

## Innovative Ultrafast Optics from Edmund Optics® and UltraFast Innovations Awarded Silver-Level 2021 LFW Innovators Awards

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Edmund Optics® and UltraFast Innovations (UFI®) are proud to announce two of their innovative ultrafast products are 2021 Laser Focus World (LFW) Innovators Award winners. [Negligible Thermal Lensing Ultrafast Mirrors](#) and [Ultra-Broadband Complementary Chirped Mirror Pairs](#) both won Silver-Level Awards. Honorees of the LFW Innovators Awards are recognized among the most innovative products and solutions available to the machine vision and imaging community, as determined by a panel of third-party expert judges.

Negligible Thermal Lensing Ultrafast Mirrors enable ultrafast laser designers to create high-power lasers while avoiding the detrimental effects resulting from thermal lensing. Ultrafast system integrators then have access to more stable, higher-power lasers and can create more effective solutions in applications such as materials processing, medical lasers, nonlinear imaging, and microscopy.

Ultra-Broadband Complementary Chirped Mirror Pairs are constructed from two mirrors with out-of-phase group delay dispersion (GDD) oscillations, resulting in an oscillation-free GDD across a broad wavelength range. This allows ultrafast laser systems to generate short pulses with durations less than three femtoseconds (fs), resulting in high peak powers beneficial in chirped-pulse amplifier systems and ultra-broadband laser oscillators. The Chirped Mirror Pairs offered by Edmund Optics and UltraFast Innovations feature the broadest wavelength range in the industry. This technology has been used to generate the shortest visible ultrafast laser pulse ever recorded, as described in [this article](#).

Sourcing these types of high-precision ultrafast optics has traditionally been difficult because they often need to be custom designed and the resulting high prices and long lead times for small quantities are prohibitive for many. Edmund Optics has partnered with UltraFast Innovations to make these technologies available globally in-stock for immediate shipping. The partnership reduces the price and lead time for small quantities, which is especially important for rapidly repairing broken systems, exploring new ideas quickly for system prototyping, and quickening the pace of scientific discovery through research. The availability of these mirrors allows designers and system integrators to experiment with ultrafast systems without the typical large investment of both time and cost.

### About EO:

Edmund Optics® (EO) is a leading global supplier of optics, imaging, and photonics technology that has served a variety of markets including Life Sciences, Biomedical, Industrial Inspection, Semiconductor, R&D, and Defense since 1942. EO designs and manufactures a wide array of optical components, multi-element lenses, imaging systems, and optomechanical equipment, while supporting OEM applications with volume production of stock and custom products. With locations in more than nine countries across the globe, EO employs just over 1,000 employees and continues to expand. Customers can purchase items by calling 1-800-363-1992, via the catalog, or on the website at [www.edmundoptics.com](http://www.edmundoptics.com).

### About UFI:

Ultrafast Innovations GmbH (UFI) is a spin-off from the Ludwig-Maximilians-Universität München and the Max Planck Institute of Quantum Optics. UFI is a premium manufacturer of optics with complex designs, dielectric optics for laser applications, and dielectric/metallic multilayer structures for XUV/soft X-ray applications. Combining broadband coherent sources with unique dispersive technology, UFI also offers the generation and measurement of the shortest pulses in the market in the femto- (UV-VIS-IR) and attosecond (XUV/soft X-ray) ranges.

[www.ultrafast-innovations.com](http://www.ultrafast-innovations.com)

