

SR-7000 Hyperspectral Camera



Key Features

- Produces radiometrically calibrated spectral images
- Circular variable filter-based spectral imager
- Optimized for the 7.8 - 12 μm spectral band
- Spectral resolution: 0.5% of wavelength
- Hyperspectral, narrowband and wideband filters modes
- Simple field setup
- Built-in calibration

The Hyperspectral Imaging Game Changer

CI Systems' SR-7000 is used for quantitative spectral characterization of thermal scenes in the field. It acquires data at high spectral and spatial resolution with good SNR in a short acquisition time. The SR-7000 is a "game changer", it is capable of triple camera operation, hyperspectral camera, narrowband spectral camera and wideband thermal imager, all in one system. The mode of operation is user-selectable through the user interface software. The flexible system configuration allows the user to control key parameters and exports all data in band sequential (BSQ) format.

Robust Field Technology

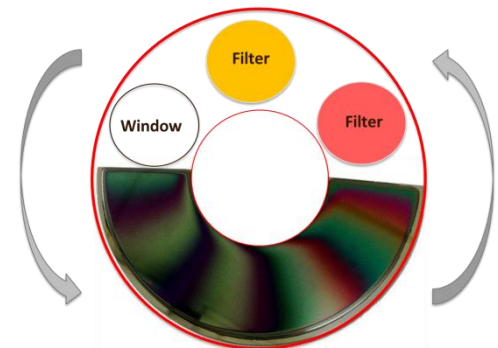
The SR-7000 system is based on a synergy between two technologies: a high resolution Circular Variable Filter (CVF) and Virtual Cold Filtering (VICO). Both make the SR-7000 the right choice for measurements in field conditions. It operates as staring imager and has its own built-in calibration blackbodies.

Flexible Systems Configuration

The unique all-in-one spectral design enables the flexibility to adapt the SR-7000 to fulfill specific application requirements by controlling the trade-offs with respect to spectral range and resolution, acquisition time, etc. This control is made possible by the presence of a free 180 degree section in the wheel where a number of application specific narrow and wideband filters can be mounted, in addition to the CVF. These filters conveniently provide simultaneous information without the need of additional analysis of the spectral cube.

All-In-One Systems:

- Hyperspectral camera
- Narrowband spectral camera
- Wideband spectral camera



* Patent pending

Specifications

Item	Unit	Value
Wavelength range	µm	7.8-12
Spectral resolution	%	0.5% of wavelength
Spectral bands	#	80
Typical NESR@10µm (temperature: 300c)*	(Watt/sr/cm ²)	6.8x 10 ⁻⁸
Spatial resolution	Pixels	320 x 256
Time to acquire a spectral image	Sec	2
FOV	Degrees	5.5 x 4.4
Communication and data transfer		GigE
Power consumption	Watt	300
Weight	Kg	18
Operating temperature**	°C	5-45

(*) Other measurement schemes can improve NESR

(**) Extended temperature range available

Applications

- Standoff identification of surface and liquid contaminants
- Research (infrared signature acquisition of targets)
- Explosives and drugs laboratories detection
- Gas imaging & identification
- Environmental monitoring
- Industrial processes
- Quality control
- Surveillance

Take Advantage of CI's Experience in Hyperspectral Imaging

The best choice of measurement parameters' combinations and procedures are very important in many cases. CI Systems can share with you its knowledge and experience in how to get the best results from your work in specific applications. CI is offering to its remote sensing customers optional training courses for the most efficient use of its spectroradiometric and hyperspectral imaging products.

About CI Systems - *A Passion for Measuring Light*

CI Systems for more than 30 years continues to design infrared spectroradiometry for remote sensing of atmosphere, objects' spectral signatures and ground truth measurements. During the years CI Systems has become the world expert in quantitative infrared measurements, including the most sensitive and accurate low level infrared detection and calibration techniques. Our goal is to supply the best service and applications support in the world.



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