

Benchmark for Silicon Photonics Chip Technology



Overview

In this paper, we introduce PICBench, the first benchmarking and evaluation framework specifically designed to automate PIC design generation using LLMs, where the generated output takes the form of a netlist. We benchmark the PIC at 760 nm, which is a typical wavelength for Yb + -applications. The fabricated grating couplers enable the outcoupling of collimated free-space beams for both polarizations, exhibiting distinct emission angles. This dual-polarization capability gives more flexibility in. Three material platforms — silicon photonics, indium phosphide, and thin-film lithium niobate — are competing to define the next generation of photonic integrated circuits for data centers and sensing. A breakdown of Co-Packaged Optics and its key concepts.

Article Content

Photonic integrated circuit technology landscape 2026

Three material platforms — silicon photonics, indium phosphide, and thin-film lithium niobate — are competing to define the next generation of photonic integrated circuits for data centers

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In this paper, we introduce PICBench, an open-source and comprehensive benchmark for PIC design using natural language to generate simulation-ready netlists. The benchmark includes 24

Review of Silicon Photonics Technology and Platform Development

In this paper, we review most of the foundries that presently enable silicon photonics integrated circuits fabrication. Some of these are pilot lines of major research institutes, and others are fully commercial

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