



## Bigeye G

### G-629 Cool

- 6 Megapixels resolution
- Exposure time up to more than 4200 s

## Description

### Cooled 6 Megapixel full frame CCD camera

The Bigeye G-629B Cool is a cooled CCD camera with 6 Megapixels resolution and a sensitive full frame sensor. This camera is optimal for applications with low-light conditions requiring long exposure times. The camera can operate with its internal long life electromechanical shutter or with external impulse light sources and constantly opened shutter.

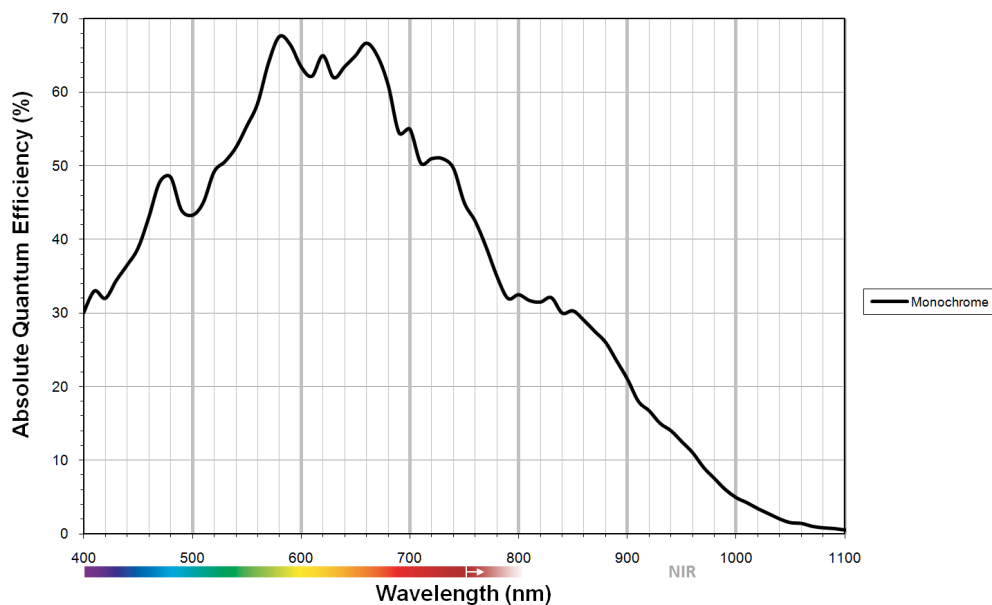
Benefits and features:

- GigE Vision, multi-functional, user-configurable I/O interface
- OnSemi KAF 6303E sensor, 3072 x 2048 pixels, cooled to +5 °C (stabilized), quantum efficiency @530 nm: 49%, exposure time up to 4292 s ( $\approx$  71 min)
- Reliable operation under rough industrial conditions

## Specifications

Bigeye G	G-629 Cool
Interface	IEEE 802.3 1000baseT
Resolution	3072 × 2048
Sensor	OnSemi KAF-6303E
Sensor type	CCD Progressive
Cell size	9.0 x 9.0 $\mu$ m
Cooling temperature	+5 °C
Temporal dark noise	21 e-
Dark current	0.008 e-/pixel/s
Saturation capacity	56000 e-

Bigeye G	G-629 Cool
Dynamic range	69 dB
Lens mount	F-Mount
Max frame rate at full resolution	0.67 fps
ADC	14 bit
On-board FIFO	32 Mbyte
<b>Output</b>	
Bit depth	14 bit
Mono modes	Mono8, Mono12, Mono12Packed, Mono14
<b>General purpose inputs/outputs (GPIOs)</b>	
TTL I/Os	1/1
Opto-isolated I/Os	3/3
RS-232	2
<b>Operating conditions/dimensions</b>	
Operating temperature	0 °C ... 35 °C
Power consumption (@12 V)	max. <37.2 W, typ. <18 W
Mass	1390 g
Body dimensions (L × W × H in mm)	131.55 × 90 × 109 incl. connectors, w/o lens
Regulations	CE, RoHS (2011/65/EU), WEEE, FCC Class B



## Features

- Gain (6 dB)

- Exposure time 50688  $\mu$ s to  $\approx$  71 minutes
- Binning (2x1, 2x2)
- Gamma (0.45, 0.5, 0.7)
- Three look-up tables (LUTs)
- Five storable user sets

**Easy integration**

The Bigeye G-629B Cool can be easily integrated into your application, since it is GigE Vision compliant and compatible with AVT's GigE SDKs. Additionally, this camera can be used with numerous third-party software solutions.

## Applications

The Bigeye G-629B Cool is a low-noise CCD camera with a very high dynamic range. It is best suited for applications with the highest demands on image quality. Due to the Peltier cooling, the camera is ideal for image acquisition with long exposure times.

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