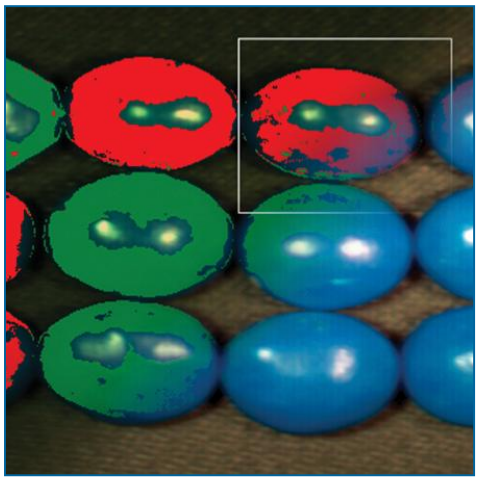
Hyperspectral Imaging Technology

Corning Advanced Optics

CORNING



Corning® microHSI™ 410 Vis-NIR Hyperspectral Sensor

Corning's microHSI™ 410 hyperspectral sensor, designed for the 400 – 1000 nm spectral range, meets all of your imaging camera needs in a compact and small-form-factor package. This hyperspectral sensor is higher performing and lower cost compared to other hyperspectral technologies, making the benefits of hyperspectral data more accessible. This sensor comes in easy-to-use format, ideal for applications like process control, precision agriculture, medical diagnostics, food quality, and others. The microHSI 410 sensor is Corning's standard product offering for the 400-1000 nm spectral range. Customizable versions are also available.

The Corning Advantage

Light Collection	Hyperspectral imagers collect light in proportion to their optical numerical aperture (NA). Corning's hyperspectral systems have a higher NA for enhanced light collection sensitivity in an extremely compact, lightweight package.
Transmission	High-performance coatings and enhanced-efficiency blazed gratings provide significantly better throughput.
Sensitivity	A combination of high NA optics and improved transmission delivers more light to the detector. Superior sensitivity means smaller anomalies can be detected and/or processed faster.
Wavelength Stability	Corning patented hyperspectral systems deliver stability over temperature (0 °C to 45 °C typical), pressure and humidity.
Durability	Encapsulated reflective surfaces isolate the optics from contamination, handling, humidity, and abrasion.
Transmission Stability	Protected critical optical surfaces deliver consistent, reliable throughput, and retain stability.

Vis-VNIR System Attributes

Sensor Type	Push-broom Line Imaging Spectrometer
Spectrograph	Solid Block Offner
Grating	Diamond-Ruled High Efficiency Reflective Blazed
FPA Detector	CCD/CMOS hybrid
Effective Pixel Size	11.7 µm
Effective Array Size	704 spatial x 155 spectral
Focal Length, f/#	16 mm, f/1.4 standard
Full FOV	29.5 degrees (516 mrad) standard
IFOV	366 µrad standard
Spectral Range	400 nm - 1000 nm
Spectral Bin Size (per effective pixel)	4 nm
Data Readout	12-bit
Etendue	50 steradian μm^2

Size and Weight

Dimensions - L x W x H	15.4" x 2.5" x 2.4" with standard foreoptic 4.0" x 2.5" x 2.4" without foreoptic
Weight	1.0 lb

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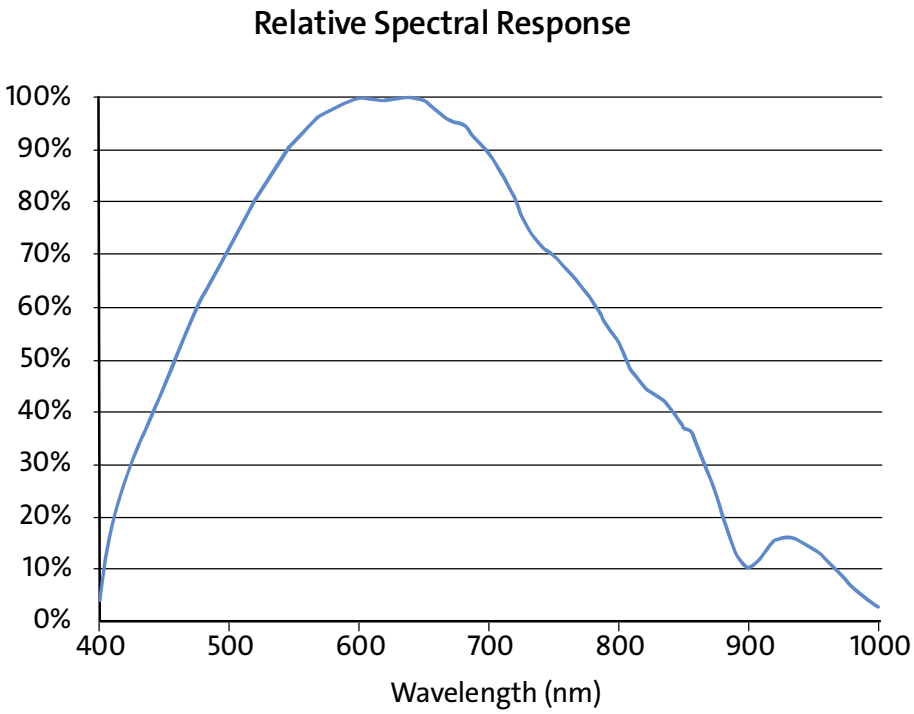
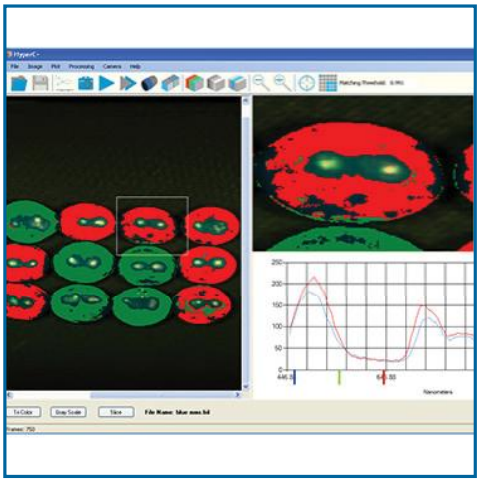
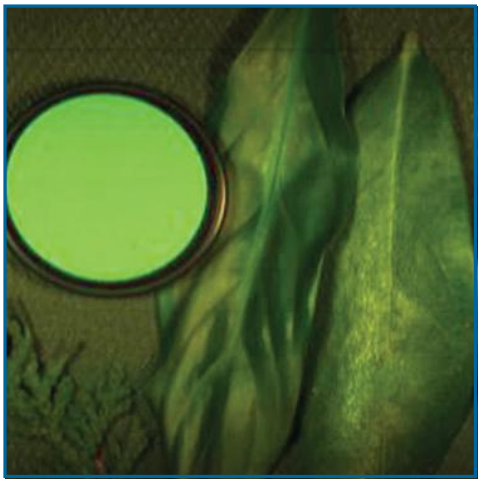
Relative Spectral Performance



Enhanced Discrimination Capabilities





NOTE: Visibly similar test samples are identified by very subtle differences in spectral signature. False color techniques allow for accurate sorting and designation of the samples.

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For more information about Corning's hyperspectral and multi-spectral imaging systems please contact:

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