Fiber Array Packaging Loss

In this research, we explore a promising solution: CO2 laser fusion splicing combined with strategically designed on-chip silicon dioxide mode converters. Photonic chips can achieve ...

A critical aspect of PIC-based systems is the ability to transmit optical signals between chips, which requires a low-loss, robust interface between the PIC-chip and optical fiber. Here we ...

Packaging of multiple fibers in a single shot significantly increases the throughput of photonic packaging. The laser fusion splicing method enables optical packaging of photonic devices without the use of ...

We present a robust, low-loss packaging technique of permanent optical edge coupling between a fiber and a chip using fusion splicing that is low-cost and scalable for high-volume...

Conventional photonic packaging methods relying on edge or grating coupling are constrained by high insertion losses, limited bandwidth density, narrow band operation, and sensitivity to misalignment. ...

In this paper, we refer to the process of attaching an optical fiber/fiber array to a photonic chip as "fiber-attach". We introduce an optical packaging technique to attach fiber arrays to a photonic chip in a ...

We present a plug-and-play fiber-to-PIC solution using female multifiber termination push-on cables, with alignment counterparts additively fabricated on the chip via two-photon ...

The connector, produced through aligned 3D microprinting directly on the chip, achieves passive, broadband, and sub-dB loss coupling in under three minutes packaging time per port. This ...

In this research, we explore a promising solution: CO2 laser fusion splicing combined with strategically designed on-chip silicon dioxide mode ...

We present a low-cost, robust, and low-loss packaging technique of permanent optical edge coupling between a fiber and multiple fiber to a chip using fusion splicing that is scalable for ...

The connection of these integrated photonic circuits to optical fiber arrays is often a challenge in terms of performance and cost. Vanguard Automation GmbH and LIGENTEC SA have now demonstrated a ...

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