

Photonics West 2017: iXblue Photonics raises the bar on power and performance once again with release of brand new range of products

On the occasion of the Photonics West global trade exhibition, iXblue Photonics, a business unit of the iXblue Group, introduces its latest generation of doped double clad fibers and fiber optic components as well as a range of new modulators and reference transmitters.

January 28th, 2017, Paris:

Firmly established as the leading European manufacturer of specialty optical fibers, fiber optic components and modulators, iXblue Photonics has once again cemented its place at the forefront of innovation in this field. With an ongoing devotion to improvement and development of its products, by raising levels of power and performance and constantly attentive to the evolving needs of its customers, iXblue Photonics is today releasing a series of new products covering a wide variety of applications, including fiber lasers and amplifiers, fiber optic sensors and gyros, optical communications as well as analog transmissions.

These latest developments from iXblue Photonics are outlined below.

- **New generation of erbium ytterbium Er/Yb double clad fiber**

The new Er/Yb-doped fibers feature optimized glass compositions allowing not only for high efficiency operation and low 1 micron emission but also enhanced power stability at high power. All iXblue Photonics double clad fibers are available in PM version and combined with state of the art qualified and reliable fluoroacrylate coating for greater fiber durability in extreme environmental conditions. (IXF-2CF-EY-O-12-130-HP, IXF-2CF-EY-PM-12-130-HP, and others designs are available).

Patrice Crochet, VP of Sales & Marketing, comments: "The new Er Yb doped fibers are precisely the answer to the demands of our customers, who are constantly aiming for higher power systems. iXblue photonics is helping customers develop better products, and this is turning out to be a unique approach for us as we're not competing with them or trying to make our own lasers."

- **High power fiber Bragg grating for KW class fiber laser**

Cavity mirrors based on Fiber Bragg Grating (FBG) Technology are key components for monolithic high brilliance CW fiber lasers. These wavelength-selective mirrors inscribed in iXblue specialty

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double-clad optical fibers are the best solution to promote high performance, robust and reliable Ytterbium fiber

lasers. iXblue Photonics processes and fiber core composition have been optimized to minimize intra cavity losses. These components are specifically designed for high power handling.

- **New PM holmium doped fiber for 2050nm Mid-IR fiber laser**

iXblue has developed a range of holmium Ho-doped fiber for high energy laser applications in the eye-safer wavelength range, and also because they can be resonantly pumped with great power conversion efficiency and with limited thermal issues.

Thierry Robin, iXblue Photonics CTO, explains: "It's a number of years now since iXblue Photonics introduced new fibers to address the Mid-IR wavelength with thulium single and double clad fibers. Holmium doped fibers are pushing forward the frontiers of silica fiber and we have put a lot of effort into minimizing the OH Hydroxyl that is considered to be the principal contamination with strong absorption in the Ho³⁺ emission wavelength region. OH content is less than 0.1 ppm. These new Holmium doped fibers give our customers increased design flexibility for their next generation products." Ho-doped core fibers have demonstrated a slope efficiency better than 67%, and are available as Single Clad with small and large core, and/or as a PM Panda type.

- **NIR band/1000 nm Phase Modulators**

iXblue Photonics's 1000 nm band family of NIR-MPX-LN phase modulators has been optimized to minimize the driving voltage and the optical insertion loss. On request, these components can be provided with a higher polarization extinction ratio (PER > 25 dB) and/or with a lower optical insertion loss value (IL of 2.5 dB typ.). The electrical power handling is also increased up to +33 dBm thanks to new integration processes.

- **NIR Band/800 nm-950 nm Amplitude Modulators**

iXblue Photonics recently improved the microwave electrode design of the NIR-MX800-LN intensity modulators working at the 800 nm wavelength. This significantly increased the current modulation bandwidth (> 25 GHz). Moreover, the resulting 50 ohms impedance of the electrode makes for increased electrical efficiency thanks to a lower electrical return loss (-20 dB typ. in the range 0-10 GHz). This new electrical design is now therefore combined with unparalleled stability and a superior optical power handling capability. iXblue now also offers a dedicated 950 nm modulator through a chip selection.

- **New Modulator Bias Controller**

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iXblue is releasing the next generation of automatic bias controller for Mach-Zehnder modulators. The MBC-DG-LAB offers simplified plug-and-play operation thanks to its autoset function to stabilize the

modulator at any transmission level. Compared to the previous version, the new MBC-DG-LAB demonstrates enhanced sensitivity, and thus reduced dither modulation, allowing it to achieve an ultra-high extinction ratio in MIN mode. The new graphical user interface (GUI) makes the MBC-DG-LAB at once cost effective and more compact.

