

NEWS

For Immediate Release

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LIGHTTIME UNVEILS SEMICONDUCTOR MODELOCKED LASER FOR OPTICAL CLOCKING

*LightClock™ pulsed lasers designed for optical clocking in next generation microprocessors
offers top performance at low cost*

Oshkosh, WI – January 19, 2005 – LightTime™ LLC, a privately-held developer of high-performance, cost-effective semiconductor lasers, today announced the preliminary release of its LightClock™ series pulsed laser for optical clocking of microprocessors and other applications. Compared to conventional quartz-referenced electronic clocks, LightClocks are compact modelocked semiconductor lasers with pulse rates scalable from 8 to 100 GHz. LightClocks are mass-produced semiconductor devices that are particularly economical for microprocessor (mpu) clocking. LightClocks interface with mpu's in a variety of customer-specified formats, including flipchip, fiberoptic, planar waveguide, or made-to-order methods.

“We took a novel approach to semiconductor modelocked lasers and developed a straightforward method for designing and producing them to target performance specifications,” said Clark Caflisch, president and CEO of LightTime. “Our LightClock is the only available cost-effective photonic clocking technology that addresses microprocessor clocking, and is readily scaled to the tens-of-GHz speeds that the semiconductor industry will demand in the near future. For today's applications, the LightClock offers benefits, such as low power consumption and reduced skew and jitter that will drive the transition from quartz-based electronic timing to true optical timing nearer term at more modest speeds.”

The current mpu-specific LightClock lasers operate at a design wavelength of 860nm, appropriate for silicon photo detectors, compatible with CMOS processes. The overall design operating range is 700-1600nm, and LightTime is developing picosecond pulsed lasers at wavelengths and speeds for a wide variety of applications. The Company's proprietary technology achieves

picosecond modelocking passively and without an external cavity structure, which enables mass production at reduced cost. Compared to conventional electronic clocking, LightClocks have no RFI/EMI issues, and their optical output can reduce microprocessor skew/jitter. LightClocks also substantially reduce on-chip clocking and signal distribution power consumption and heat generation.

“New computer designs will increasingly rely upon optical technology to facilitate the speed, throughput, and multiple-processor objectives of the industry roadmap,” added Dr. James Siepmann, LightTime’s CTO. “LightClocks meet all performance requirements at an extremely competitive cost.”

LightTime is forming strategic partnerships with qualified organizations. Engineering samples of the Company’s LightClock™ lasers will be produced in collaboration with these strategic partners’ development programs. For additional information, please contact LightTime.

About LightTime

LightTime™ LLC is a privately held optoelectronics development company founded in 2000. LightTime’s mission is to develop and commercialize optical oscillators and multi-wavelength sources that substantially outperform incumbent technologies. LightTime’s products are based upon internally developed, proprietary and patented technologies. The Company has developed core technologies for two types of optical oscillators: a semiconductor laser oscillator and a fiber laser oscillator. Major market opportunities for the semiconductor optical oscillators exist in Computer Microprocessors, Telecommunications Components, and Analog to Digital Converters (ADC), for clocking and/or multi-wavelength sources. Potential markets for the fiber laser oscillator are in LADAR systems and Test and Measurement Instruments. LightTime is a Wisconsin Limited Liability Company with operations located in Oshkosh, Wisconsin, and sales and marketing offices in Belmont, California. For more information, visit www.LightTime.com.

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