

# Goldeye

## P-032 SWIR



- Goldeye P-032 SWIR SWIR camera with InGaAs sensor, 636 × 508 pixels, Peltier cooling

### See the invisible

## Short-wave infrared (SWIR) cameras with InGaAs sensor technology

Goldeye P-032 SWIR with InGaAs FPA 636 × 508 runs 30.0 frames per second at 0.3 MP resolution.

Goldeye cameras are equipped with InGaAs sensor technology making them sensitive in the short wave infrared spectrum ranging from 900 nm to 1,700 nm. Some models have extended sensitivity in the visible spectrum down to 400 nm or up to 2200 nm. All Goldeye SWIR cameras can be operated at very high frame rates and capture outstanding low-noise images. They are the perfect choice for industrial and scientific applications beyond the visible spectrum. All Goldeye models are available with either a Camera Link or a GigE Vision interface.

The Goldeye is a short-wave infrared (SWIR) camera. It has a spectral response from 900 nm to 1700 nm. Its InGaAs sensors feature high sensitivity, very good linearity, and a high damage threshold against intense illumination. Thanks to the 14-bit processing and the numerous image correction features, Goldeye cameras produce an outstanding, low-noise image quality. The camera is also available with Peltier cooling. The Peltier cooling is beneficial especially for applications with long exposure times, or for exact temperature measurements.

- C-Mount, compatible with standard machine vision lenses
- GigE Vision, also available with Camera Link interface
- Options:
  - Peltier cooling for long exposure times and exact temperature measurements

## Specifications

Interface	IEEE 802.3 1000baseT
Resolution	636 (H) × 508 (V)
Spectral range	SWIR, 900 nm to 1700 nm
Sensor	InGaAs FPA 636 × 508
Sensor type	InGaAs
Sensor size	No standard size
Pixel size	25 μm × 25 μm
Lens mount (default)	C-Mount, F-Mount, M42-Mount
Max. frame rate at full resolution	30 fps
ADC	14 Bit

## Output

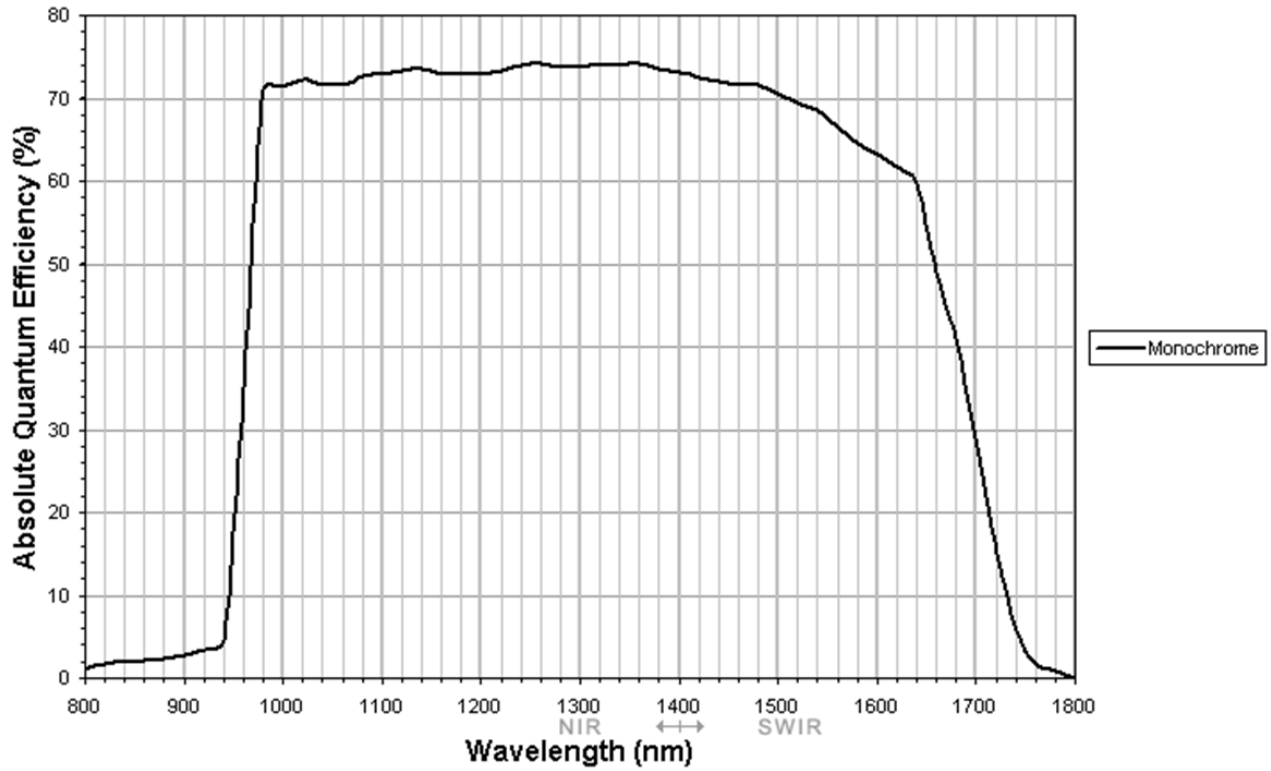
Bit depth	12-bit
Monochrome pixel formats	Mono12

## General purpose inputs/outputs (GPIOs)

## Operating conditions/dimensions

Operating temperature	0 °C to +35 °C
Power requirements (DC)	12 V
Power consumption	15.6 W @ 12 VDC
Mass	1110 g (C-Mount)
Body dimensions (L × W × H in mm)	115.8 × 90 × 99 (C-Mount)

## Quantum efficiency



## Features

- Switchable gain, factor 20 at short exposure times
- Exposure time 5  $\mu$ s to 1 s
- Shipped with built-in correction data sets
- Gain/offset correction (NUC / non-uniformity correction) for each pixel
- Factory adjusted bad pixel correction
- Background (FPN) correction
- Continuous mode (image acquisition with maximum frame rate)
- Image On Demand mode (triggered image acquisition)

In combination with Allied Vision's AcquireControl software, extensive image analysis functions are available:

- Pseudo color LUT with several color profiles
- Auto contrast
- Auto brightness
- Analyze multiple regions (rectangular, circle) within the image
- Real-time statistics and histogram display

## Applications

Goldeye SWIR cameras are very sensitive in the short-wave infrared spectrum, show excellent linearity, and tolerate intense illumination. They are the perfect choice for numerous SWIR applications:

- SWIR imaging
- Thermal imaging of hot objects (in a range of 250°C to 800°C)
- Imaging spectroscopy
- Laser beam profiling
- Plastic sorting
- Semiconductor inspection
- Water or moisture detection
- Medical science and biology
- Vision enhancement