

# GREEN 1550(1585)NM TAP COUPLER/ ISOLATOR HYBRID COMBINATION

## TCIHG Series

### Product Description

Oplink's Tap Coupler/Isolator Hybrid Combination (TCIH) is based on patented athermal platform for optical device. This product is a combination of a partial reflection filter and a polarization insensitive optical isolator that features ultra low insertion loss, super thermal stability, and unparallel reliability. The technology is a lead-free packaging platform and no epoxy in the optical path.



### Performance Specification

TCIHG Series Specifications		Single Stage	Dual Stage	Unit
Operating Wavelength Range		C-band: 1528 ~ 1564 L-band: 1570 ~ 1605		nm
Insertion Loss <sup>[1]</sup>	Standard Port	< 0.8	< 1.0	dB
	Tap Port	1% Tap Ratio: 19.2~21.0 2% Tap Ratio: 16.2~18.0 5% Tap Ratio: 12.2~14.0 10% Tap Ratio: 9.6~10.8		dB
Wavelength Dependent Loss		< 0.3	< 0.4	dB
Reverse Direction Isolation (over operating wavelength range, 0~70°C, all SOP)		> 21	> 38	ps
Polarization Dependent Loss		< 0.1		dB
Polarization Mode Dispersion		< 0.25	< 0.05	dB
Directivity		> 55		dB
Return Loss		> 50		dB
Maximum Power Handling		< 500		mW
Fiber Type		Corning SMF-28		
Operating Temperature		0 to +70		°C
Storage Temperature		-40 to +85		°C
Package Dimensions <sup>[3]</sup>		P1: (ø) 5.5 x (L) 34.0 P2: (ø) 5.5 x (L) 40.0		mm

Note:

[1] The maximum IL is under all states of polarization and within the full operating temperature and wavelength ranges specified.

Add 0.3dB on signal port IL for 10% tapping case.

[2] All the parameters are excluding connectors.

[3] The mechanical tolerance should be +/-0.2mm on all package dimensions unless otherwise custom specified.

### Features

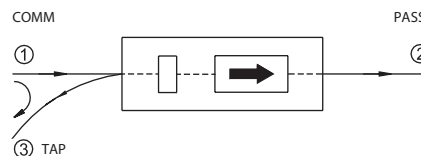
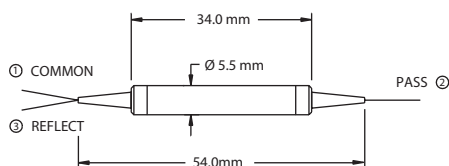
- ◆ Wide Operating Wavelength Range
- ◆ Compact Size
- ◆ Low Insertion Loss
- ◆ High Isolation
- ◆ Ultra Low PDL & PMD
- ◆ Highly Stable & Reliable
- ◆ Epoxy-free Optical Path

### Applications

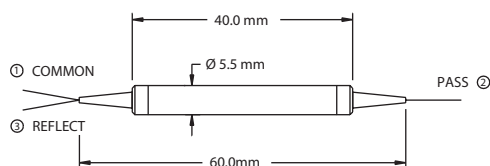
- ◆ Fiberoptic Amplifiers
- ◆ CATV Fiberoptic Links
- ◆ System Monitoring
- ◆ Fiberoptic Instruments
- ◆ Transmitters and Fiber Lasers
- ◆ Laboratory R&D

### Mechanical Drawing / Package Dimensions (dimension in mm)

P1: SMF-28 250 $\mu$ m bare fiber



P2: 900μm loose tube



## Ordering Information

**TCIHG**

**Wavelength**  
1550 nm = 1550  
1585 nm = 1585

**Stage**  
Single Stage = S  
Dual Stage = D

**Tap Ratio**  
1% = 1  
2% = 2  
5% = 5  
10% = 0

**Fiber Length\***  
1.0 Meter = 1  
1.5 Meters = 5  
2.0 Meters = 2

**Connector Type**  
None = 1  
FC/PC = 2  
FC/SPC = 3  
FC/APC = 4  
SC/PC = 5  
SC/SPC = 6  
SC/APC = 7  
ST = 8  
LC = 9  
MU = A

**Package & Fiber Jacket**  
P1 + 250µm bare fiber = 11  
P2 + 900µm loose tube = 22

*\* The tolerance of fiber length is +/-0.1m. 1 meter is standard. The lead-time for special fiber length will be longer.*

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Molex:

[TCIHG1550S11111](#)