610 Series SM Standard Tree Coupler

Splitters and Couplers

Overview

ARIA's singlemode standard tree and star fiber optic couplers are bi-directional high-port count units for effective splitting or combining optical signals in singlemode fiber systems.

They are fused biconic tapered (FBT) couplers cascaded in series to achieve the desired port configuration.

These couplers have excellent uniformity and low excess loss which are ideal for fiber distribution, telecommunications systems and CATV applications.

Various types of connector terminals are available.

Features

- Low insertion loss
- Low PDL
- Excellent uniformity
- High directivity
- Bi-directional
- Environmentally stable and reliable

Applications

- Telecommunications
- CATV
- Subscriber loop
- Fiber-to-the-home
- Local Area Network (LAN)
- Test equipment
- Optical fiber sensors

Specifications

Parameter	Value (Nx4 / N=1,2)		Value (Nx6 / N=1,2)		Value (Nx8 / N=1,2,8)		Value (Nx16 / N=1,2)	
Operation Wavelength (nm)	1310 or 1550 (±40)		1310 or 1550 (±40)		1310 or 1550 (±40)		1310 or 1550 (±40)	
Grade	P	A	P	A	P	A	P	A
Insertion Loss (dB) (Max)	6.8	7.2	8.7	9.3	10.0	11.0	13.0	14.0
Excess Loss (dB) (Typ.)	0.3	0.5	0.5	0.9	0.5	0.9	0.8	1.2
Uniformity (dB) (Max)	0.8	1.2	0.9	2.0	1.2	3.0	2.4	3.8
PDL (dB) (Max)	0.2		0.3		0.3		0.4	
Directivity (dB) (Min)	55		55		55		55	
Return Loss (dB)	50		50		50		50	
Temperature Stability (dB/C)	0.003		0.003		0.004		0.006	
Operating Temperature (C)	-40 to +70		-40 to +70		-40 to +70		-40 to +70	
Storage Temperature (C)	-40 to +70		-40 to +70		-40 to +70		-40 to +70	
Package (mm)	100x80x10		100x80x10		100x80x10		100x80x10	

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ARIA TECHNOLOGIES, INC.
Fiber Optic Connectivity©

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Environmental Reliability Tests

- Complies with Telcordia requirement TR-NWT-001221 & TR-NWT-001209.Tests Optical characteristics, Thermal Cycling, Vibration Test, Salt Spray Erosion, Thermal Aging, and Humidity Resistance.
- High Temperature Storage Test: 85°C for 5000 hours
- Low Temperature Storage Test: -40°C for 5000 hours
- Thermal Cycling Test: -40°C/75°C for 500 cycles
- Fiber Pulling Test: 0.23 Kg
- Water Immersion Test: 43°C, pH=5.5, 340 hours
- Vibration Test: 10~2000 Hz random , 20g, 3 axes
- Impact Test: 8 drops, 1.8 meters high
- Thermal Shock Test: 100°C

Part Number

610-__-__-__-__-__-__-__

1	1	2	2	2	3	3	4	5	6	6	7	7

1 Wavelength

15 = 1550
13 = 1310
9 = 980
08 = 850
XX = Other

2 Port Number

14 = 1x4
24 = 2x4
44 = 4x4
16 = 1x6
26 = 2x6
18 = 1x8
28 = 2x8
88 = 8x8
116 = 1x16
216 = 2x16

3 Fiber & Package

03 = 3mm cabled fiber, ruggedized case
04 = 250µm bare fiber, ruggedized case
05 = 900µm loose tube fiber, ruggedized case

4 Grade

P = Premium
H = High
A = Average

5 Band

N = Narrow(+/-10nm)
W = Wide(+/-40nm)

6 Tail Length

05 = .05m
10 = 1.0m
15 = 1.5m
20 = 2.0m

7 Connectors

LC = LC/UPC
SC = SC/UPC
FA = FC/APC
SA = SC/APC
ST = ST/UPC
0 = None
XX = Other

Example: 1x4 premium grade SM standard tree coupler for 1310 nm light, 3mm cable terminated with FC connectors, tail length 1 meter. Part Number: 610-13-14-03-P-N-10-FC/FC

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