

Launch of the Innovative Chromatiq Spectral Engine™ with Extended Wavelength Range

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Hamamatsu Photonics is pleased to announce the launch of a new innovative Chromatiq Spectral Engine™ (CSE) made by its wholly-owned subsidiary Energetiq Technology. This pioneering light source manufacturer designed a breakthrough product now featuring an extension to near-infrared (NIR) wavelengths.



The CSE, initially introduced in 2021 and recognized with the esteemed Laser Focus World Innovator's Award, addresses a crucial challenge faced in light sensing and color measurement applications: the ability to generate light with highly specific spectral content, emulating real-world lighting conditions and other custom spectra to meet calibration and testing requirements.

What sets the CSE apart from existing solutions in the market is its high spectral resolution enabled by Energetiq's Laser-Driven Light Source (LDLS®) technology. LDLS, a plasma-based broadband light source, is recognized for its outstanding spectral radiance, stability, long lifetime, and broad wavelength range.

The CSE not only outperforms comparable sources in terms of resolution, but it also boasts a lightning-fast switching speed of <10 ms between programmed spectra. The added NIR wavelength range covers the full active range of silicon-based detectors, from 380 nm to 1,100 nm, offering precise alignment between light source and detector.

Key features and functionalities that define the uniqueness of the CSE include:

- **Realistic Spectrum Matching:** Ensures accurate simulation of real-world lighting conditions.
- **Laser-Driven Light Source Technology:** Built on LDLS technology for unmatched performance.
- **Custom Spectrum Generation:** Offers multi-peak, flat top, ramp top, and narrow peaks as well as dimming capabilities.
- **Production-Optimized Switching Speed:** Facilitates fast switching for efficiency in production environments.

The CSE caters to a broad audience, including manufacturers of color sensors, spectrometers, and image sensors, as well as anyone integrating these optical sensing technologies into finished products. The applications span a diverse range, from consumer electronics and advanced driver assistance systems to evolving needs in the aerospace industry.

“Customers can expect improved levels of reliability and efficiency from seamlessly integrating the CSE into multiple stages of their production processes,” said Debbie Gustafson, CEO of Energetiq. “The CSE provides the accurate and repeatable data necessary to support cutting-edge product innovation across multiple industries.”

This launch represents another significant step forward in Energetiq Technology's commitment to innovation, driving the evolution of light source technology.

About Energetiq Technology

Energetiq Technology, Inc. is a wholly-owned subsidiary of Hamamatsu Photonics. Energetiq combines its deep understanding of the plasma physics needed for high-brightness light generation with its long experience in building rugged industrial & scientific products. The result is that users can expect the highest levels of performance combined with the highest reliability. For more information on these products, please visit: [Light & radiation sources | Hamamatsu Photonics](#)

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