



SINCE 1993

Chip Hope Technology, Inc.
1300 Market Street, Suite 5
Lemoyne, PA 17043

P: 717.737.7850
F: 717.737.7851
www.chiphope.com

CHIP HOPE SMDC Series Single-Mode Broadband Dual Window Couplers

email: info@chiphopetech.com

SMDC Series Single-Mode Broadband Dual Window Couplers

> Description

Chip Hope's single-mode broadband dual-window couplers are bi-directional passive devices that split or combine different optical signals. Coupling ratios between 1%:99% and 50%:50% are available. They have exceptional stability and excellent uniformity between ports. They are designed for demanding telecommunications systems, sensors and CATV.

> Features

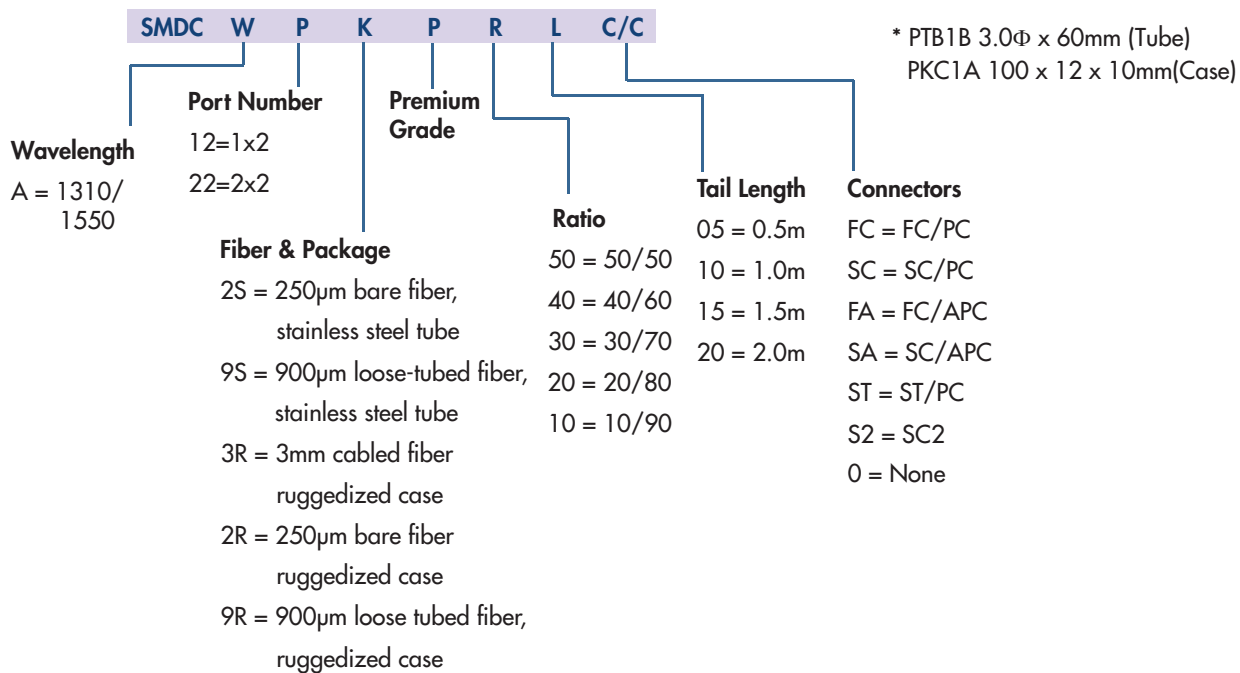
- » For both 1310 and 1550nm
- » Variety of coupling ratios
- » Low insertion loss
- » Polarization insensitive
- » High directivity
- » Environmentally stable

> Applications

- » Telecommunications
- » CATV
- » Subscriber loop
- » Fiber-to-the-Home
- » Taps for signal monitoring
- » Test equipment
- » Optical fiber sensors

> Ordering Information

> Packaging Option *



Example: SMDCA222SP5010SC/SC

2x2 50/50 premium grade SM broadband dual window coupler for 1310nm light, 250µm bare fiber packaged in a stainless steel tube and terminated with SC connectors, tail length = 1 meter



SINCE 1993

Chip Hope Technology, Inc.
1300 Market Street, Suite 5
Lemoyne, PA 17043

P: 717.737.7850
F: 717.737.7851
www.chiphope.com

CHIP HOPE SMDC Series Single-Mode Broadband Dual Window Couplers

email: info@chiphopetech.com

> Specifications

Broadband Dual-Window Coupler Specification (50/50 Coupling Ratio)

Operation Wavelength(nm)	1310 / 1550(±40)
Insertion Loss(dB)(Max)	3.6
Excess Loss(dB)(Typ.)	0.1
Uniformity(dB)(Max)	0.8
Polarization Dependent Loss(dB)(Max)	0.15
Temperature Coef(dB/°C)	0.002 Max
Directivity(dB)(Min)	50
Operating Temperature(°C)	-40 to +85 */#
Storage Temperature(°C)	-40 to +85

* -20°C to +70°C Ruggedized Packaging

-40°C to +85°C using 250 µm fiber and stainless steel tube



Coupling Ratio / Insertion Loss Conversion Chart

Coupling Ratio	Insertion Loss(dB)
50/50	3.6
40/60	4.7/2.5
30/70	5.8/1.9
20/80	7.8/1.2
10/90	11.3/0.6
5/95	15.2/0.6
1/99	23.5/0.3

Coupling Ratio	PDL
40-50%	0.15
30-39%	0.20
10-29%	0.30
1-9%	0.35

* PDL is for Tap Port Only

> Environmental Reliability Tests

- » Complies with Telcordia requirement TR-NWT-001221 & TR-NWT-001209
 - Optical characteristics
 - Thermal Cycling
 - Vibration Test
 - Salt Spray Erosion
 - Thermal Aging
 - Humidity Resistance
- » High Temperature Storage Test ... 85°C for 2500hours
- » Low Temperature Storage Test -40°C for 2500hours
- » Thermal Cycling Test -40°C/75°C for 500cycles
- » Fiber Pulling Test 0.23Kg for 250 µm fiber and 900µm loose tube
- » Water Immersion Test 43°C,PH=5.5, 340 hours
- » Vibration Test 10~2000 Hz random, 20g, 3axes
- » Impact Test 8 drops, 1.8 meters high
- » Thermal Shock Test 100°C