Product: Tap + Isolator + WDM Hybrid

Part Number	Spec Number	Version	Date
TAIWXXXXXXXXXXX	S003	Rev 02	11/30/2021

1 Function Diagram

This is a tap coupler + isolator + 1550/980nm WDM hybrid.

Signal → Common

Tap → Pump
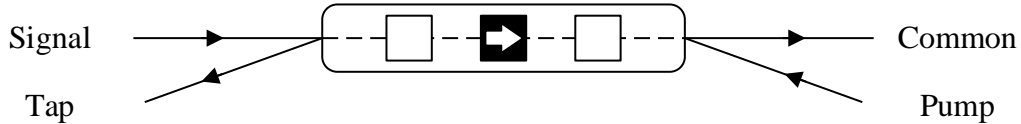
2 Specifications

2.1 Environment Conditions

Item	Parameters	Symbol	Min	Typ	Max	Units	Note
1.	Operating Temperature	Top	0		70	°C	
2.	Storage Temperature	Tstor	-40		85	°C	
3.	Operating Relative Humidity	RHop	5		95	%	[1]
4.	Storage Relative Humidity	RHstor	5		95	%	[1]

Note:
[1] Not to exceed industrial standard of 0.024 kg water per kg of dry air under non-condensing conditions.

2.2 Optical Specifications

Item	Parameters		Symbol	Min	Typ	Max	Units	Note
5.	Signal Wavelength		λs	1528 ~ 1568			nm	
6.	Pump Wavelength		λp	965 ~ 995			nm	
7.	Signal Insertion Loss (Signal → Com) @λs		IL_S			1.5	dB	
8.	Pump Insertion Loss (Pump → Com) @λp		IL_P			0.6	dB	
9.	Tap Insertion Loss (Signal → Tap)		IL_T	17		24	dB	1%
10.	Isolator Isolation (Com → Signal) @λs	Single Stage	Iso	20			dB	
		Dual Stage	Iso	36			dB	
11.	Pass Isolation (Signal → Com) @λp		Iso	25			dB	G
12.	Reflect Isolation (Pump → Com) @ λs		Iso	15			dB	G
13.	Wavelength Dependent Loss @23°C		WDL			0.5	dB	
14.	Polarization Dependent Loss		PDL			0.2	dB	
15.	Return Loss @23°C		RL	50			dB	
16.	Directivity (Com → Tap) @23°C		Dir	50			dB	
17.	Polarization Mode Dispersion	Single Stage	PMD			0.25	ps	G
		Dual Stage	PMD			0.05	ps	G
18.	Optical Power		Pop			500	mW	G

Note:
*Above specifications are for device without connector. IL is 0.3 dB higher, RL is 5 dB lower after connector added.
G: Guaranteed by design.

2.3 Mechanical Specifications

2.3.1 Specifications

| Item	Parameters		Symbol	Min	Typ	Max	Units	Note
19.	Fiber Type	Signal & Tap			G.657 A1			
		Common & Pump			OFS CL 980-20			
20.	Fiber Length				By PN		m	
21.	Fiber Jacket				By PN			[2]
22.	Connector Type				By PN			
23.	Package Dimension				See below for details		mm	
24.	Fiber Color	Signal			Black			[3]
		Tap & Common			Natural			
		Pump			Red			[3]

Note:

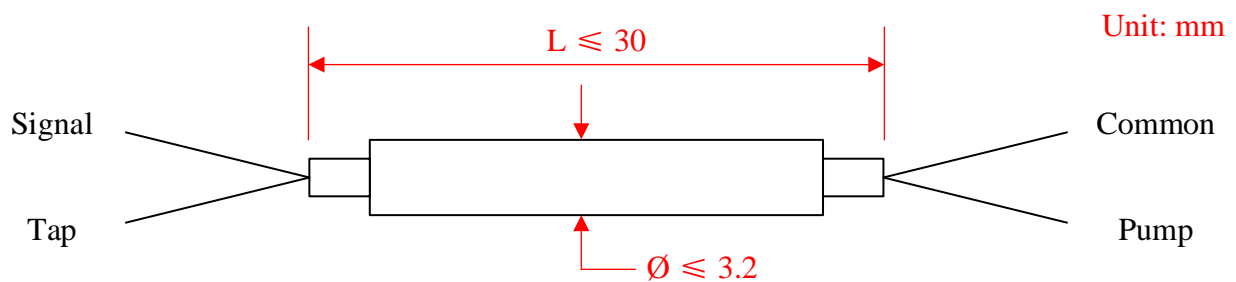[2] Available in bare fiber or loose tube. Loose tube is only for steel tube packaging.

[3] Mark the bare fiber starting at 10~30cm away from the device body to fiber end.

2.3.2 Drawing

Steel Tube Packaging:
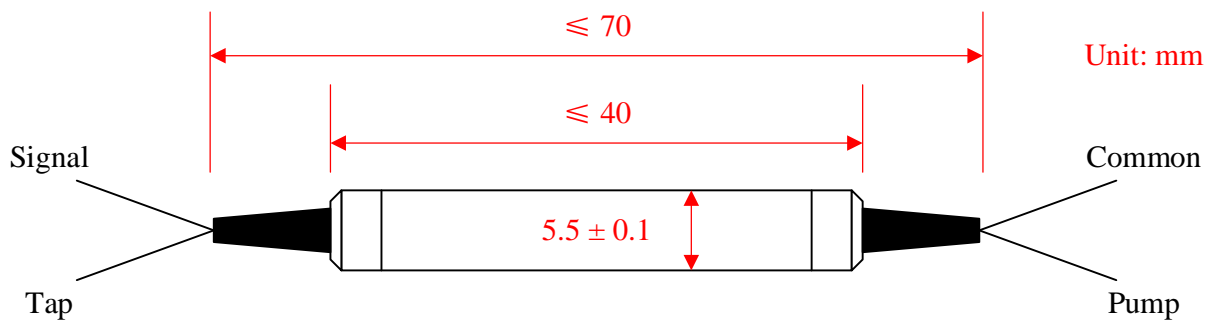
Glass Tube Packaging:

3 Device Label, Delivery Data

Triple-Stone standard format.

4 RoHS

RoHS compliant.

5 Ordering Information

TAIW ☐ 0 1 ☐ 1 5 9 8 ☐ ☐ ☐

Dimension
Ø5.5mm = 5
Ø3.2mm = 3

Tap Ratio
1% = 01

Stage
Single stage = S
Dual stage = D

Wavelength
1550/980nm = 1598

Fiber Jacket
250μm bare fiber =1
900μm loose tube =2

Fiber Length
1.0 meter = 1
1.5 meters = 5
2.0 meters = 2
0.5 meter = H
Specify = S

Connector Type
None = 1
SC/APC = 2
SC/UPC = 3
FC/APC = 4
FC/UPC = 5
LC/APC = 6
LC/UPC = 7