = 16 32 Port = 32	Select Below	0.5m = 1 1m = 3 2m = 2 Special = 0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC/PC = 7 LC/APC = A LC/UPC = U Special = 0

- [1]. Aerospace-grade package featuring an aluminum metal casing filled with a specially formulated RTV compound that is both vibration-resistant and thermally conductive, specifically designed to endure repeated thermal shock cycles from -45°C to 90°C.
- [2]. 0.5m fiber length is default. The customized fiber length may cause long lead time and higher cost.
- [3]. The default connector configuration uses fiber with 0.9 mm buffer protection. The connector cannot be installed directly onto bare fiber because the bare fiber is prone to damage during shipping. However, the connector can be assembled on bare fiber if a 3 cm protective loose tube is added for reinforcement. The customer may remove this protective tube after testing. The optical power handling of a standard connector is less than 0.5 W for SMF-28 fiber and decreases further for smaller-core fibers.

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	Hi780	40	PM850	77	IRZS23
08	SM800	41	PM980	78	IRFS32
09	SM980	42	PM780	79	200 µm
10	Hi1060	43	PM350	80	PCF
11	SM400	44	PM405	81	UV180nm
12		45	PM460	82	LMA-PM-10
13		46		83	400 µm

+1 781-935-1200

sales@agiltron.com

www.agiltron.com

Information contained herein is deemed to be reliable and accurate as of the issue date. We reserve the right to change the design or specifications at any time without notice. Agiltron is a registered trademark of Optowares Corporation in the U.S. and other countries.