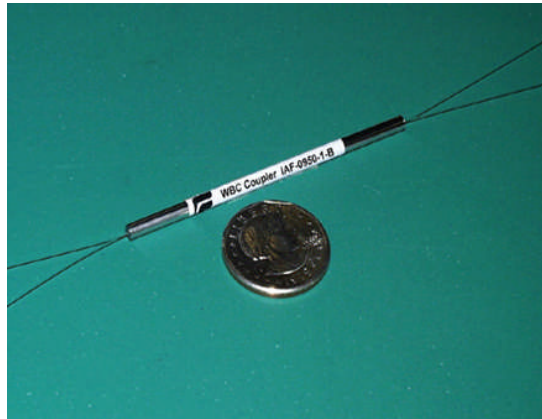


PM Couplers (Polarization Maintaining Couplers)



Fujikura PM Couplers are produced by Fujikura fused taper technology and knowhow of PANDA fiber. Fujikura PM couplers are qualified with Telcordia GR-1221-CORE and GR-1209-CORE.

Features

- ◇Low Crosstalk
- ◇Low Insertion Loss
- ◇Variety of Brands
- Tap : 1550 nm
- WDM : 980/1550 nm

Applications

- ◇Monitoring in PM Transmitter
- ◇Polarization Maintaining EDFA

Available products:

Product Name	Part #
1550 nm PM Tap Coupler	PTAP-01**-**-*
PM 980/1550 WDM Coupler	PDS-0100-**-B

STANDARD SPECIFICATION

FOR PM TAP COUPLERS (PTAP-01xx-y-B, PTAP-01xx-y-T)

1. General

This specification covers PM tap Couplers to be operated in the 1550 nm region.

Note: This specification is subject to change without notice.

2. Part number definition

PTAP-01xx-y-(B or T): xx: tap ratio,
 y: 1 (1x2), 2 (2x2)
 B: 250 μ m UV curable resin coated fiber for pigtail
 T: 250 μ m UV curable resin coated fiber with 0.9 mm loose tube

3. Specifications

3-1 Fiber Specifications

Fiber type:	Fujikura PANDA fiber for 1550 nm
Fiber major diameter:	125 +/- 1 μ m
Mode field diameter:	10.5 +/- 1.0 μ m @1.55 μ m
Maximum attenuation:	0.5 dB/km @1.55 μ m
Beat length:	3.0 to 5.0 mm @1.55 μ m
Polarization crosstalk:	Max -30 dB / 100 m
Coating diameter:	245 +/- 15 μ m
Coating material:	Double Layers of UV cured Acrylate

3-2 Coupler Configuration

Number of Port:	B type: 1 x 2 (Fig.1) , 2x2 (Fig.2) T type: 1 x 2 (Fig.3) , 2x2 (Fig.4)
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Packaging

Coupler Main Body	SUS
Length:	75 +/- 1 mm (B type 1x2 UV fiber type, T type 1x2, 2x2 loose tube type), 70 +/- 1 mm (B type 2x2 UV fiber type)
Diameter:	3.0 +/- 0.2 mm
Length of Each Port Fiber Lead:	>1 m (B type: as UV pigtail fiber portion) >1 m (T type: as loose tube portion)

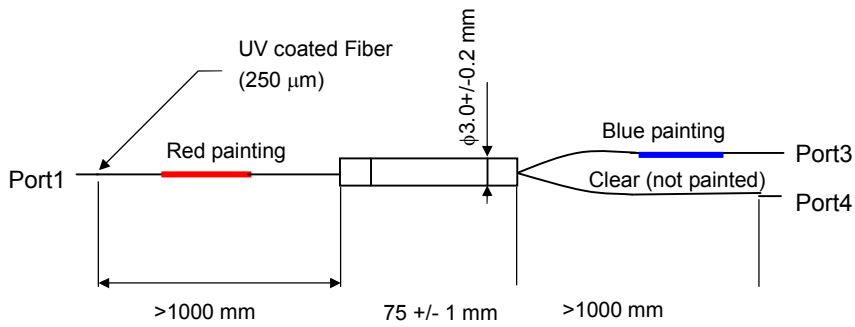


Fig. 1 Configuration of UV curable resin coated fiber pigtail type (PTAP-01xx-1-B)

