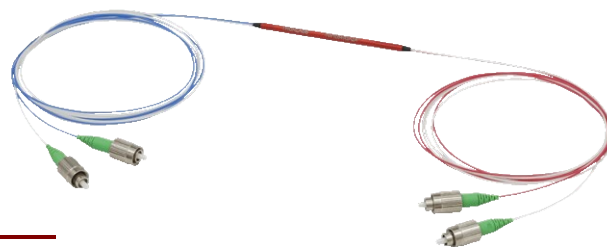


Wideband Fiber Optic Coupler 1064 nm, 50:50 Ratio

TW1064R5A2A

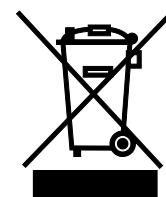


Description

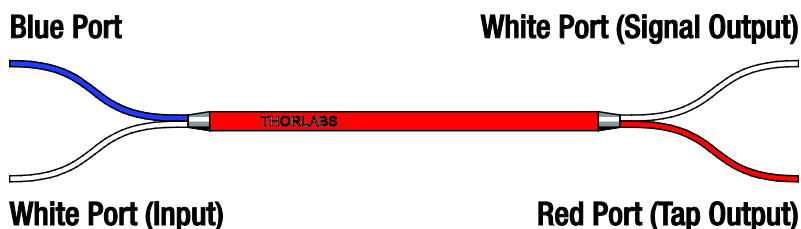
Thorlabs' TW1064R5A2A single mode wideband fiber coupler is designed to operate from 964 to 1164 nm with <0.2 dB of excess loss.

Specifications

TW1064R5A2A	
Coupling Ratio ^a	50:50
Coupling Ratio Tolerance	±5.0%
Center Wavelength	1064 nm
Bandwidth ^b	±100 nm
Insertion Loss ^a	≤3.8 dB / ≤3.8 dB
Excess Loss ^a	<0.2 dB (Typ.)
Uniformity ^a	≤0.6 dB
Polarization Dependent Loss (PDL) ^a	≤0.2 dB
Optical Return Loss (ORL) / Directivity ^a	≥60 dB
Max Power Level ^c	1 W (With Connectors or Bare Fiber) 5 W (Spliced)
Fiber Type ^d	HI1060
Fiber Cut-Off Wavelength ^b	920 ± 50 nm
Fiber NA	0.14
Port Configuration	2x2
Fiber Lead Length and Tolerance	0.8 m +0.075 m/-0.0 m
Connectors	2.0 mm Narrow Key FC/APC
Package Size	Ø0.12" x 2.76" (Ø3.2 mm x 70 mm)
Jacket	Ø900 µm Hytrel® Loose Tube
Pigtail Tensile Load	10 N
Operating Temperature Range	-40 to 85 °C
Storage Temperature Range	-40 to 85 °C



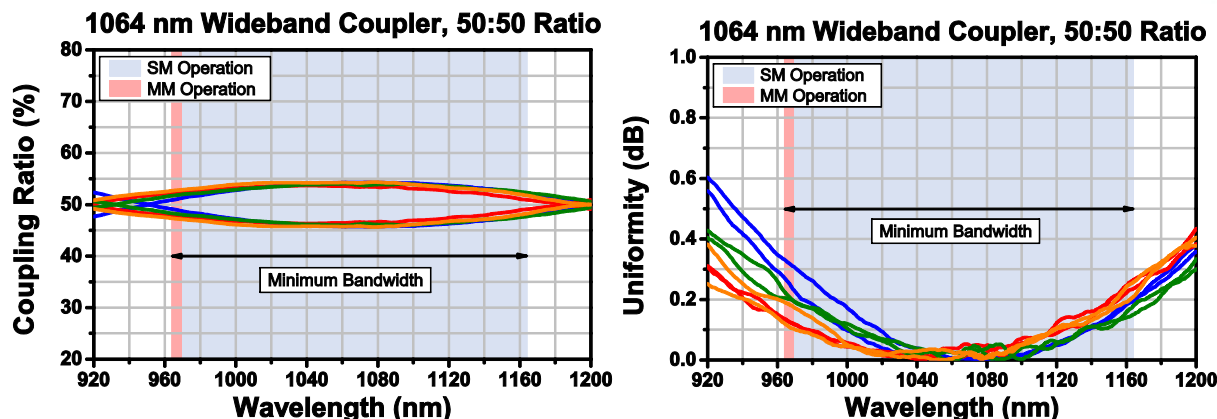
- All values are specified at room temperature over the bandwidth without connectors and measured through the white input port as indicated below. Performance may vary if the blue port is used as the input.
- Below the cut-off wavelength, single mode performance is not guaranteed (see the graph on the following page).
- Specifies the total maximum power allowed through the component. Coupler performance and reliability under high-power conditions must be determined within the user's setup. See Usage Tips for safety and handling information.
- Other fiber types may be available upon request. Please contact techsupport@thorlabs.com with inquiries.



January 24, 2022

TTN035513-S01, Rev D

Typical Performance Plots



These persistence plots show the coupling ratio and uniformity of four TW1064R5A2A couplers (tap and signal outputs from the same coupler are indicated by matching colors on each graph). The red- and blue-shaded regions denote the coupler's full operating wavelength range. Please note that the red region indicates wavelengths for which single mode operation is not guaranteed, as the cut-off wavelength for the HI1060 fiber utilized in this coupler is 920 ± 50 nm.

Usage Tips

- 1) Before connecting a component to a system, make sure the light source is turned off. Inspect both the input and output fiber ends; debris or contamination on the end face can lead to fiber damage when operated at high powers.
- 2) After connecting the component, the system should be tested and aligned using a light source at low power. The system power can be ramped up slowly to the desired output power while periodically verifying all components are properly aligned and that coupling efficiency is not changing with respect to optical launch power.
- 3) Optical connectors can be removed and the device can be spliced into a setup for operation at higher optical powers. Fiber ends should always be cleaned and cleaved prior to splicing.