



Northrop Grumman Wins 2015 CLEO/Laser Focus World Innovation Award for Lasers

May 5, 2015

SAINT CHARLES, Mo., May 5, 2015 /PRNewswire/ -- Cutting Edge Optronics, a Northrop Grumman (NYSE: NOC) company, was honored with the CLEO/Laser Focus World Innovation Award in the Lasers and Sources category for their Gigashot(TM) High Energy Diode Pumped Solid State laser system. The system is the first Joule class, all diode-pumped, commercially available laser, ideally suited for use in scientific, industrial and medical applications.

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"We delivered the first Gigashot(TM)-HE laser in December to Lawrence Livermore National Laboratory (LLNL) for use in their HAPLS laser system, which will enable new science discoveries in physics, chemistry, biochemistry and medicine at the Extreme Light Infrastructure Beamlines facility beginning in 2016," said Ed Stephens, general manager of Cutting Edge Optronics, Northrop Grumman. "This new laser offers our customers several competitive advantages, including increased efficiency and improved energy stability. Thank you to CLEO, Laser Focus World and the Award committee for recognizing our team's accomplishment."

The CLEO 2015 recognizes companies that have made major contributions to advancing the field of optics and photonics through recently launched products and services. American Physical Society, IEEE Photonics Society and The Optical Society, with *Laser Focus World* co-sponsor the award.

Cutting Edge Optronics' Gigashot(TM)-HE laser is a high energy, short pulse diode-pumped solid-state (DPSS) Nd:YAG laser system. The injection-seeded DPSS laser delivers more than two Joules of 532 nm energy in each sub-10 ns pulse at 10 Hz with a near field flat top beam, offering a new level of efficiency for scientific research. With the overall need for higher repetition rates in scientific experiments and the number of worldwide Terawatt and Petawatt laser installations increasing, the introduction of an all diode-pumped high energy laser system is an important step in the advancement of high repetition rate / high energy scientific research.

The laser uses a Master Oscillator-Power Amplifier (MOPA) configuration, with technology that is scalable to operate at more than 100 Hz. A four Joule 1064 nm version is also standard, and the Gigashot(TM)-HE is configurable to other customized applications.

Diode Pump Solid State (DPSS) lasers, including the Gigashot(TM)-HE, offer several advantages over flashlamp-pumped systems, including: increased electrical-to-optical efficiency, reduced thermal lens strength, improved energy stability and reduced depolarization losses. In addition, DPSS laser modules can be operated at much higher repetition rates (10s of Hz to 1 kHz). The lifetime of the laser diode bars in these systems is > 10 billion pulses which equates to years or decades in many applications, making the laser modules nearly maintenance-free.

Cutting Edge Optronics is a leading supplier of laser diodes, laser amplifiers, and complete DPSS laser systems for commercial, industrial, scientific and military / aerospace applications. For more information please visit northropgrumman.com/ceolaser.

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