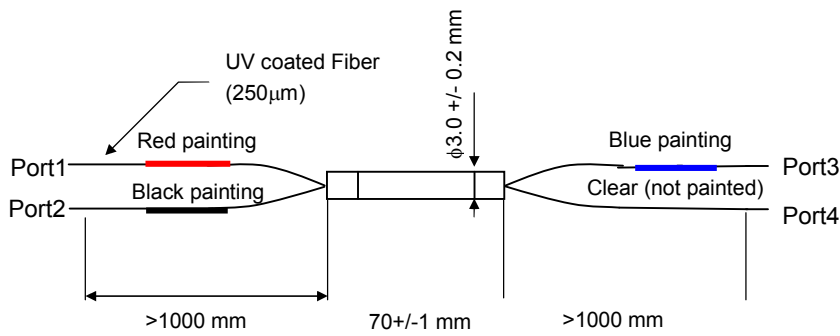


Fig. 2 Configuration of UV curable resin coated fiber pigtail type (PTAP-01xx-2-B)

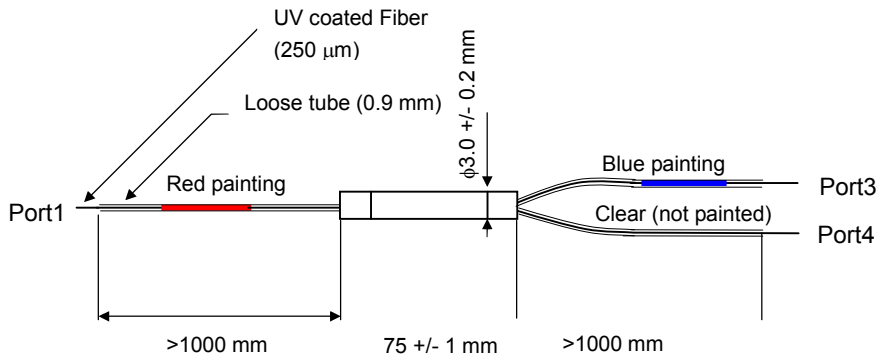


Fig. 3 Configuration of loose tube pigtail type (PTAP-01xx-1-T)

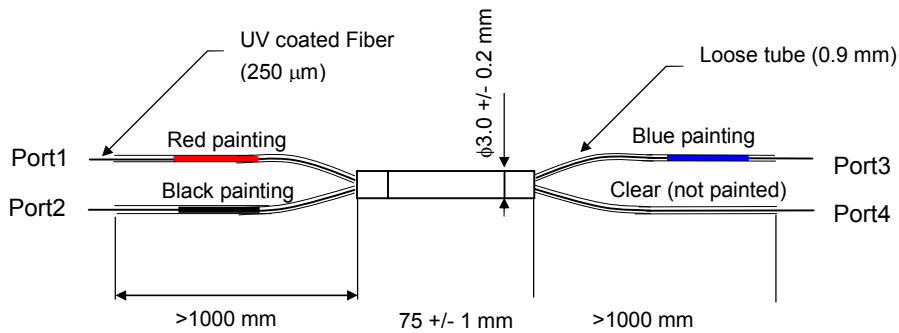


Fig. 4 Configuration of loose tube pigtail type (PTAP-01xx-2-T)

3-3 Optical Specifications

Table 1. Types of coupling Ratios (Slow axis)

Part number	Coupling ratios
PTAP-0101-y-B,T	1%/99% (20dB)
PTAP-0105-y-B,T	5%/95% (13dB)
PTAP-0110-y-B,T	10%/90% (10dB)
PTAP-0150-y-B,T	50%/50% (3dB)

- 3-3-1 Operating Temperature / Humidity: 0 to +70 degC / 10 to 95%RH
 3-3-2 Operational Wavelength: 1530 to 1570 nm
 3-3-3 Storage Temperature / Humidity: -40 to +85 degC / 10 to 95%RH
 3-3-4 Excess loss (Slow axis)

Table 2. Part numbers and Excess losses

Part numbers	Excess losses
PTAP-0101-y-B,T	<=0.5 dB
PTAP-0105-y-B,T	<=0.5 dB
PTAP-0110-y-B,T	<=0.5 dB
PTAP-0150-y-B,T	<=0.7 dB

- 3-3-5 Insertion loss at 23+/-5 degC (Slow axis)

Table 3. Insertion Losses

Part numbers	Thru port	Cross port
PTAP-0101-y-B,T	Max 0.6 dB	Max 22 dB
PTAP-0105-y-B,T	Max 0.8 dB	Max 14.5 dB
PTAP-0110-y-B,T	Max 1.2 dB	Max 11.5 dB
PTAP-0150-y-B,T	2.5 to 4.5 dB	2.5 to 4.5 dB

- 3-3-6 Cross talk (from slow axis to fast axis)

The maximum Cross talk is -20 dB for all types.

