

Photonics Packaging Services

Introduction

LioniX International offers several solutions and services for assembly and packaging of integrated optical components. For proto-types and demonstration models as well as small volume production, we can offer different types of services. We support you with the design of your complete optical system: from singulation and characterization of bare Photonic Integrated Circuits (PIC) to pigtailing of fibers and fiber arrays to PICs. We offer hybrid integration of different PICs and mounting the optical assembly, including the driving electronics, in standardized or customized housings.

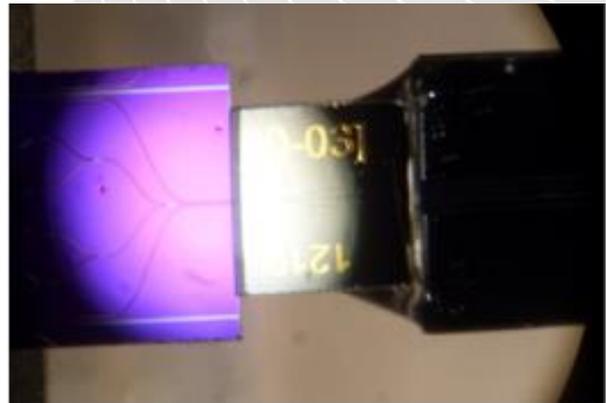
Fiber (array) to PIC

We have extensive expertise on various kinds of integrated optical technologies like, InP, SOI, glass or TriPleX™. Our team of optical engineers has over 30 man-year of experience with attaching fibers and fiber arrays to different kinds of optical chips fabricated using the above mentioned technologies. Standard single mode fibers or specialty fibers can be attached at one or multiple sides of the PIC.



Hybrid PIC to PIC

For applications that require the hybrid integration of multiple PIC technologies, like spotsizes or mode conversion to high contrast PIC technology, we offer services to assemble multiple PICs. As an example a spotsizes and mode converter in TriPleX™ can be attached to an InP high contrast PIC.



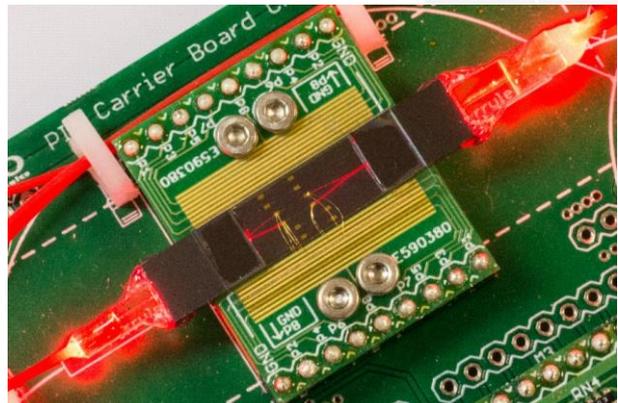
Specialty Fiber Arrays

Besides the standard SMF fiber arrays, we also offer specialty fiber arrays. These can consist of PM or non-telecom fibers or have multiple fiber types in a single fiber array (FA). Also the outer dimension of the FA can be adapted to create for example very thin FAs.



Integration of electronics

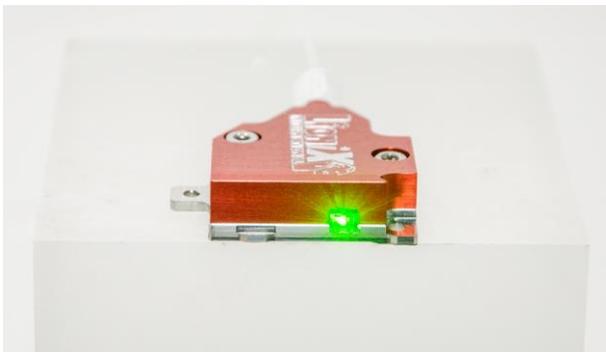
Many applications require the PIC to be driven through an electronic interface. We are able to integrate different types of electrical interfaces by wirebonding and flip-chipping to PCB or ceramics. Also electronics design for example for driving circuitry, is possible.



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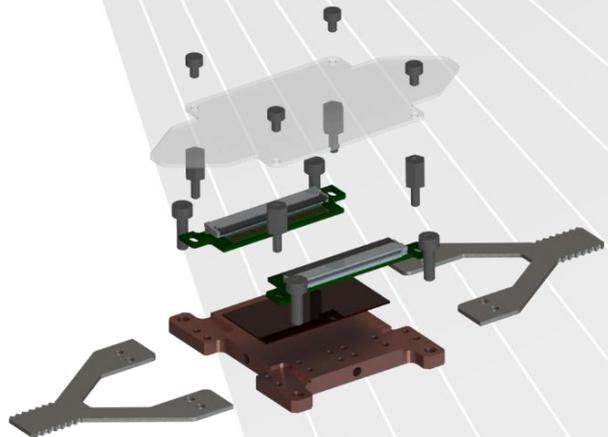
Photonic component package design and manufacturing

We offer several standard packages for prototype assembly. Also customized packages are possible and, if possible, the packaging compatibility can be accounted for in the design phase. Design rules for the standardized packages are available within the design kit of our partner Phoenix Software. Mounting the assembly in a standard package or in a customer specific package is possible. We implement wirebonding and a strain-relief to fabricate a robust assembly. Combined with peltier elements, also customized heatsinks can be designed and machined to suit your application best.



Characterization Packaging Service

As intermediate solution between a bare PIC and a final product packaging, we offer our characterization packaging service (CPS). When the PIC is designed following the packaging guidelines, a standardized package is offered. This package allows the assembly of fiber arrays with strain relief and an electronic interface. The PIC is mounted on a metal submount for optional temperature handling. The CPS approach allows you to easily measure the PIC, without the need of an alignment setup.



We have extensive experience with attaching fiber and fiber arrays to PIC of different technologies like InP, SOI, glass and TriPleX™.

Please contact us to discuss the possibilities of our Photonic Packaging Service.

Our chips drive your business

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