



Goldeye

P-008 SWIR

- Goldeye P-008 SWIR SWIR camera with InGaAs sensor, 320 × 256 pixels, optional cooling

See the invisible

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

Goldeye P-008 SWIR with InGaAs FPA 320 × 256 runs 118.0 frames per second at 0.1 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 | 320 (H) × 256 (V) |
| Spectral range | SWIR, 900 nm to 1700 nm |
| Sensor | InGaAs FPA 320 × 256 |
| Sensor type | InGaAs |
| Sensor size | No standard size |
| Pixel size | 30 μm × 30 μm |
| Lens mount (default) | C-Mount, F-Mount, M42-Mount |
| Max. frame rate at full resolution | 118 fps |
| ADC | 14 Bit |

Output

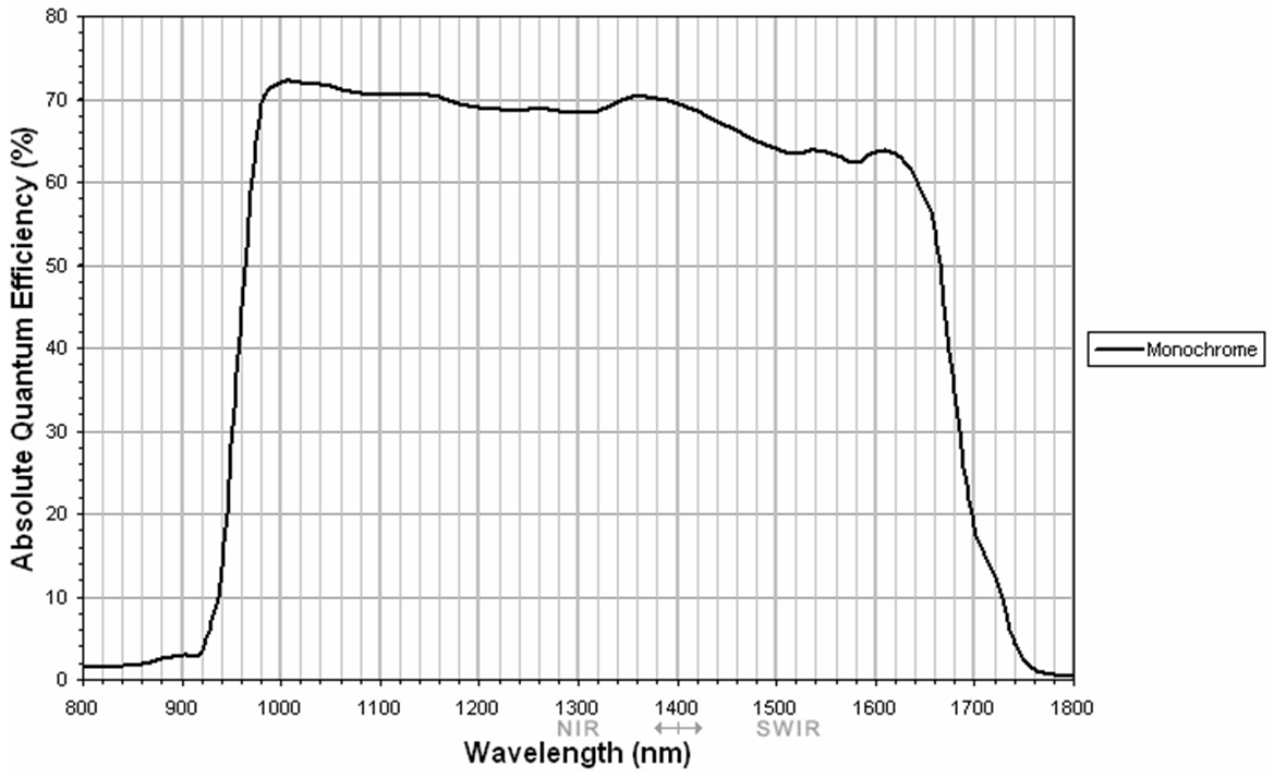
| | |
|--------------------------|--------|
| Bit depth | 12-bit |
| Monochrome pixel formats | Mono12 |

General purpose inputs/outputs (GPIOs)

Operating conditions/dimensions

| | |
|-----------------------------------|--|
| Operating temperature | 0 °C to +30 °C, Cool: 0 °C to +40°C |
| Power requirements (DC) | 12 V |
| Power consumption | 7.2 W @ 12 VDC / Cool: 33.6 W @ 12 VDC |
| Mass | 660 g /Cool: 1420 g |
| Body dimensions (L × W × H in mm) | 89 × 90 × 71 / Cool: 116 × 90 × 99 |

Quantum efficiency



Features

- Switchable gain, factor 10 with short exposure times
 - Exposure time 5 μ s to 100 ms (Goldeye P/CL-008 LWIR)
 - Exposure time 5 μ s to 1 s (Goldeye P/CL-008 LWIR Cool)
- 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 AVT'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:

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