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## **NKT Photonics A/S introduces the world's largest single-mode pulse amplifier fiber**

***New DC-285/100-PM-Yb-ROD fiber based on industry proven CRYSTAL FIBRE technology***

Birkerød, Denmark, January 25<sup>th</sup> 2010 – NKT Photonics A/S has introduced a new version of its CRYSTAL FIBRE series double-clad rod type fiber. The DC-285/100-PM-Yb-ROD is based on our CRYSTAL FIBRE patented airclad technology and features a strictly single-mode 100  $\mu\text{m}$  PM core with high absorption and low photodarkening. The Ytterbium doped rod is typically used in output stages of amplifier chains for high power pulsed laser amplification where it can sustain Mega-Watt peak power levels.

For years, the fiber community has turned to CRYSTAL FIBRE for state-of-the-art solutions for high performance fiber amplifiers. Now, NKT Photonics is releasing a CRYSTAL FIBRE rod for MW peak power fiber amplifiers. The DC-285/100-PM-Yb-ROD fiber is polarization maintaining and features a 76 micron mode field diameter Ytterbium core offering an effective mode field area of over 4500  $\mu\text{m}^2$ . The 285 micron pump core diameter accepts pump light at numerical aperture values up to 0.55 for pumping at 915 or 976 nm. Pump absorption is 30 dB/m for 976 nm pumping.

Output of the rod fiber is robust single-transverse mode beam quality, and it has been tested with over 100W average power over a range of pulse durations and repetition rates.

The DC-285/100-PM-Yb-ROD fiber is designed for OEM use for industrial customers. It can be used as an extension of output energy levels for existing fiber amplifiers or as a replacement of traditional crystalline rods such as Nd:YAG, Nd:YVO<sub>4</sub>, Nd:YLF etc. Compared to such traditional laser rods, the rod fiber offers high beam quality guidance of the signal as well as guidance of pump – without thermal lensing. The rod fiber has a high single pass gain, PER of over 15 dB and pump absorption is polarization independent.

The DC-285/100-PM-Yb-ROD fiber is available from stock – as bare fiber with end-sealed and angle cleaved facets or with 8x8 mm AR coated silica end-caps. The products will be displayed at Photonics West (booth # 1635) where more details will be available.

### **About NKT Photonics A/S**

NKT Photonics A/S – formed by the merger between Koheras A/S and Crystal Fibre A/S - designs and manufactures commercial and industrial class specialty microstructured fibers and high power fiber amplifiers. The company also designs and manufactures fiber-based industrial systems such as supercontinuum white light lasers and ultra precise DFB fiber lasers. The mentioned products are produced under the brand names CRYSTAL FIBRE, *aeroLASE*<sup>™</sup>, SuperK<sup>™</sup> and KOHERAS<sup>™</sup>. These systems are already commercially deployed in material processing, bio-photonics, metrology, optical sensors, coherent communications, test and measurement, high resolution spectroscopy and LIDAR markets. NKT Photonics A/S operates out of Birkerød Denmark, Morganville NJ and Cologne, Germany and is wholly owned by the Danish industrial conglomerate NKT Holding A/S.

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