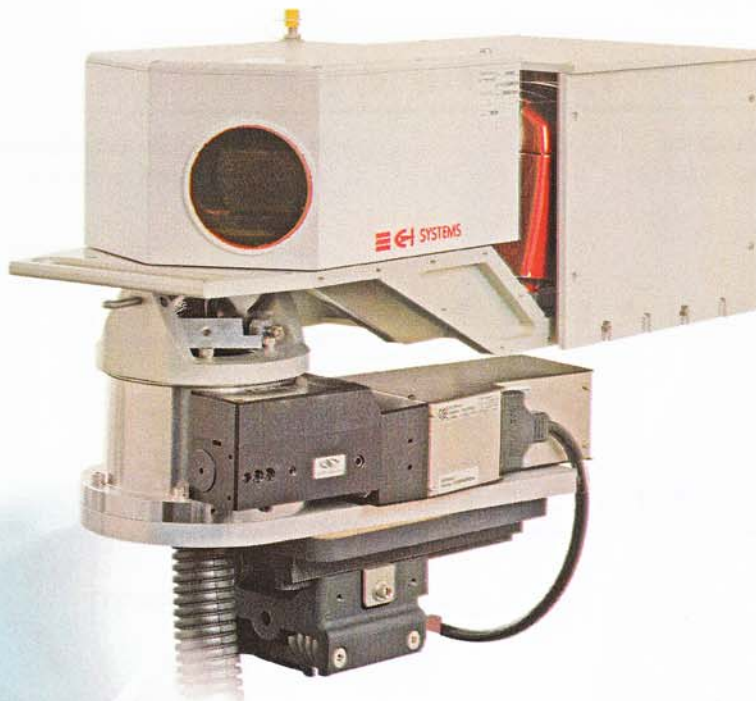


# SI-5000

## SPECTRAL IMAGER FOR MWIR SPECTRAL RANGE



The SI 5000 addresses a wide variety of scientific, military and industrial applications that require recognition and mapping of chemical materials in a region of space from a distance. Being based on a pushbroom optical configuration it may scan a section of the horizon in a ground based set-up or a strip of earth surface in an airborne set-up.

### T Y P I C A L   A P P L I C A T I O N S

#### Ground:

- ▶ IR Emissivity mapping of surfaces, buildings, walls, camouflage materials
- ▶ Development of camouflage materials and paints emissivity
- ▶ Temperature mapping of surfaces
- ▶ Gas leaks detection and identification
- ▶ Gas cloud mapping in the air over smokestacks
- ▶ Gas leaks detection and identification in industrial and petrochemical plants
- ▶ Aircraft engines plume mapping of temperature and gas contents
- ▶ Missile engines plume mapping of temperature and gas contents
- ▶ Mapping of vehicle exhaust in urban areas

#### Airborne:

- ▶ Gas emission mapping over industrial areas
- ▶ Gas leak detection and identification over natural gas pipelines
- ▶ IR emissivity mapping of military targets in nadir configuration
- ▶ Water content mapping on agricultural ground
- ▶ Salinity mapping on agricultural ground



# SI-5000

## SPECTRAL IMAGER FOR 3-5 $\mu$ SPECTRAL RANGE

### A D V A N T A G E S

- ▶ No need of cooling the optics
- ▶ Compact and inexpensive system
- ▶ Usable in the laboratory, field or airborne
- ▶ High reliability
- ▶ Easy to use with user friendly interface

### F E A T U R E S

- ▶ Calibrated in units of Spectral Radiance
- ▶ Spectral images in ENVI compatible format
- ▶ Convenient file management system
- ▶ Field packaged for easy and reliable transportation

### S I G N A L P R O C E S S I N G

- ▶ By ENVI program (provided)

### S P E C I F I C A T I O N S

Spectral range:	3-5 $\mu$
Number of pixels:	240x(user-pre-established number)
Field Of View (vertical):	6.90°
Field Of View (horizontal):	up to 300°
Instantaneous Field of View:	0.5mrad
Spectral resolution:	50 $\text{cm}^{-1}$
Noise Equivalent Spectral Radiance:	$2.5 \times 10^{-9} \text{ Watt}/(\text{cm}^2 \cdot \text{sr} \cdot \text{cm}^{-1})$ , at 4.8 microns and uniform blackbody source at 25C over the field of view
Data acquisition time for 9.1x6.90 FOV:	~5 seconds
Working environment temperature:	-10 to 40 C non condensing
Weight of optical head:	16.8 Kg
Weight of optical head, mounted on scanning stage:	28.2 Kg
Size of optical head:	20x20x60 cm.

 **SYSTEMS**  
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Specifications are subject to change without prior notice.