Allied Vision
a **TKH Vision** brand

// Goldeye Pro

Short-wave infrared cameras with 5GigE interface

Allied Vision's new Goldeye Pro camera series is designed to raise your SWIR vision system to the next level regarding throughput, quality, and imaging performance. Equipped with a **GigE Vision compliant 5 Gbps interface**, Goldeye Pro cameras optimally support the bandwidth requirements of the latest SWIR applications while enabling simultaneously an efficient sensor temperature stabilization via thermoelectric cooler (TEC).

In combination with several on-board image correction features this enables you to capture SWIR images with outstanding and reproducible image quality. Goldeye Pro cameras have the same compact form factor as our proven Goldeye camera series with GigE and Camera Link interface. Its multiple mounting options let the camera fit easily into space-constraint systems.

First Goldeye Pro models incorporate the **TEC-version of Sony's IMX992/993 SenSWIR sensors** sensitive between 400nm – 1,700nm. They enable high-resolution SWIR imaging with unmatched details at high frame rates by providing best in class imaging performance.

New Models	Sensor	Resolution (H) x (V)	Frame Rate	Pixel Size µm x µm	Optical Format	Cooling Power typical
Goldeye Pro G5-530 TEC 1	IMX992 SenSWIR	5.3 MP 2592 x 2056	115 fps	3.45 x 3.45	Type 1/1.4	min. ΔT= 25K
Goldeye Pro G5-320 TEC1	IMX993 SenSWIR	3.2 MP 2080 x 1544	157 fps	3.45 x 3.45	Type 1/1.8	min. ΔT= 25K

Camera Highlights

// 5GigE Vision interface, GenICam-compliant feature control, and a free comprehensive GUI-viewer application provide you a plug & play feeling when evaluating your Goldeye Pro camera and speed up the integration into your system.
// Automatic on-board image correction and stabilized sensor cooling without a fan ensure you best possible imaging results even when the camera configuration changes.
// Lockable connectors and an extended operating temperature range enabling a secure operation under harsh conditions.
// Power over Ethernet (PoE) and comprehensive, configurable I/O control options simplify the connection of Goldeye Pro cameras to your host system and the synchronization with other system components.
// Ability to update firmware in the field will simplifiy your system maintenance.

Feature Highlights

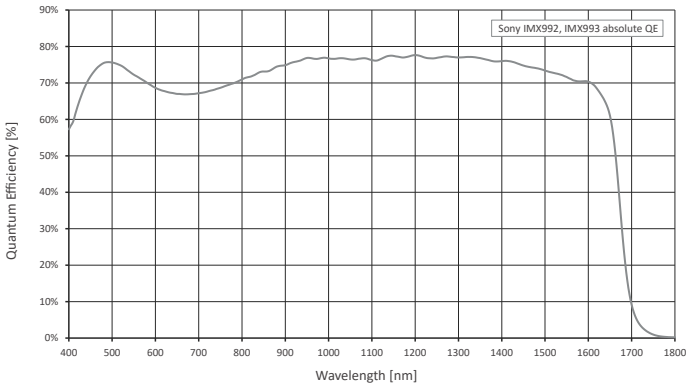
// ROI settings for frame rate and bandwidth control
// Built-in image correction for optimized image quality:
- Non-uniformity correction with automatic adaption
- Defect pixel correction
- Background correction

// Look-up tables to increase contrast
// User sets for simplified camera setup
// Digital binning and gain control to increase sensitivity

Operating Conditions

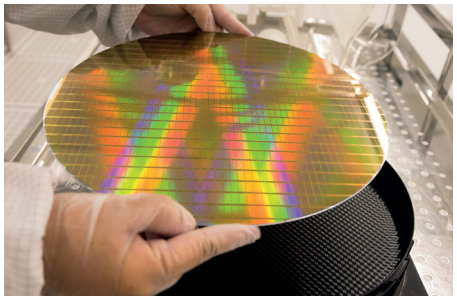
Power requirements	Power over Ethernet; external power 12 to 24 VDC (+/- 10%)
Power consumption	< 12,95 W (5GigE)
Operating temperature	-20°C to +55°C (housing temperature)
Storage temperature	-30°C to +70°C (ambient)
Regulations	CE, FCC Class B, CAN ICES-3 (B), RoHS
Pixel operability	> 99.5 %

Spectral Sensitivity



Applications

Goldeye Pro SWIR cameras are sensitive in the visible and the SWIR spectrum, and are well-suited for many typical SWIR applications in various industries:



// Semiconductor industry: Solar cell and chip inspection
// Agriculture: Multicopter-based spectral remote sensing
// Recycling industry: Material sorting of plastics, waste, and other materials
// Medical imaging & research: Hyper- and multi-spectral imaging
// Food industry: Quality inspection and grading
// Beverages industry: Fill level detection in opaque containers
// Packaging: Seal inspection
// Glass industry: Defect detection through hot glass
// Printing industry: Seeing hidden features
// Surveillance: Vision enhancement, for example, seeing through fog, smoke, or haze
// Security: Counterfeit detection of, for example, banknotes, faked hair, or skin

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