



January 2022 - BiOS/Photonics West

Greetings !

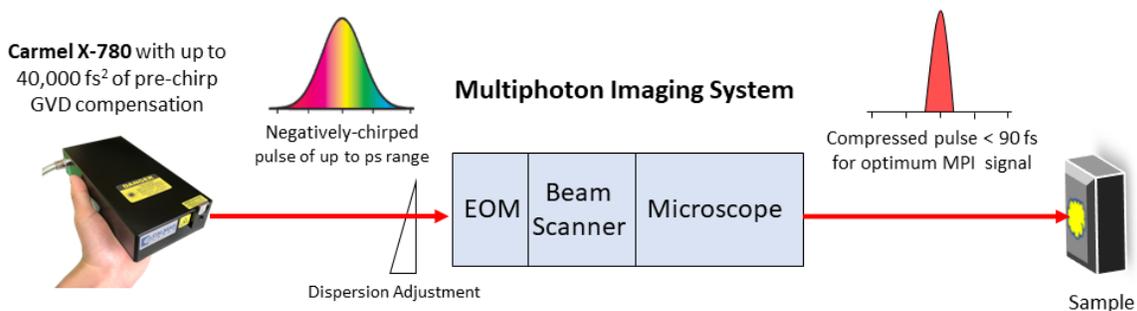
It's hard to believe that it's been two years since we last met face-to-face in San Francisco and while we continue to be cautious about the spike in omicron COVID cases, we remain optimistic that the show will go on! We expect to be in Hall E of the Moscone Center at Booth #8456 for BiOS (January 22-23) and Booth #3456 for Photonics West (January 25-27). We will have a full range of products to show, so please stop by if you are in town - we'd love to catch up.

In the meantime, we would like to share some exciting updates for our Carmel X-780, the most compact high-power femtosecond laser on the market. As many of you know, our laser has become the preferred platform for bio-imaging, 3D nanoprinting, cancer diagnostics/phototherapy, metrology and other applications. Here's some of the reasons why:

Customized Pre-chirped Pulses

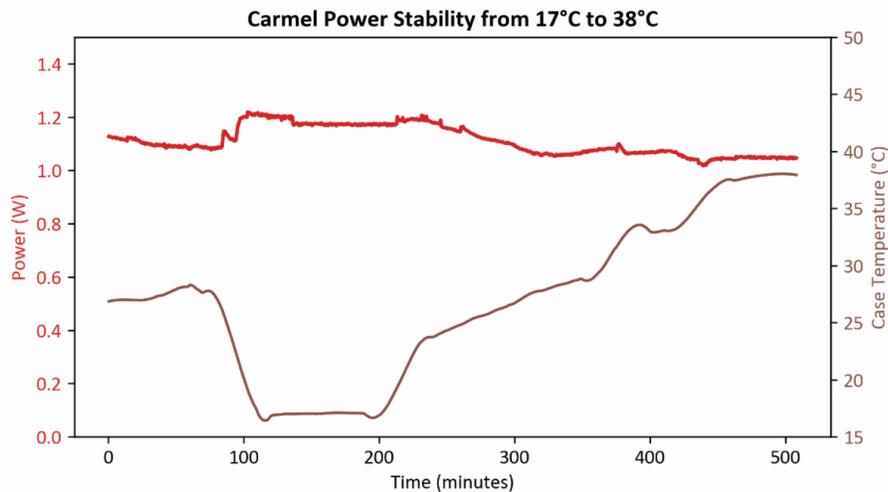
We now offer the ability to incorporate a pre-chirp of up to 40,000 fs² in the output pulses from the Carmel X-780. For multiphoton imaging applications, femtosecond pulses can be significantly broadened by the time they arrive at biological samples due the large dispersive effects of the optical elements, especially the microscope objective lenses, used in typical setups. This results in higher average powers being used to achieve adequate signal levels with consequential sample damage.

We can now tailor the output pulses from the Carmel X-780 with up to 40,000 fs² of negative group velocity dispersion (GVD) to compensate for the positive GVD effects of the downstream microscope components. As a result, the shortest pulses can be obtained in the sample region, ensuring the highest multiphoton imaging signals at the lowest average laser power. **And the pre-chirp is accomplished in the same compact laser head,** contact us for more details.



Air-cooled with an Extended Operating Temperature Range

Unlike other solid state femtosecond lasers, the Carmel X-780 requires no external chiller. The fiber laser is completely air-cooled. Further, we have extended its operating temperature to accommodate a wider range of ambient environments. So, whether you are in a well-controlled lab or using the laser on an outdoor platform, you can expect exceptional performance from 17 to 38°C.



Power Adjustment Feature

Another new option, is the ability to make power adjustments while still preserving the same short output pulses. The power can be adjusted over $\pm 10\%$ range to maximize signal levels and ensure optimal performance for your experiments.

We look forward to sharing more details in a few weeks. As always we are interested to learn more about your unique application requirements and how we might assist with customized ultrafast fiber laser solutions, please stop by to chat.

Regards,

Tony Lin, PhD

Calmar Laser.

951 Commercial Street

Palo Alto, CA 94303

Email: sales@calmarlaser.com

www.calmarlaser.com

About Calmar Laser

Calmar Laser is a US-based, ISO 9001:2008 developer and manufacturer of innovative ultrafast fiber laser and fiber amplifier solutions for OEM, B2B industrial, medical and scientific applications. Since 1996, Calmar has served universities and research institutions with leading-edge ultrafast fiber laser platforms. Our compact, robust designs have also enabled long term partnerships with customers in the fields of advanced high-speed test and measurement, optical communications, biomedicine, component characterization, semiconductor metrology, ophthalmology, and micromachining. Today, Calmar continues the tradition of technology leadership with its unique range of ultrafast fiber laser platforms designed for simple, hands-off, reliable operation.

For more information about Calmar Laser, visit the Company's Web site at www.calmarlaser.com for product updates.

Calmar Laser | 951 Commercial Street , Palo Alto, CA 94303

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Sent by tony@calmarlaser.com