



Bigeye

G-1100 Cool

- Outstanding signal-to-noise ratio
- Exposure time up to more than 4200 s
- 10 Megapixel resolution

For demanding applications for both the visible spectrum and the NIR spectrum

Low noise cooled CCD cameras, up to 11 MP, prime quality

Bigeye G-1100 Cool with ON Semi KAI-11002 runs 1.6 frames per second at 10.8 MP resolution.

The Bigeye is a Peltier cooled camera series for demanding applications. It is equipped with highly sensitive CCD sensors from Sony and OnSemi. Bigeye cameras are designed for low-noise image acquisition even at long exposure times. The compact, robust metal housing of all Bigeye cameras has a hermetically sealed vacuum section, ensuring maintenance-free operation for many years even under rough conditions. Moreover, two NIR enhanced camera versions are available (with ICX285 and KAF-6303E).

- Dual level Peltier cooling with 5 years warranty against condensation
- Low dark current even at very long exposure times
- Superior signal/noise ratio
- Robust alloy metal housing for industrial use
- Secure operation due to screw locks at all connectors
- Multi-functional, user-configurable I/O interface
- Support of AVT's GigE software development kits (SDKs)

Specifications

| | |
|------------------------------------|----------------------|
| Interface | IEEE 802.3 1000baseT |
| Resolution | 4024 (H) × 2680 (V) |
| Sensor | ON Semi KAI-11002 |
| Sensor type | CCD Progressive |
| Sensor size | Type 35 mm |
| Pixel size | 9 μm × 9 μm |
| Lens mount (default) | F-Mount |
| Max. frame rate at full resolution | 1.58 fps |
| ADC | 14 Bit |
| Image buffer (RAM) | 32 MByte |
| Cooling temperature | 0 °C |
| Dark current | 0.010 e-/pixel/s |
| Temporal dark noise | 40 e- |
| Saturation capacity | 54000 e- |
| Dynamic range | 63 dB |

Output

| | |
|--------------------------|-----------------------------|
| Bit depth | 12 Bit |
| Monochrome pixel formats | Mono8, Mono12, Mono12Packed |

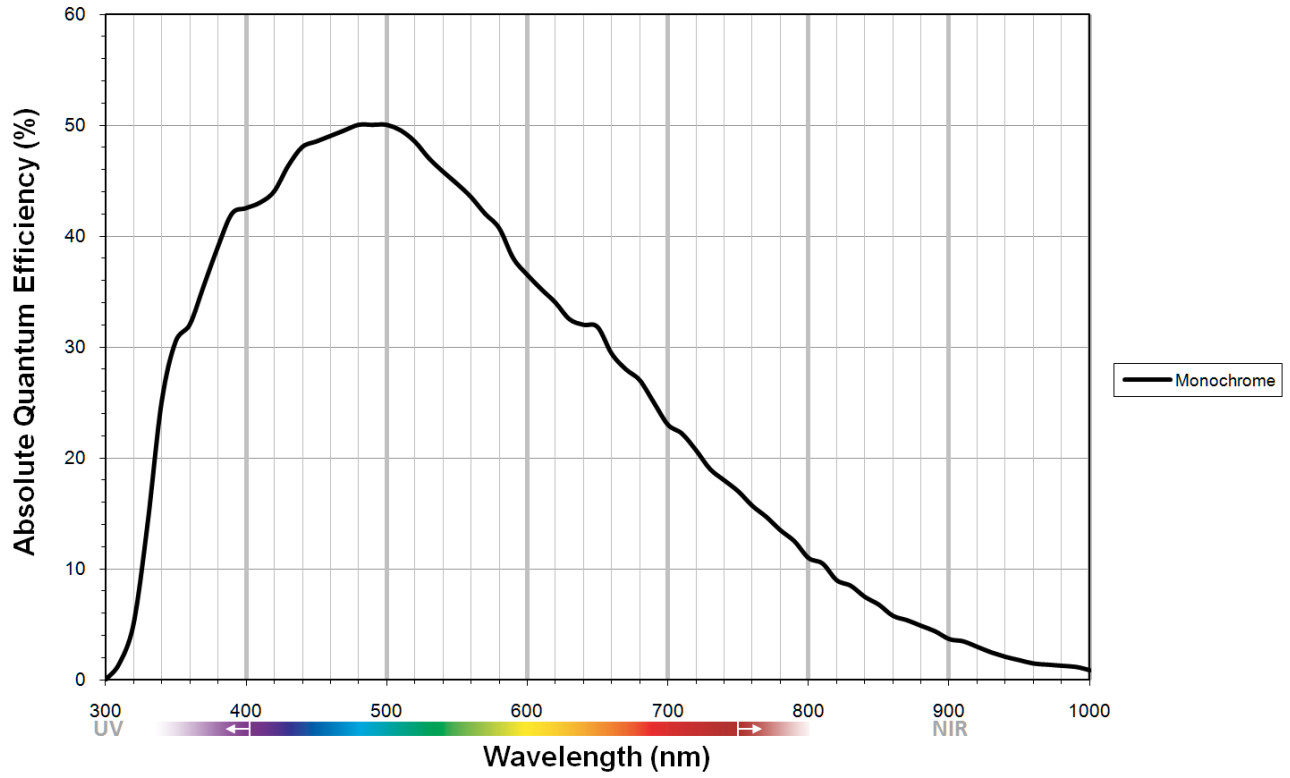
General purpose inputs/outputs (GPIOs)

| | |
|--------------------|-----|
| TTL I/Os | 1/1 |
| Opto-isolated I/Os | 3/3 |
| RS232 | 2 |

