

## 2 Micron High Power Mode-Locked Fiber Laser Wins R&D 100 Awards

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Tucson, AZ. AdValue Photonics has been selected as a winner of the prestigious R&D 100 Awards in 2012 for its world's first 2 Micron High Power Mode-Locked Fiber laser. Widely recognized as the "Oscars of Innovation", the R&D 100 Awards salute the 100 most technologically significant products introduced into the marketplace over the past year.

The AdValue Photonics 2 Micron High Power Mode-Locked Fiber Laser is an all-optical-fiber laser, with no free-space component in the optical system, providing advantages in operation stability and reliability. At 2 micron wavelength, picosecond pulse width, 10 kW peak power, and near diffraction limited beam, it is a brand new tool to the scientists working with nonlinear optics, frequency conversion, spectroscopy, LIDAR, and materials studies. It is a turn-key system with compact size and light weight, providing unprecedented performance capability and valuable convenience to its users.



An important significance of this product is its usefulness in nonlinear frequency conversion and mid-infrared (Mid-IR) wavelength generation. 2 micron is a more favorable wavelength as a pump laser for mid-IR generation as compared to its counterparts at 1 micron and 1.55 micron. Development of mid-IR (1.8  $\mu\text{m}$  to 15  $\mu\text{m}$ ) lasers and light sources is particularly important for sensing because many molecular species of immense interest have their spectral signatures (finger prints) in the mid-IR region. Applications encompass many industries from commercial to military, e.g. for environmental monitoring, industrial process controls, hazardous chemical detection, molecular identification, thermal imaging, anti-missile infrared countermeasures (IRCM), materials processing, and medical diagnostics. The underlying technology of the AdValue Photonics' 2 Micron High Power Mode-Locked Fiber Laser enables a cost-effective way for obtaining light sources that play a key role in these applications.

The R&D 100 Awards has long been a benchmark of excellence for industry sectors as diverse as telecommunications, high-energy physics, software, manufacturing, and biotechnology. Over the last 50 years, the R&D 100 Awards have identified revolutionary technologies newly introduced to the market. Many of these have become household names, helping shape everyday life for many Americans. These include the flashcube (1965), the automated teller machine (1973), the halogen lamp (1974), the fax machine (1975), the liquid crystal display (1980), the Kodak Photo CD (1991), the Nicoderm anti-smoking patch (1992), Taxol anticancer drug (1993), lab on a chip (1996), and HDTV (1998).

<http://www.rdmag.com/Awards/RD-100-Awards/R-D-100-Awards>

### About AdValue Photonics

AdValue Photonics is a developer and manufacturer of optical fiber based lasers, amplifiers, broadband light sources, and passive components. The company is focused on producing innovative, high quality, and cost-effective products by leveraging its proprietary technology and expertise in advanced optical glasses and fibers. The entire process from chemical batch of raw materials to fiber drawing to assembly of fiber laser systems can be optimized in house. It is the design flexibility and manufacturing capability in this area that makes the company and its products unique. [www.advaluephotonics.com](http://www.advaluephotonics.com)

### For more information, please contact

Katherine Liu, AdValue Photonics, 1-520-790-5468, [kliu@advaluephotonics.com](mailto:kliu@advaluephotonics.com)