

GREENEYE

VNIR Hyperspectral Imaging Camera (400 – 1000 nm)

The **GreenEye** is a linescan (pushbroom) visible and near-infrared (VNIR) hyperspectral imaging camera that allows the acquisition of real-time spectral data with very high spatial resolution. In addition to chemical information, i.e. material characteristics, precise color information is obtained as well.

Combining superior optical design with advanced holographic transmission grating technology, sensitive CMOS detector and high-end electronics, the **GreenEye** camera brings an outstanding performance making it an ideal tool even for the most demanding laboratory or process analytical applications.

A variety of dedicated accessories for the **GreenEye** ensures seamless integration in any individual application scenario. Depending on the measured object dimensions, various camera lenses (fore optics) can be chosen for optimal image quality. Specialized modular tungsten halogen or LED lighting provide homogeneous sample illumination.

The conveyor belt or stepper table for lab measurements, tripod with rotation stage for field applications or different mounting accessories for industrial installations ensure easy setup and optimal sample presentation. Dedicated software packages from SDK to fast data collection and evaluation are available for various user requirements.



Features:

- **Transmission grating configuration for superior sensitivity**
- **High spatial and spectral resolution**
- **Excellent imaging performance**
- **Robust design without moving parts**
- **Compact design**

Technical Specifications:

GreenEye

Spectrograph

| | |
|---------------------|--------------------------|
| Spectral range | typ. 400 – 1000 nm |
| Dispersion | 85 nm/mm |
| Spectral resolution | 10 nm (with 80 µm slit) |
| Spatial resolution | rms spot radius < 35 µm |
| Smile | < 90 µm |
| Keystone | < 30 µm |
| F-number | 2.8 |
| Slit width, default | 80µm (others on request) |

Electronics

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|----------------------|--------------------------------------|
| Sensor | CMOS enhanced in VNIR range |
| Pixels in full frame | 1312 x 1082 |
| Pixel size | 8 µm x 8 µm |
| Bit depth | 12 bit |
| Frame rate | up to 54 fps full resolution (8 bit) |
| Data interface | Gigabit Ethernet |
| Camera control | RS 485 |
| Power consumption | < 4,8 W |
| Power supply | +12 V DC (-10%)...+24 V DC (+10) |

Operating Conditions

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|-------------------------|------------------|
| Temperature (operating) | 0 °C - + 50 °C |
| Temperature (storage) | -10 °C - + 50 °C |

Mechanics

| | |
|----------------------|------------------|
| Dimensions l x w x h | 236 x 50 x 46 mm |
| Weight | 2 kg |
| Lens mount | Standard C-mount |

Please note that any specs on the data sheet are subject to change without notice.

Optionally, the **GreenEye** is available with integrated scanning unit that allows to perform the measurements on static samples without moving camera itself.

As a well established manufacturer of spectroscopic measurement equipment, **inno-spec** provides optimized solutions for any individual applications: from customized OEM components for system suppliers up to fully integrated turnkey solutions for the end-customers.

Accessories:

- Modular tungsten halogen or LED lighting
- Different fore optics: 8 mm, 12,5 mm, 16 mm, 25 mm, 35 mm, 50 mm
- Conveyor belt, stepper table or tripod with a rotary stage
- Various mounting accessories
- Portable battery system
- Multiple software packages

