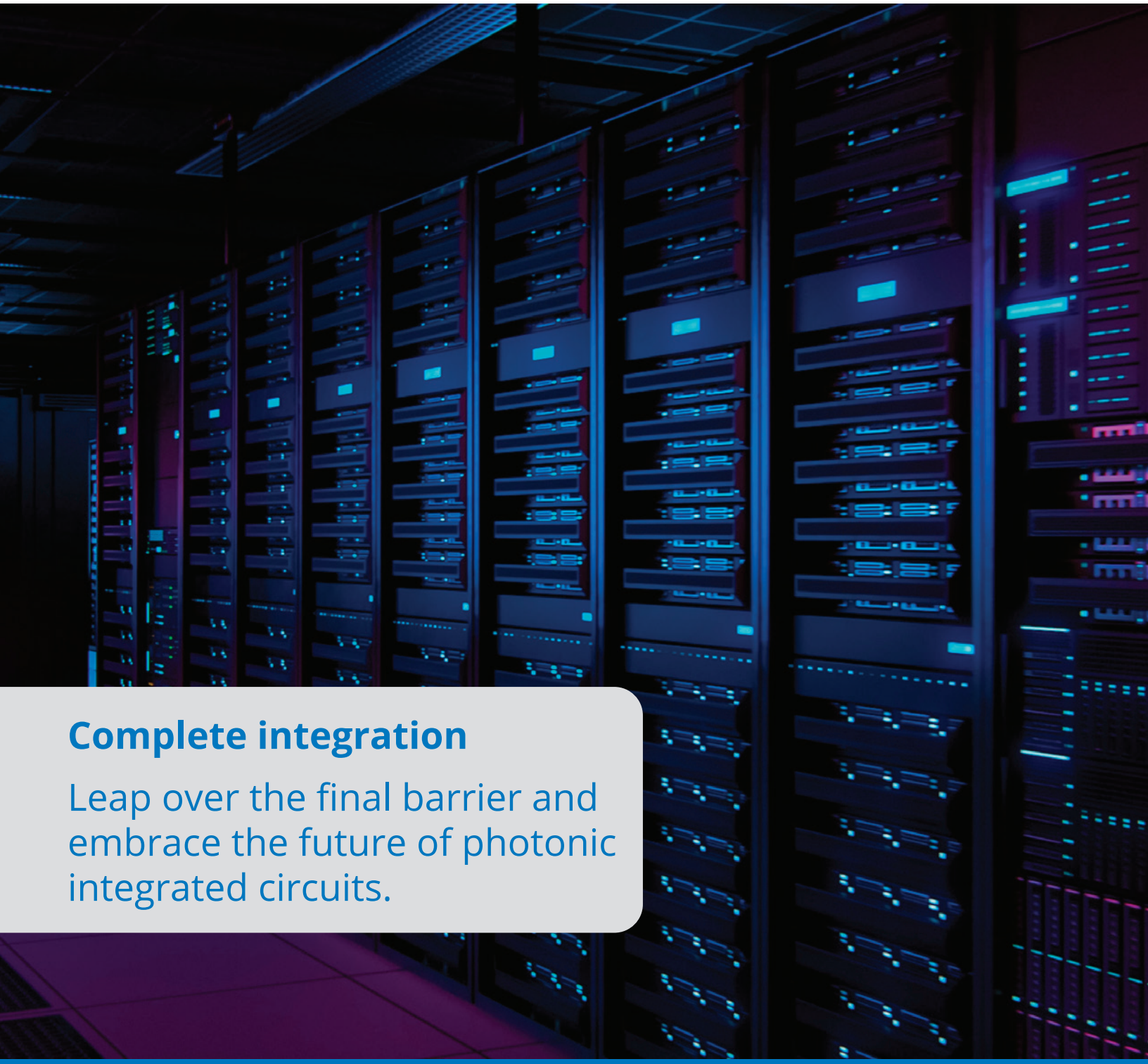
AEPONYX™
PHOTONICS IN MOTION

IWG

Isolator Waveguide



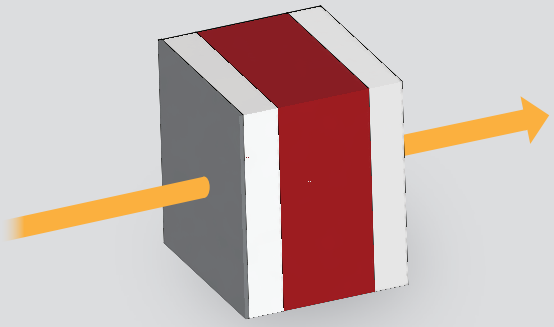
Complete integration

Leap over the final barrier and embrace the future of photonic integrated circuits.

Isolator Waveguide - IWG

Use-case
- PIC transceivers
- Laser dies, amplifiers
- Photonic sensors

- Easily integrates with PICs
- Ultra-compact form-factor
- Magnet-less and epoxy-free
- On-chip and off-chip integration



Introducing the Isolator Waveguide

Technology

At the heart of IWGs are waveguides meticulously inscribed by femtosecond laser processes. This produces garnet slabs where Faraday rotation characteristics are preserved and that can guide light like any other waveguide .

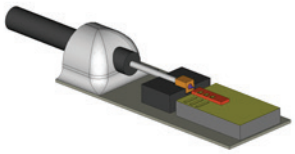
No more complex/costly lens alignments

Technical Specifications

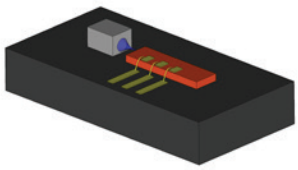
- Insertion loss: <0.6 dB
- Isolation: >25 dB
- Return loss: 50 dB
- Operating wavelength: 1550 nm

Applications

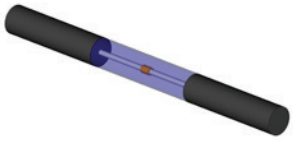
The compact lens-less design and the flexibility of mounting options offered by IWG isolators means they can be easily integrated into existing systems, avoiding costly modifications.



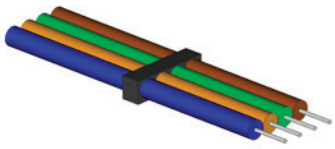
Fibered PIC isolator



Integrated PIC isolator



In-line isolator



Ribbon isolator

Bulky optical isolators are now a thing of the past!

Tiny yet efficient latched garnet crystals can guide light seamlessly in PICs.

Want to learn more about the underlying technology ?
Head to our article in *Nature Portfolio*.

Integrated Magnetless Passive Broadband Faraday Isolator

In this paper we demonstrate an innovative approach that allows to make submillimeter-size magnetless passive optical isolators having the potential of being easily integrated in PICs.