- 3-3-7 Directivity

The minimum directivity of slow axis is 55 dB for all types.

<End of Specification>



Specifications subject to change without prior notice

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STANDARD SPECIFICATION

FOR

PM 980/1550 WDM Coupler

(PDS-0100-*-B)

1. General

This specification covers PM 980/1550 WDM Coupler.

Part number : PDS-0100-1-B

PDS-0100-2-B

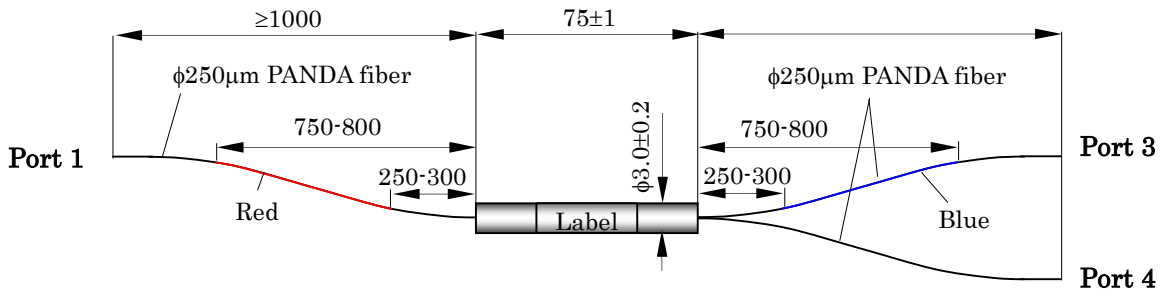
2. Specifications

Table 1 shows the specifications of PM 980/1550 WDM Coupler. Figure 1 shows the configuration.

Table 1 Specifications

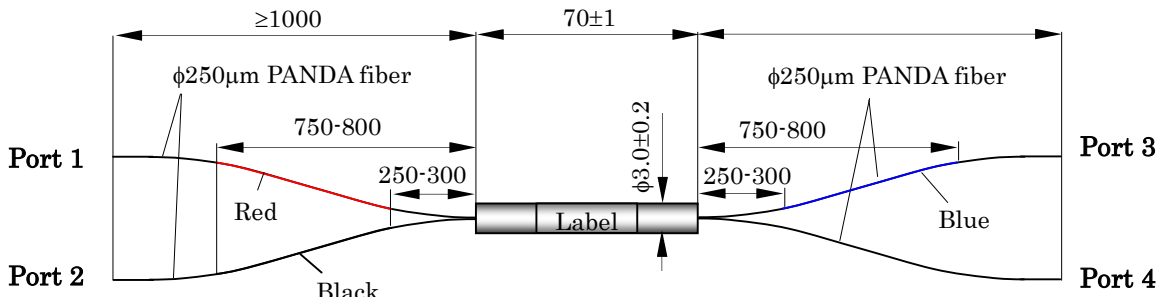
Parameter		Unit	PDS-0100-*-B	
Operating Wavelength	Pump Path	nm	970 to 990	
	Signal Path	nm	1530 to 1570	
Insertion Loss	Pump Path	dB	≤0.2	
	Signal Path	dB	≤0.5	
Wavelength Dependant Loss	Pump Path	dB	0.1	
	Signal Path	dB	0.3	
Crosstalk	Signal Path	dB	≥20	
Output Port		-	Port 4(Pump) / Port 3(Signal)	
Input Port		-	Port 1	
Return Loss		dB	≥43(Pump) / ≥50(Signal)	
Directivity		dB	≥55	
Operating Temperature		degC	0 to +70	
Storage Temperature		degC	-40 to +85	
Fiber Type		-	Fujikura PANDA fiber	
Fiber Configuration		-	1×2	PDS-0100-1-B
		-	2×2	PDS-0100-2-B
Package Dimensions		mm	φ3.0×L75	PDS-0100-1-B
		mm	φ3.0×L70	PDS-0100-2-B
Fiber Length		m	≥1	

Optical characteristic is defined by slow axis.



PDS-0100-1-B

All dimension : mm



PDS-0100-2-B

All dimension : mm

Fig. 1 Definition of each port for UV fiber pigtail type

3. Delivery Inspection Item (@23±5 degC)

Item		Wavelength	Specification
Insertion Loss (dB)	Pump Path	970 nm	≤0.2
		980 nm	
		990 nm	
Crosstalk (dB)	Signal Path	1530 nm	≥20
		1550 nm	
		1570 nm	

<End of Specification>



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