



WDM /Tap Coupler/Isolator Hybrid Combination (980/1550 & 1480/1550 nm)

ACP's WTIH is a combination of a wavelength division multiplexer, tap coupler and an isolator in a compact package. This product has an extremely low insertion loss, a very stable tap-coupling ratio, high isolation, and high return loss. The WTIH is ideal for fiber optic amplifier applications.

FEATURES

Wide Operating Wavelength Range
Low Insertion Loss
High Channel Isolation
Ultra Low PDL and PMD
High Stability and Reliability
Epoxy Free Optical Path

APPLICATION

Fiberoptic Amplifiers
CATV Fiberoptic Links
WDM Systems
Fiberoptic Instruments
Transmitters and Fiber Lasers

PERFORMANCE SPECIFICATIONS

Parameter	Specifications			
Operating Wavelength	980/1550 nm		1480/1550 nm	
Stage	Single	Dual	Single	Dual
Signal Wavelength	1550±15nm	1550±30nm	1550±15nm	1550±30nm
Pump Wavelength	965 ~ 1000nm		1450 ~ 1490nm	
Isolation @ 23°C, all SOP	≥ 31dB	≥ 45dB	≥ 31dB	≥ 45dB
Wavelength Isolation	≥ 12 ¹⁾ dB	≥ 12 ¹⁾ dB	≥ 12 ¹⁾ dB	≥ 12 ¹⁾ dB
Wavelength Isolation	≥ 30 ²⁾ dB	≥ 30 ²⁾ dB	≥ 30 ²⁾ dB	≥ 30 ²⁾ dB
Insertion Loss [(Signal for 1 & 2% Tap)]	≤ 1.1 ³⁾ dB	≤ 1.2 ³⁾ dB	≤ 0.9 ³⁾ dB	≤ 1.1 ³⁾ dB
Insertion Loss [(Signal for 5% Tap)]	≤ 1.3 ³⁾ dB	≤ 1.4 ³⁾ dB	≤ 1.1 ³⁾ dB	≤ 1.3 ³⁾ dB
Insertion Loss (Pump)	≤ 0.6 ³⁾ dB			
Insertion Loss (1% Tap)	19 ~ 20.8 ³⁾ dB			
Insertion Loss (2% Tap)	16.2 ~ 18.0 ³⁾ dB			
Insertion Loss (5% Tap)	12.2 ~ 14.0 ³⁾ dB			
Wavelength Dependent Loss	≤ 0.4dB			
Polarization dependent loss	≤ 0.1dB			
Polarization Mode dispersion	≤ 0.25 (0.05) ⁴⁾ dB	≤ 0.05dB	≤ 0.25 (0.05) ⁴⁾ dB	≤ 0.05dB
Directivity	≥ 55dB			
Return Loss	≥ 50dB			
Optical Power	≤ 300mW			
Operating Temperature	0 to +70°C			
Storage Temperature	- 40 to +85°C			
Fiber Type (Pump and Common port)	Hi1060 or Hi 1060 Flex		SMF-28, SMF28 Ultra, or ClearCurve ZBL	
Fiber Type (Signal and Tap port)	SMF-28, SMF28 Ultra, or ClearCurve ZBL			
Package Dimensions	A= Standard, Φ5.5xL38mm (250um fiber), Φ5.5xL42mm (900um fiber)			

Note: 1) 2 to 4 @ signal (See "Port Configuration").

2) 1 to 2 or 2 to 1 @ pump (See "Port Configuration").

3) Overall wavelength range under 0 to 70°C, all SOP.

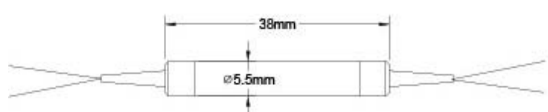
4) Low PMD option.

All values referenced are without connector.

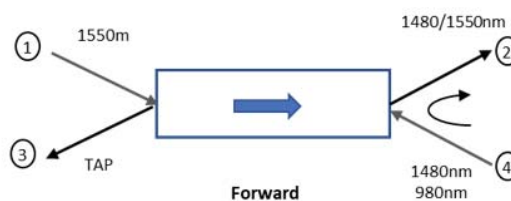
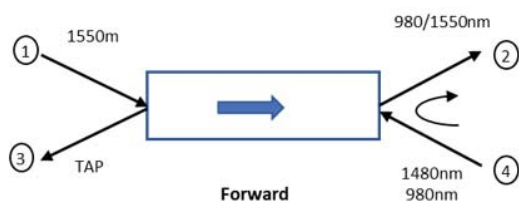
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MECHANICAL DIMENSIONS

A Package



PORT CONFIGURATIONS



ORDERING INFORMATION

WTIH	Stage	Operating Wavelength	Tap Ratio	Port	Package	Fiber Type* (Pump and Common port)	Fiber Type* (Signal and Tap port)	Pigtail Style	Fiber Length**	Connector
	S=Single	9855=980/1550nm	1=1%	202=2x2	A= A package	2=SMF-28 Ultra (G.657.A1)	2=SMF-28 Ultra (G.657.A1)	1=Bare fiber	05=0.5m	0= None
	D=Dual	4855=1480/1550nm	2=2%			3=ClearCurve ZBL(G.657.B3)	3=ClearCurve ZBL(G.657.B3)	2=900um loose tube	10=1.0m	1= FC/APC
			5=5%			6=Hi1060				2= FC/PC
						7=Hi1060 Flex				3= SC/APC
										4= SC/PC
									20=2.0m	5= ST
										6= LC/UPC
										7= LC/APC

*1=SMF-28(G.652) is available upon request.

**Other length is available upon request, However, 900µm loose tube is only up to 2m.