Operating conditions/dimensions

| | |
|-----------------------------------|--|
| Operating temperature | 0 °C to 35 °C |
| Power consumption | max. <36 W at 12 VDC, typ. <18 W at 12 VDC |
| Mass | 1320 g |
| Body dimensions (L × W × H in mm) | 132.8 × 90 × 99 (including connectors) |

Quantum efficiency

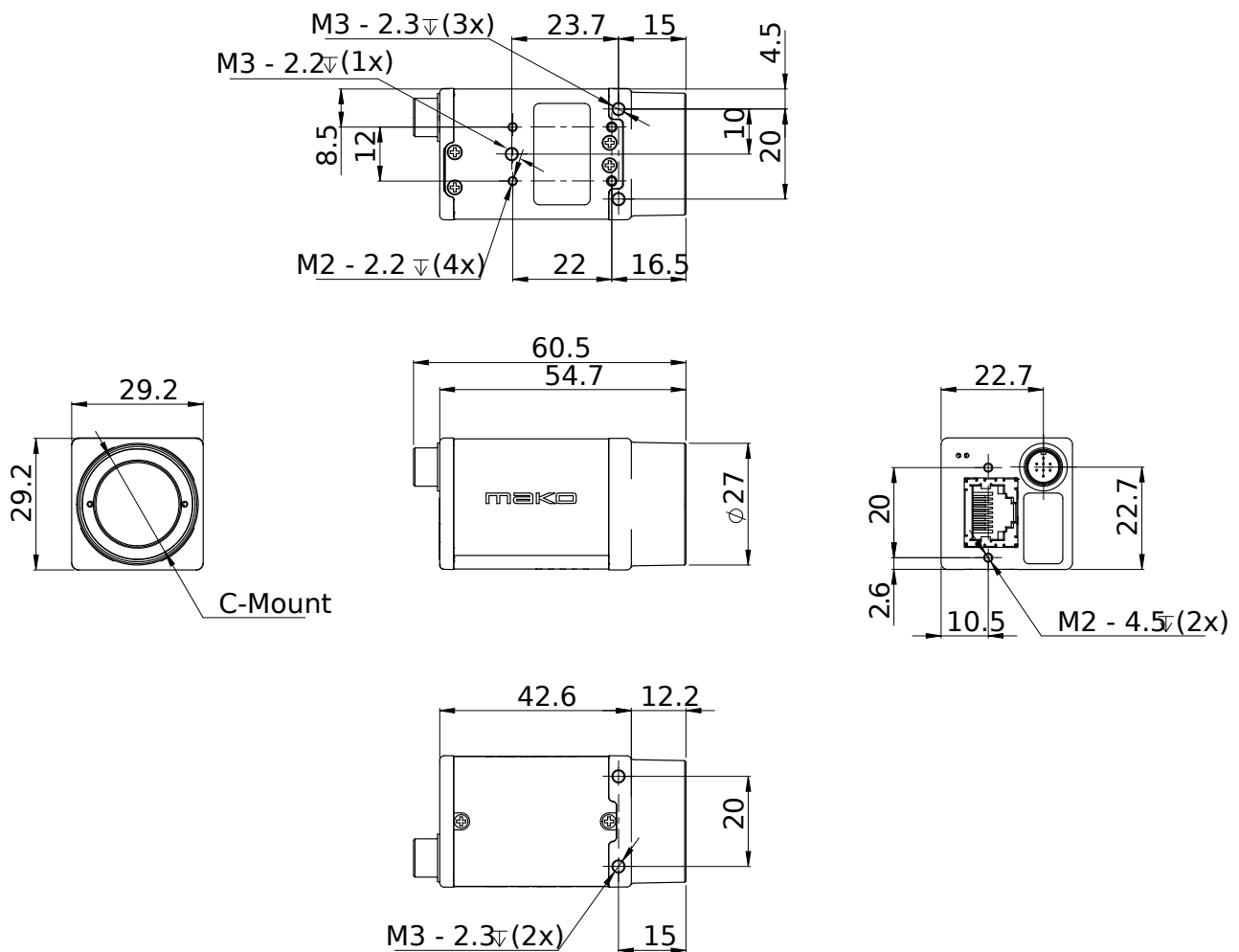


Features

- Gain (6 dB)
- Exposure time 1394 μ s to \approx 71 minutes
- Binning (1x2, 2x1, 2x2)
- Gamma (0.45, 0.5, 0.7)
- Three look-up tables (LUTs)
- Five storable user sets

Easy integration The Bigeye G-1100B Cool can be easily integrated into your application, since it is GigE Vision compliant and compatible with Allied Vision's GigE SDKs. Additionally, this camera can be used with numerous third-party software solutions.

Technical drawing



Applications

The Bigeye G-1100B Cool is the perfect choice for image acquisition with high resolution and low noise. Long exposure times with the cooled sensor produce images with outstanding image quality.

Typical applications:

- Low-noise imaging (industrial and scientific imaging)
- Image acquisition with long exposure times
- Microscopy with high resolution
- Fluorescence microscopy
- Gel electrophoresis, DNA documentation
- Non-destructive evaluation of photosensitive objects
- Astronomy