Optical Coupler Experiment Design Report

ses By Neha Jayeshkumar Chauhan Master of Science in Electrical Engineering The main purposes of this project are to introduce different types of optical fiber couplers with their wide range of ...

The objective of this paper is to provide a review of the theory, techniques, and applications of optical couplers.

silicon nitride (Si3N4) waveguides and optical fibers using linear adiabatic edge tapers. Addressing the significant challenge of minimizing coupling losses, the study explores the inter-play between taper ...

In this paper, the experimental study is extended to further validate the VHOE coupler design and fabrication approach for additional incident beam angles, comparing -40° -45° and -50° (in air). The ...

We report on the design and simulation of a compact and low loss single mode fiber matched 2x2 optical coupler. The design utilizes the evanescent field coupling mechanism. The MATLAB software has ...

More specifically we have conducted the study, design, simulation and implementation of an integrated optical circuit device. Here, a set of integrated 1 × 2 evanescent wave couplers were ...

We have developed a novel photonic lantern approach for the PolyOculus fiber optic linkages which potentially offers substantial advantages over previously considered free-space optical linkages, ...

In this three-year program, the research team designed, fabricated, characterized and optimized acoustic couplers for the distributed fiber optic acoustic sensing systems.

Due to the open nature of the dielectric optical waveguides, when two guides are brought close to each other, optical field propagating in one of them could be coupled to the other.

Figure 1.12: Optical losses present in rectangular gratings used for interlayer coupling. Possible solutions to reduce losses in a binary SOI grating out-coupler are (a)(b) increasing directionality to ...

Abstract: We report a fabrication process of a polymer, and mirror-based out-of-plane optical coupler. In the process, a pre-formed mirror blank made of a buffer coat material is re-exposed by a laser direct ...

In this paper, we proposed and designed an integrated optical coupler based on three-core fiber (TCF) with long-period gratings (LPGs). The TCF with three cores distributed in the cladding ...

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Here we experimentally demonstrated various types of fiber-to-chip edge couplers and the best design yielded 0.56 dB/facet coupling loss for transverse-electric (TE) mode and 0.88 ...

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