

FRAUNHOFER HEINRICH HERTZ INSTITUTE

PRESS RELEASE

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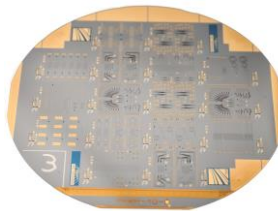
Fraunhofer HHI at FOE 2016, April 06-08 in Tokyo, Japan

At the FOE – Fiber Optics Expo – Fraunhofer Heinrich Hertz Institute HHI presents its Photonic Integration Toolbox, InP Lasers for Integration into Silicon Photonics, integrated tunable Lasers for Terahertz generation and the LED based Optical Wireless Backhaul Link.

You find the following highlights at our booth E30-32.

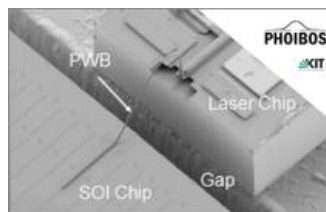
InP Foundry Services – Photonic Integration Toolbox

Fraunhofer HHI enables an own design of InP PIC with passives and actives on one substrate. It is possible to choose from a range of proven building blocks e.g. 40 GHz receivers, 20 GHz transmitters, 1 dB/cm passive waveguides. Rx-type as well as Tx/Rx-type PICs are already commercially. Dedicated design and layout software is provided and packaging partners are available.



InP Lasers for Integration into Silicon Photonics – Optical Sources for Si-Photonics

Fraunhofer HHI provides DFB lasers, gain chips and SOAs with flip chip capability for hybrid integration on Si-Platforms. Single devices and arrays are offered for lateral and vertical coupling schemes. InGaAsP and InGaAlAs are used as active MQW layer and operating wavelengths range from 1270 nm to 1650 nm.



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Integrated Tunable Lasers for Terahertz generation

Fraunhofer HHI's PolyBoard platform enables the hybrid integration in one chip of two Polymer/InP DBR tunable lasers in the 1.5 μm wavelength range. Each laser shows a tuning range of 20 nm (2.4 THz), and continuous sweeps of more than 9 nm (1.1 THz) have been demonstrated. Application fields of such dual optical sources are DWDM optical networks, CW Terahertz systems, microwave photonics, and spectroscopy.



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LED based Optical Wireless Backhaul Link

Robust, low latency infrared LED link for mobile backhaul. Well suited for wireless point-to-point communication in industrial environments.



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The **Fraunhofer Heinrich Hertz Institute** is a world leader in the development of mobile and fixed broadband communication networks and multimedia systems. From photonic components and systems through fiber optic sensor systems to video coding and transmission, the Fraunhofer HHI works together with its international partners from research and industry. www.hhi.fraunhofer.de

The Fraunhofer-Gesellschaft is the leading organization for applied research in Europe. Its research activities are conducted by 66 institutes and research units at locations throughout Germany. The Fraunhofer-Gesellschaft employs a staff of nearly 24,000, who work with an annual research budget totaling more than 2 billion euros. Of this sum, around 1.7 billion euros is generated through contract research. More than 70 percent of the Fraunhofer-Gesellschaft's contract research revenue is derived from contracts with industry and from publicly financed research projects. International collaborations with excellent research partners and innovative companies around the world ensure direct access to regions of the greatest importance to present and future scientific progress and economic development.

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