- **Optical Short Pulse Generation and Metrology ModBoxes**

iXblue is proud to release a complete family of Pulse Generation/Pulse Shaper/Pulse Picker ModBox instruments, as well as Front-Ends and optical pulse metrology systems dedicated to high energy optical pulse generation (OPCPA or main line laser).

- The turn-key ModBox-PG, ModBox-PS and ModBox-PP units generate low jitter sub-nanosecond optical square pulses or controlled shape pulses for either Pulse Generation, Pulse Shaping or Pulse Picking.
- The Front-End ModBox is a standalone seeder generating optical pulses of high energy showing a customized temporal profile, with an extremely low jitter (down to 1 ps) and with a high optical contrast (> 60 dB).
- The ModBox-DER is a metrology equipment that displays the Dynamic Extinction Ratio measurement simultaneously with a pedestal analysis from a single shot optical pulse. The ModBox-DER results from a technology transfer from the CEA (French Alternative Energies and Atomic Energy Commission) developed within the framework of the Mega-Joule laser project.

Where to find iXblue Photonics at Photonics West 2017?

iXblue Photonics - born of the merger between iXfiber and Photline in 2015 – is pursuing its development as part of the iXblue Group. To promote its new identity, iXblue Photonics has created new brand collateral and a distinctive new style of exhibition space. We look forward to welcoming you at our Booth 5163 so you can meet our team and discover our new branding. We will be happy to introduce you to our products, answer your questions and discuss your specific needs.

About iXblue Photonics

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Born of the acquisition and merging of former companies

iXFiber and Photline within a single iXblue Group business unit, iXblue Photonics helps photonics engineers throughout the world to get the most out of the light by providing high performance, innovative and reliable photonic solutions. We offer specialty fibers, Bragg gratings and optical modulation solutions based on our proprietary range of

integrated modulators for a variety of purposes spanning optical communications, fiber lasers and amplifiers, photonic sensors, space and science applications. With exports accounting for more than 70% of sales, iXblue Photonics is present in more than 40 countries around the world, selling to a portfolio of 450 customers. As a single organization, iXblue Photonics is in a strong position to leverage its synergies and to offer customers new and more comprehensive fiber optic solutions.

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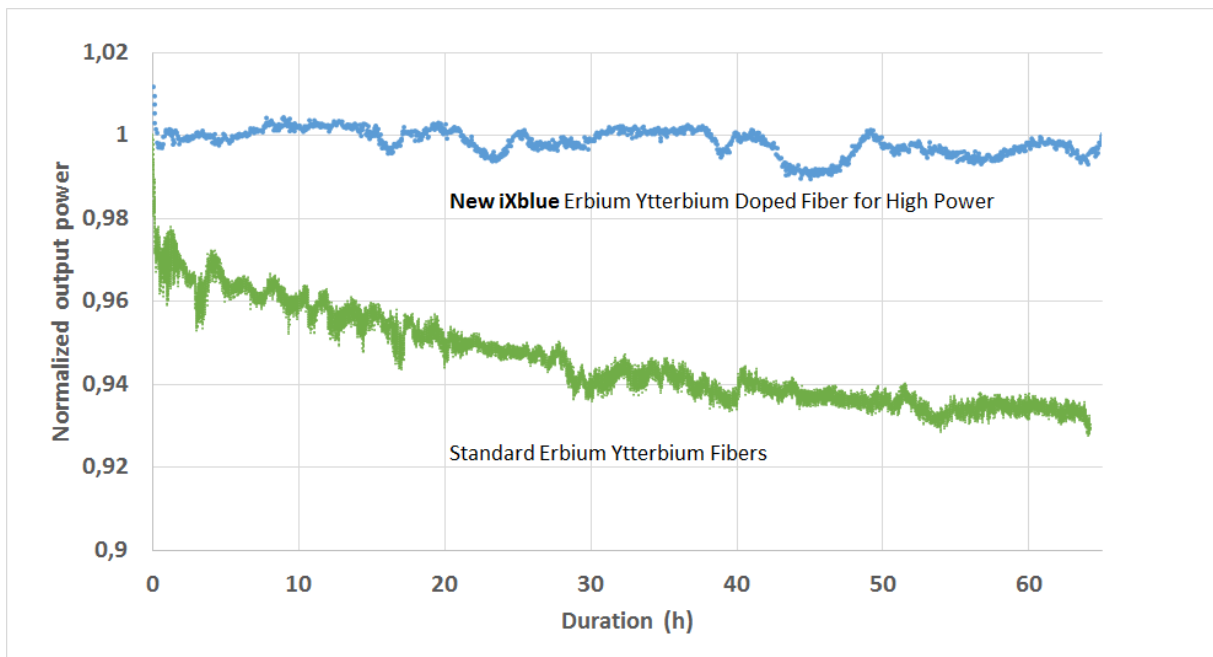
Claire André

