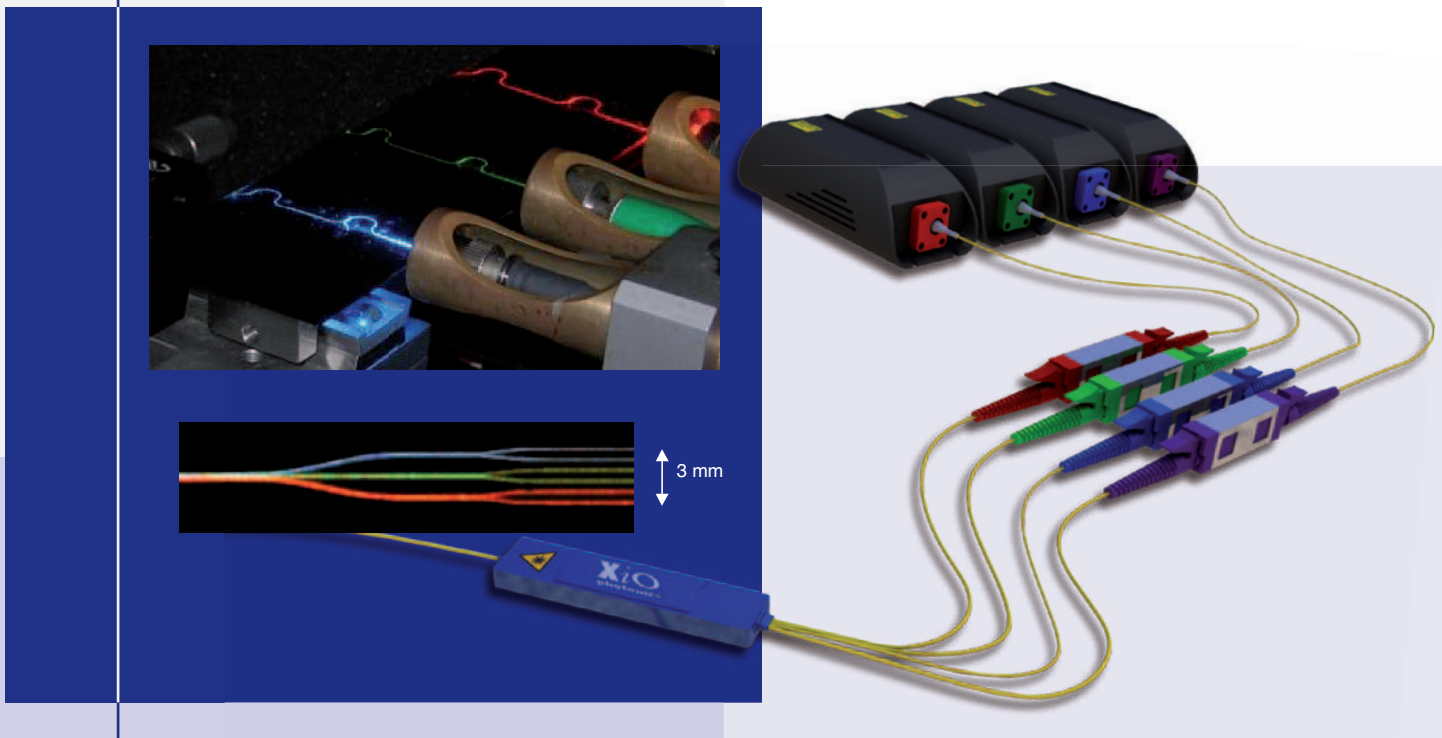


*A solution for:*

## Integrated Laser-Beam Combiner



### Application

XiO Photonics' Integrated Laser-Beam Combiner is a compact and easy-to-use system that combines visible wavelength (400-700 nm) channels into one single-mode fiber. The combiner requires no alignment of optical components and is therefore stable and maintenance-free.

The optical-fiber based connectors allow the beam combiner to be easily plugged to various types of laser sources. The module combines 4 to 8 wavelengths and enables the "plug-and-play" and stable operation for use in all kinds of Life Science instruments as for example in confocal fluorescence microscopy.

### Chip Specifications

- high transparency for RGB laser light
- channel dimensions:  $\sim 1 \mu\text{m}$  single mode
- mode confinement: 4–10 , depending on nitride-tapering
- stable against UV
- power handling: upto 500 mW
- tapered waveguides for high coupling efficiency

*Chip manufacturing by:*

## Lionix BV

LioniX BV is a global leading provider in the development and production of innovative and leveraging products based on micro/nano technology. LioniX also provides MEMS foundry services.

Our customers operate in the Data/Telecom, Industrial Process Control, Life Sciences and Space markets, among others. They include innovative OEM's, VC-funded start-up companies, multi-national corporations, and research institutions located around the world.

The core competencies of LioniX include integrated optics, micro/nanofluidics and related surface functionalization. Additionally, LioniX has been successful in combining these core competences in one technology platform, enabling unparalleled innovative product concepts for their customers.

LioniX offers design-for-manufacturing and horizontal integration through partnerships with other micro/nanotechnology foundries and suppliers of complementary technologies such as micro electronics, biotech, chemistry/pharma, medical, food, water and space. These relationships are based on subcontracting agreements, licensing of IP and/or joint ventures.



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## XiO Photonics BV

XiO Photonics delivers a photonics integration platform from the UV to IR that offers integrated optical solutions for products ranging from telecom, datacom & sensing and visible light applications. XiO Photonics supplies besides the standards in fiber optical products, like splitters and patchcords, also the next generation optical modules that integrate more functionality on an optical chip. This way the benefits of integration, known from the IC industry, can be used for photonic applications.

The technology base is the patented TriPleX™ planar lightwave circuit technology. XiO Photonics is focused at the photonic integration markets and is poised to deliver disruptive technology that will significantly reduce cost while increasing performance. Application fields for our XiO Photonics' products are for example confocal fluorescence microscopy, food sorting, health and consumer.



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