



MODEL 4000 UV  
HYPERSPPECTRAL IMAGER  
(220-500 nm)



INTELLIGENT HYPERSPPECTRAL IMAGING

Overview

The **Hinalea Model 4000 UV Hyperspectral Camera** delivers full-frame spectral images across the 220-500 nm spectral range in a compact, highly portable, lightweight platform.

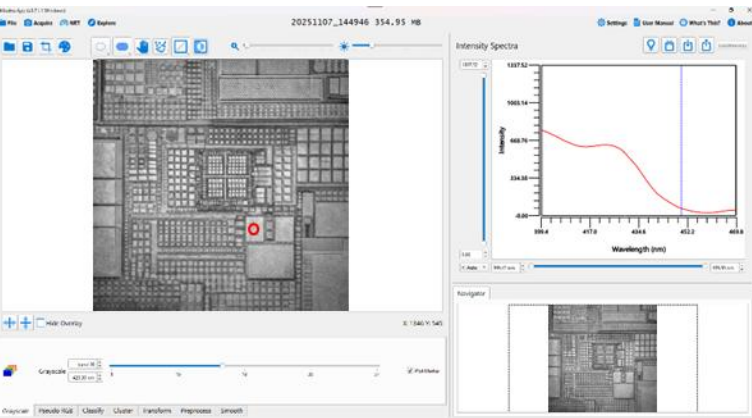
Based on front-staring Fabry-Pérot Interferometer (FPI) technology, the Model 4000 includes hardware and software required to support surface characterization across a broad range industrial, semi-conductor, pharmaceutical, biomedical, and research applications.

The Model 4000 captures a complete 2D hyperspectral data cubes with high spatial-resolution without the motion artifacts, smile, or keystone distortions in seconds. Unlike push-broom architectures, Hinalea’s FPI-HSI technology enables the user to scan a subset of non-sequential spectral bands. This dynamic control of the sensor optimizes data-capture and data-processing efficiency while maintaining spatial uniformity and imaging performance across the full field of view.

Engineered for precision, flexibility, and ease of integration, the Model 4000 combines high spectral fidelity with full-frame spatial consistency in a rugged, deployment-ready form factor. Its scan-free FPI architecture enables reliable ultraviolet hyperspectral analysis without the mechanical complexity of traditional systems, empowering users to extract actionable insights quickly and efficiently. Whether deployed in advanced research, quality control, or industrial inspection environments, the Model 4000 delivers a cost-effective, intelligent UV hyperspectral imaging designed to solve problems beyond the reach of conventional machine vision.

Powerful software

The Model 4000 UV system includes Hinalea’s proprietary application software, enabling fast and easy hyper-cube capture and intuitive image classification and segmentation. The integrated platform provides a comprehensive suite of spectral image exploration and analysis tools designed to streamline data processing and visualization.



| MODEL 4000<br>TECHNICAL SPECIFICATIONS |                                     |
|----------------------------------------|-------------------------------------|
| MECHANICAL                             |                                     |
| Dimensions (LxWxH)                     | 100 x 100 x 400 mm                  |
| Weight (Mass)                          | ~ 3.6 kg (8 lbs)                    |
| ELECTRICAL                             |                                     |
| Input voltage                          | 110 VAC/60 Hz or<br>220 VAC / 50 Hz |
| Data interfaces                        | USB-C / USB 3.0                     |
| ENVIRONMENTAL                          |                                     |
| Operating temperature                  | 15° – 30°                           |
| Humidity                               | 65% non-condensing                  |
| SCAN PERFORMANCE                       |                                     |
| Standard lens                          | 75 mm FL                            |
| Sensor spatial resolution              | 4.2 MP                              |
| Spectral range                         | 220 to 500 nm                       |
| Spectral bands                         | 100                                 |
| Spectral resolution                    | 4 nm                                |
| Dynamic range                          | User selectable<br>8- or 16-bit     |
| Illumination                           | Optional                            |

The material in this document is accurate at time of publication. Hinalea Imaging reserves the right to modify this information as it incrementally improves the product.

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