Communications Manager

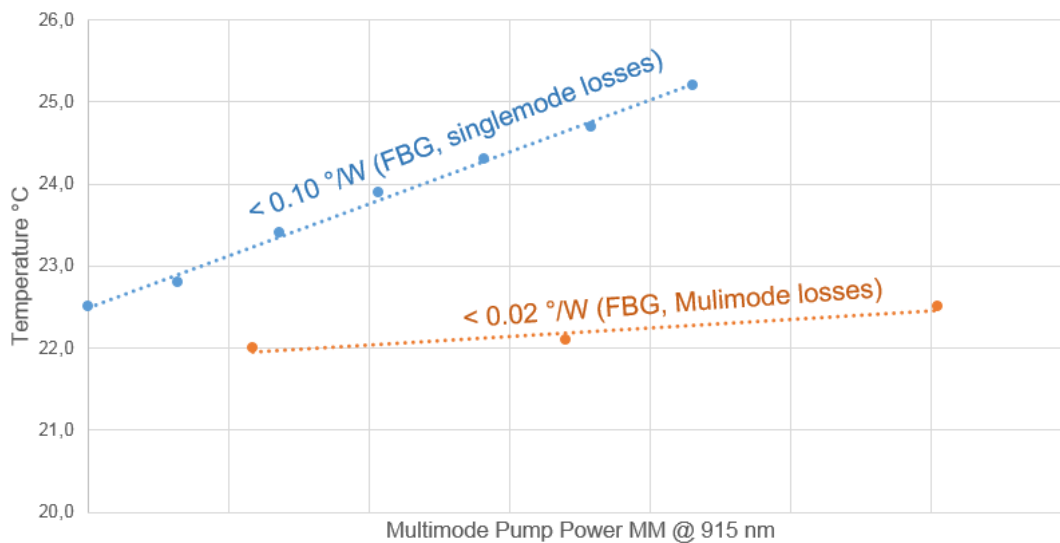
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Appendices

- **New generation of erbium ytterbium Er/Yb double clad fiber**

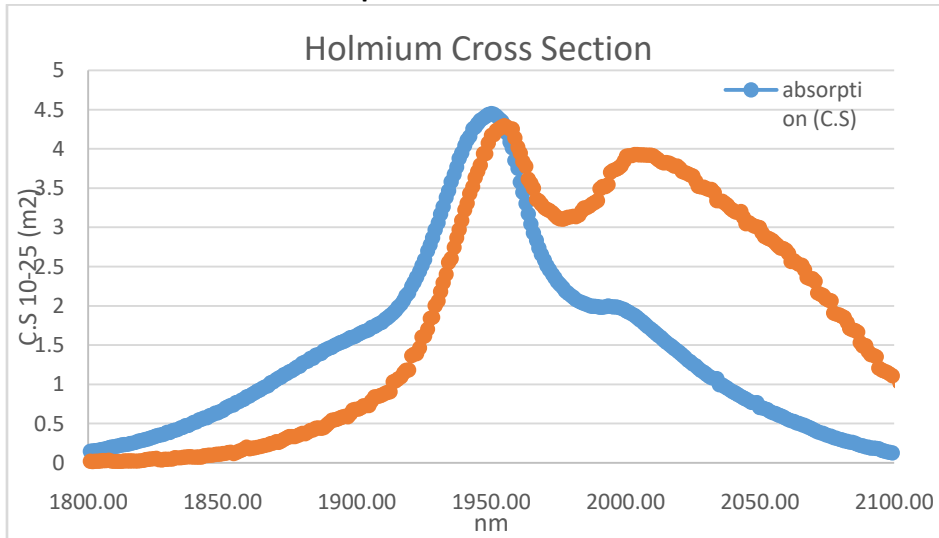


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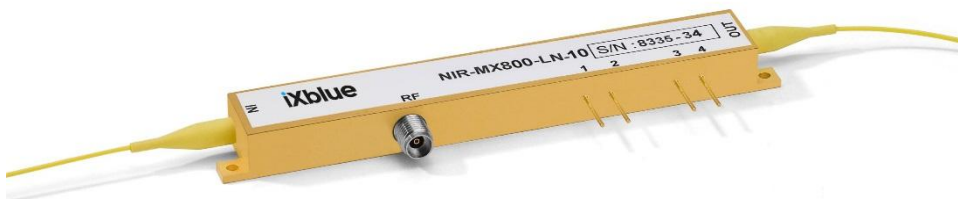
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