

# REDEYE

## NIR Hyperspectral Imaging Camera

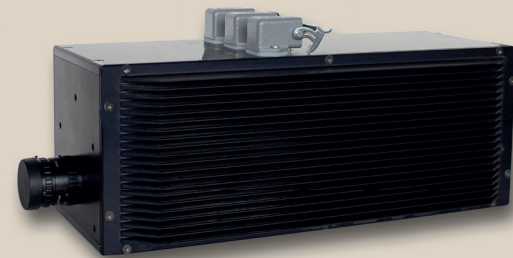
The new **RedEye 2.2** is a linescan (pushbroom) hyperspectral imaging camera in the near-infrared spectral range that allows the acquisition of real-time data with high spectral and spatial resolution.

This new capability was developed from our vast experience with industrial applications we have delivered in the past decade.

Combining a superior optical design with an advanced 3-D transmission grating technology, high-end electronics, and a fast FPA detector, the **RedEye** camera provides an outstanding performance even under harsh environmental conditions.

inno-spec's new approach of material characterization allows reliable measurements combining chemical and spatial information. It therefore enables comprehensive analytical applications for the laboratory or for critical online or in-line monitoring in manufacturing processes.

To meet different user demands, multiple software packages are available: from hardware drivers through laboratory software up to fully automated real-time routines for rapid data acquisition, evaluation, and process control.



### Features

- **Transmission grating configuration for superior sensitivity**
- **High spatial and spectral resolution**
- **High frame rate**
- **Excellent imaging performance**
- **Robust design**

## Technical Specifications:

### RedEye 2.2

#### Spectrograph

Spectral range	typ. 1200 to 2200 nm
Dispersion	140 nm/mm
Spectral resolution	13 nm (with 80 µm slit)
Spatial resolution	rms spot radius <85 µm
Smile	< 75 µm
Keystone	< 25 µm
F-number	2.6
Slit width (default)	80 µm

#### Electronics

Sensor	extended InGaAs
Pixels in full frame	320 x 256
Pixel size	30 x 30 µm
Bit depth	14 bit
Frame rate	3330 fps (full frame)
Data interface	Gigabit Ethernet
Camera control	RS 485
Power supply	24 V DC
Cooling	2-Stage TEC

#### Operating Conditions

Temperature	-5°C to + 40°C
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#### Mechanics

Dimensions l x w x h	400 x 184 x 180 mm <sup>3</sup>
Weight	10.5 kg
Lens mount	Standard C-mount

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

Optionally, by replacing the input optics with a multifiber cable, the **RedEye** can be used as a synchronous multipoint, multichannel spectrometer.

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

## Accessories

- Tungsten halogen light sources in modular sizes
- Different fore optics: 8 mm, 16 mm, 25 mm, 35 mm, 50 mm
- Numerous software packages
- Multifiber bundle (up to 66 channels)