

# Custom Process for High-Temperature Resistant Optical Directional Couplers for Surveillance



## Overview

In this paper, we present a novel approach for fabricating high aspect ratio, customizable waveguide directional couplers using 2PP. Advances in 2-photon lithography have enabled in-lab production of sub-micron resolution and millimeter scale 3D optical components. The potential complex geometries are well suited to rapid prototyping and production of waveguide structures, interconnects, and waveguide directional couplers. High-temperature resistant optical devices are becoming more and more necessary for sensors, high-precision material processing, laser transmission and other harsh environment. Up to now, MEISU has developed various high-temperature resistant optical devices not only with regular SM fiber, but also. For combining wavelength ranges of 1470–1480 nm and 1540–1555 nm in harsh environments such as undersea and space, where the costs of component replacement are prohibitive. Need a product customized?

We can customize our products to fit your requirements. Modulators fitting

this description are available commercially for. What are some common uses of fiber couplers in fiber optics, including fiber lasers?

What are dichroic couplers and how are they used in fiber amplifiers?

What is the principle of evanescent wave coupling?

What factors influence the coupling strength and wavelength sensitivity in fiber couplers?

xtreme Temperature and Pressure Application metal super alloy with a proprietary seal glass. A very durable compression seal results, which can withstand extreme temperature and pressure conditions.

## Custom Process for High-Temperature Resistant Optical Directional



In this tutorial, we'll uncover the benefits of creating a parametric model for directional couplers, leveraging the advanced layout and model-building capabilities of IPKISS.



Features: 4 Rugged high-performance design 4 Extreme high-pressure/high-temperature applications 4 Designed to survive in harsh environments 4 Constructed of all low-out gassing materials 4 ...



A microprocessor controlled system for fabrication of 2 x 2 flame-fused biconical single-mode fiber directional couplers has been designed and ...



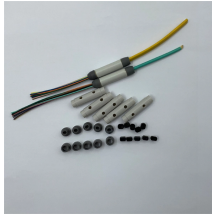
The process improves yield for devices which employ more than one precisely fabricated optical directional coupler by creating an extra degree of process freedom.



Dichroic couplers can be used to combine a pump and a signal input for a fiber amplifier, or to remove residual pump light after the amplifier. For high-power fiber lasers and amplifiers, one often needs ...



MEISU developed high-temperature resistant optical devices with SM fiber and PM fiber for fiber sensing system. By applying a special high-temperature coating to the normal PM fiber, it provides multiple ...



A directional optical coupler can be made by simply fusing fibers together for a certain length known as fused fiber coupler, or using coupled ridge optical waveguides on a PLC.



A microprocessor controlled system for fabrication of 2 x 2 flame-fused biconical single-mode fiber directional couplers has been designed and realised. The system involves multiple ...



A new methodology for realizing fabrication-tolerant planar directional couplers is proposed and experimentally demonstrated.



We can customize our products to fit your requirements. Using our proven fused biconical taper process, our HI REL capability is built upon the foundation of the long-established manufacturing history of ...



Here we present the use of 2-photon lithography for direct printing of multi-mode waveguide couplers with air cladding and single mode waveguide couplers with uncured liquid photoresin cladding. ...

## Contact Us

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