

MID-INFRARED QUANTUM CASCADE LASER-BASED SYSTEMS

THE DAYLIGHT DIFFERENCE

Mid-infrared laser light is providing game-changing solutions to molecular spectroscopy, detection and imaging in applications such as: Defense & Security; Life Sciences; Scientific Research; and Industrial Process Control. As a mid-IR technology leader, Daylight Solutions has delivered more ECqCL™ laser systems to more applications world-wide than anyone else. With a highly experienced team—and field-proven, best-in-class product performance—we stand ready to help you with your mid-IR application. Whether you need CW output, pulsed output, fast tuning, broad tuning, linewidths <5 MHz, Watt-level output powers, or low RIN, please ask how our unmatched selection of mid-IR lasers, spanning 3 to > 13 μm, can help you. For more details, please visit www.daylightsolutions.com.

TUNABLE LASERS



HEDGEHOG™

COMPACT, RAPID-SCAN CW/PULSED MID-IR LASER

Hedgehog is a unique combination of small size, high-quality CW or pulsed output, high power, and high tuning speed (to >5000 cm⁻¹/s). Hedgehog enables rapid acquisition of molecular spectra with high accuracy, repeatability and low SNR. Built on Daylight's proven QCL technology, Hedgehog is Daylight's next-generation tunable laser head. Now available in -UT (> 200 cm⁻¹) and -LT (30 cm⁻¹) tuning range options, Hedgehog is ideal for lab or OEM use. SideKick™ controller included with systems.



MIRCAT-QT™

RAPID-SCAN, ULTRA-BROADLY TUNABLE CW/PULSED MID-IR LASER

The new MIRcat-QT provides rapid tuning and high-quality light output to help you collect high-SNR spectroscopic data at speed. It offers: CW or pulsed operation; tuning speeds to > 5000 cm⁻¹/s; tuning ranges to > 950cm⁻¹; RIN as low as -150 dBc/Hz; peak powers up to 1W; average powers up to 0.5W, and wavelength repeatability as low as < 0.1 cm⁻¹. MIRcat-QT's TEM₀₀ beam and total beam pointing <2 mrad over the tuning range also enables high-efficiency fiber coupling. A true one-box, fully automated system, MIRcat-QT's flexible, modular design allows users to factory-configure their system for up to four modules, upgrade later, and add a visible aiming beam. A new laser module option also extends wavelength coverage to 14 microns.

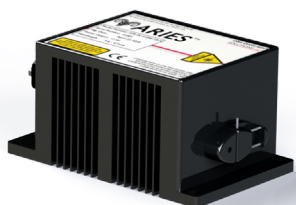


CW-MHF™

TUNABLE, NARROW LINEWIDTH MID-IR LASER

Unique to Daylight, the CW-Mode-Hop-Free laser guarantees <5 MHz linewidth, CW output that tunes without mode hops (i.e. tunes phase continuously) to > 100 cm⁻¹. Ideal for high-resolution (e.g. gas) spectroscopy, the CW-MHF system provides tens to 100+ mW output powers, low RIN, and current- and piezo-modulation capability. SideKick™ controller included with systems.

HIGH POWER LASERS

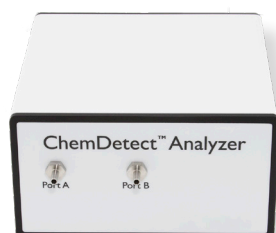


ARIES™

HIGH-POWER, NARROW LINEWIDTH MID-IR LASER

DRS Daylight's years of experience and field-proven performance in high-power mid-IR lasers come together in the Aries family of products. These fixed-wavelength, high-power mid-IR CW/pulsed lasers feature a sealed, maintenance-free design, broadband output, a choice of center wavelength, and average power options up to 2 W. Aries provides air-cooled CW or pulsed operation and current (amplitude) modulation. They are CDRH compliant and carry CE marking. All Aries systems come with a SideKick™ laser controller, an umbilical cable, and a GUI and SDK to give you everything you need for productivity out of the box.

MID-IR LASER-BASED INSTRUMENTS



CHEMDETECT ANALYZER™

RAPID-SCAN MOLECULAR ANALYZER

ChemDetect is a fully integrated sensor/analyzer platform that uses Daylight's latest high-speed, broadly tunable QCL technology, combined with advanced detection & embedded chemical ID algorithms. ChemDetect can be configured for: real-time measurements of multiple molecules (gas or condensed phase); high sensitivity (ppb to %); & high dynamic range (>10³).



SPERO-QT®

CHEMICAL IMAGING IR MICROSCOPE

The all-new Spero-QT microscope is the second-generation platform in this new class of instruments and represents yet another breakthrough in IR spectroscopy, with high-performance, label-free chemical imaging. The Spero-QT system has the wide-field, high-resolution attributes of its predecessor but with the capability to produce twice the data in one-tenth of the time, while achieving unprecedented signal-to-noise ratios. The Spero-QT stage can image up to 3 microscope slides, and its larger sample compartment makes the Spero-QT more compatible with microfluidic devices and accessories.