

# REDEYE 1.7 HighRes

## NIR Hyperspectral Imaging Camera

Introducing the **RedEye 1.7 HighRes**, our avant-garde hyperspectral camera designed to deliver real-time data with higher spatial and spectral resolution for a broad range of customer scenarios.

Developed through a decade of experience in delivering industrial applications, the **RedEye** camera incorporates sophisticated optical design, advanced transmission grating technology, and a fast NIR detector, making it suitable for use in even the most demanding applications.

Our innovative approach to material characterization provides comprehensive analytical data for laboratory or manufacturing processes, combining chemical and spatial information at the same time.

### Application areas:

- Recycling industry
- Moisture content determination
- Food and harvest products
- Mining
- Pharmaceutical industry



### Features:

- Extended spatial resolution of 640 x 512 pixels
- ROI (selectable region of interest) & Multi-ROI
- GigE Vision standard interface
- IP 65 / 67 classification
- Robust design



Website



LinkedIn



## Technical Specifications:

### RedEye 1.7 HighRes

#### Spectrograph

Spectral range	typ. 950 to 1700 nm
Dispersion	1.6 nm/px
Spectral resolution	9 nm (with 80 $\mu\text{m}$ slit)
Spatial resolution	rms spot radius < 35 $\mu\text{m}$
Smile	< 60 $\mu\text{m}$
Keystone	< 50 $\mu\text{m}$
F-number	2.6
Slit width, default	80 $\mu\text{m}$ (30, 50 and 100 $\mu\text{m}$ available)

#### Electronics

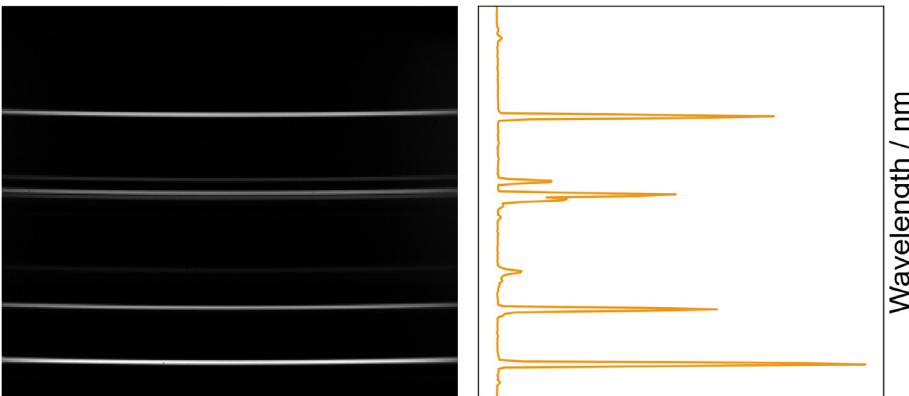
Sensor	InGaAs
Pixels in full frame	640 x 512 (spatial x spectral) pixels
Pixel size	15 $\mu\text{m}$ x 15 $\mu\text{m}$
Bit depth	12 bit
Frame rate	225 fps (full frame) 16390 fps (4 bands)
Data interface	Gigabit Ethernet (GigE Vision standard)
Power supply	12 - 36 V DC
Cooling	1-Stage TEC

#### Operating Conditions

Temperature (operating)	-5°C to +40°C
Temperature (storage)	-5°C to +50°C

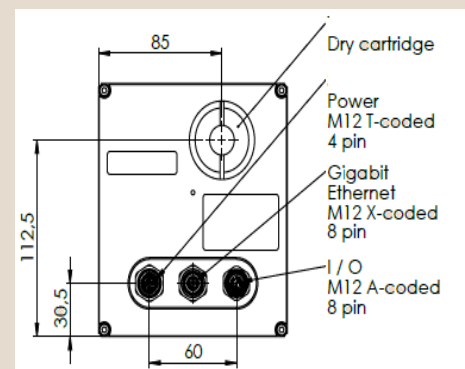
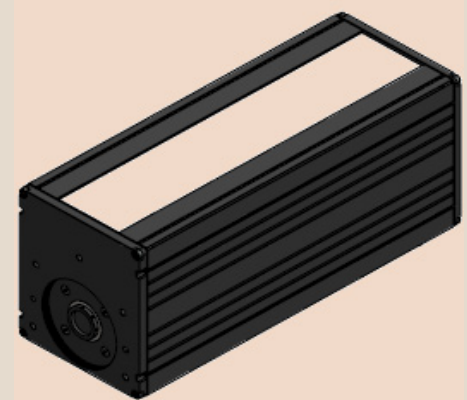
#### Mechanics

Dimensions l x w x h	368 x 130 x 145 mm <sup>3</sup>
Weight	4.7 kg
Lens mount	standard C-mount



As a well-established manufacturer of spectroscopic measurement equipments, **INNO-SPEC** provides optimized solutions for your individual applications. For example, customized OEM cameras for machine builders & system suppliers.

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



## Accessories:

- ColEx = RGB adapter which is aligned to the NIR optical path
- Conveyor belt, stepper table or tripod with a rotary stage as bundle solutions
- Tungsten halogen light sources in modular sizes
- Different objective lenses: ranging between 8 mm & 50 mm focal length
- Software packages for customized applications