

II-VI Incorporated Launches 200 Watt Actively Cooled Laser Bars and Multi-Kilowatt Stacks for New Directed Energy Weapons

PITTSBURGH, September 20, 2017 (GLOBE NEWSWIRE) – II-VI Incorporated (NASDAQ:IIVI), a leading provider of high-power semiconductor laser components, today announced the commercial availability of its industry leading actively cooled laser bars, emitting 200 W of continuous wave power with greater than 60% efficiency. These laser bars enable multi-kilowatt vertical stacks to optically pump neodymium-doped solid-state lasers, including in below-freezing environments.

Next generation directed energy weapon systems require increased mobility and operation at extreme ambient temperatures. II-VI's new industry-leading laser bars offer an unprecedented combination of power, efficiency and polarization purity. They enable diode-pumped solid state laser designs employed in new directed energy weapon systems to achieve optimum size, weight and energy efficiency. The use of an ethylene-glycol coolant makes the II-VI laser bars commercially unique in their ability to operate in extremely low temperature conditions such as in airborne vehicles and withstand storage temperatures as low as -40°C.

“With these bars we are capable of building stacks with more than 7 kilowatts of output power,” said Karlheinz Gulden, General Manager, II-VI Laser Enterprise. “It’s a significant achievement that adds to our 20 year legacy of gallium arsenide laser technology platform development.”

II-VI's new laser diode-bars, with demonstrated continuous wave output of up to 275 W, are rated for continuous wave output of 200 W in operation. The laser bars can be stacked to optically pump multi-kilowatt solid-state lasers. They also feature a proprietary hard solder technology designed to withstand high power pulsed operation with excellent reliability.

With short operating wavelengths in the 8xx nm regime, the laser-bar stacks are also effective in direct diode laser systems to process metals such as copper, bronze, brass, stainless steel and aluminum that are otherwise highly reflective to the longer wavelengths of typical industrial lasers.

For solid state laser applications, II-VI also offers laser optics with high damage threshold coatings, as well as Nd:YAG and Nd:YLF laser crystals of various designs that are manufactured at II-VI's strategic materials foundry in Florida.

II-VI will showcase its optical systems capabilities at the Directed Energy Systems Symposium in Monterey, CA, September 25-29, 2017.



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Press Release

About II-VI Incorporated

II-VI Incorporated, a global leader in engineered materials and optoelectronic components, is a vertically integrated manufacturing company that develops innovative products for diversified applications in the industrial, optical communications, military, life sciences, semiconductor equipment, and consumer markets. Headquartered in Saxonburg, Pennsylvania, the Company has research and development, manufacturing, sales, service, and distribution facilities worldwide. The Company produces a wide variety of application-specific photonic and electronic materials and components, and deploys them in various forms, including integrated with advanced software to enable our customers. For more information, please visit us at www.ii-vi.com.

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