

STANDARD COUPLER: Singlemode

PERFORMANCE HIGHLIGHTS

Tight Insertion Loss Tolerance
Low Back Reflection
Environmentally Stable

Standard singlemode couplers from Storm—Fiber Optics are an excellent choice for duplex transmission on a single fiber, CATV systems, optoelectronic equipment, or test equipment.

Standard couplers can be used to split light from one fiber into two fibers or to combine light from two fibers into one. These couplers are available in 1310 or 1550 nm operating wavelengths and 1 x 2 or 2 x 2 configurations. Fused Biconical Taper technology provides reliable, consistent performance.

Splitting ratios—between 1:99 and 50:50—are customer specified, and a variety of connector styles and packaging options is available.



STANDARD COUPLER: Singlemode

PERFORMANCE SPECIFICATIONS

Operating Window (nm)	1310 or 1550 $\pm$ 10	
Grade	A	B
Typical Excess Loss (dB)	0.06	0.15
Uniformity (dB) (50:50)	0.5	0.9
Thermal Stability, dB (peak-peak)	< 0.2	< 0.3
Polarization Stability (dB)	< 0.1	< 0.15
Port Configuration	1 x 2 or 2 x 2	
Coupling Ratio	1:99 to 50:50, (50:50 standard)	
Insertion Loss (dB)	Please refer to the coupling ratios vs. insertion loss chart	
Directivity (dB)	> 50 (1 x 2), > 60 (2 x 2)	
Reflectance (dB)	< -55	
Operating Temperature (°C)	-40 ~ +85†	
Storage Temperature (°C)	-55 ~ +85	
Packaging Options (for different pigtailling)	1. Coated Fiber (250 μ m)	B, H, I
	2. Buffered (900 μ m)	C, H, I
	3. PVC Cable (3.0 mm)	E, H, I
	4. Adapters	H, I

Package options on opposite page.

*-20°C ~ +70°C for PVC cable.

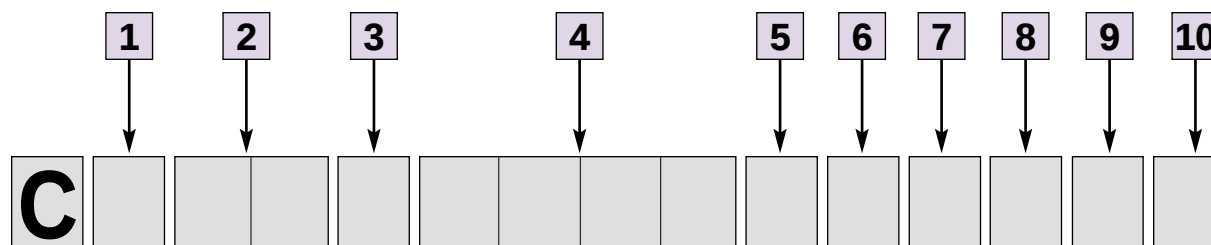
COUPLING RATIO VS. INSERTION LOSS

COUPLING RATIO (%)	INSERTION LOSS (dB)	
	Grade A	Grade B
50 / 50	3.4	3.6
40 / 60	4.4 / 2.5	4.7 / 2.8
30 / 70	5.7 / 1.8	6.0 / 2.0
20 / 80	7.5 / 1.2	8.0 / 1.4
10 / 90	10.8 / 0.7	11.5 / 0.9
5 / 95	14.6 / 0.4	15.5 / 0.6
1 / 99	21.6 / 0.2	22.0 / 0.3

THE PERFORMANCE OF THE COUPLERS HAS BEEN CAREFULLY DESIGNED TO MEET THE TOUGHEST TELCORDIA STANDARDS TA-NWT-001221 IN THE TESTS OF:

- Optical Characteristics
- Thermal Cycling
- Salt Spray Erosion
- Humidity Resistance
- Vibration Test
- Impact Resistant
- Thermal Aging
- Others
- High Temperature Storage Test85°C for 5,000 hours
- Low Temperature Storage Test-40°C for 5,000 hours
- Damp Heat Test75°C / 95% RH for 5,000 hours
- Thermal Cycling Test-40°C / 75°C for 500 cycles
- Fiber Pulling Test0.23Kg for 25 μ m fiber and 900 μ m loose tube
1.36Kg for jacketed cable
- Water Immersion Test43°C, pH = 5.5, 168 hours
- Vibration Test10 ~ 2,000Hz random 20G, 3 axis
- Impact Test8 drops, 1.8 meters high
- Fiber Torsion Test180° twist, both directions, 5N force

ENVIRONMENTAL RELIABILITY TEST



- 1** Grade: A or B.
- 2** Wavelength: 13=1310 or 15=1550.
- 3** Coupling Ratio: A=1%, B=5%, C=10%, D=15%, E=20%, F=25%, G=30%, H=35%, I=40%, J=45%, or K=50%.
- 4** Port Configuration: 0102=(1 x 2) or 0202=(2 x 2)
- 5** Package Style: See below.
- 6** Fiber Type: B=Bare, 9=900μm, 3=3mm cable, or A = Adapter
- 7** Input Port Length in meters (1 meter increments)
- 8** Output Port Length in meters (1 meter increments)
- 9** Input Port Connector/Adapter
- 10** Output Port Connector/Adapter

Example: CA13KO102E311PT

Standard singlemode coupler, grade A, 1310nm, 50%, 1 x 2, package E, 3mm cable, 1 meter input, 1 meter output, FC on input, SC on output.

PACKAGE STYLE

B	Tube 3.0 x 53 mm
C	Tube 3.8 x 66 mm
E	Box 101 x 12 x 10 mm
H	Enclosure Module (4 rack space)
I	Enclosure Module 154 x 110 x 16 mm

CONNECTOR/ADAPTER CODES

TYPE	
LC	L
LC Duplex w/ clips	M
LC 90° Boot	D
SC	T
SC Duplex w/ Clips	B
SC (APC)	Q
SC 90° Boot	C
FC	P
FC (APC)	U
ST Compatible	R
NO CONNECTOR	0 (zero)

