



## Bigeye G G-1100 Cool

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

### Description

11 Megapixel CCD camera, cooled OnSemi 35 mm sensor

The Bigeye G-1100B Cool is a high-resolution cooled CCD camera. It includes a sensitive 35 mm OnSemi sensor. Due to the cooling to 0 °C, this camera features high-resolution imaging with outstanding signal-to-noise ratio.

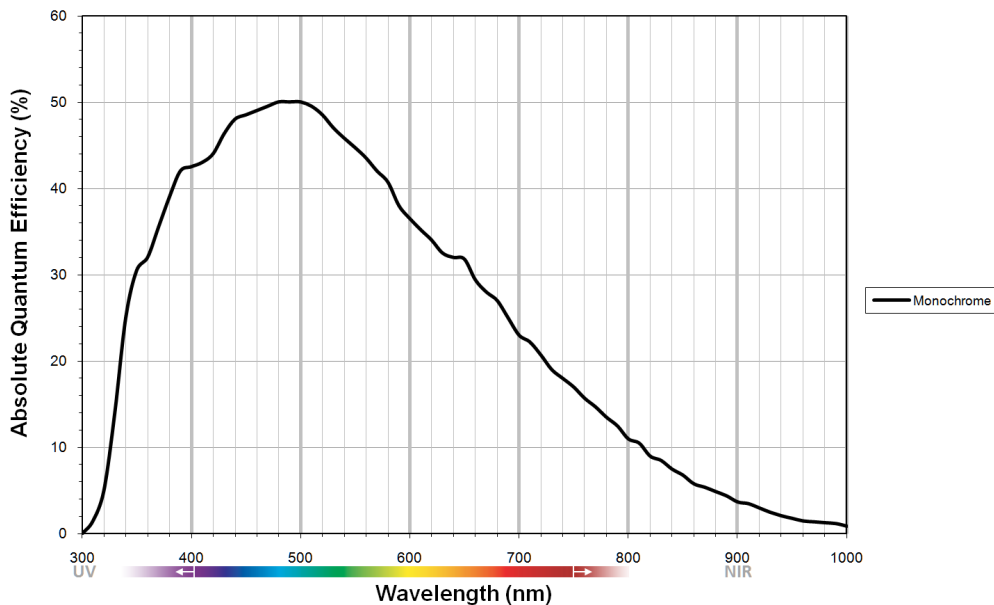
Benefits and features:

- GigE Vision, multi-functional, user-configurable I/O interface
- OnSemi KAI-11002 sensor, 4024 x 2680 pixels, quantum efficiency @530 nm: 59%, peltier cooled to 0 °C, Exposure time up to 4292 s ( $\approx$  71 min)
- Reliable operation under rough industrial conditions

### Specifications

Bigeye G	G-1100 Cool
Interface	IEEE 802.3 1000baseT
Resolution	4024 (H) × 2680 (V)
Sensor	OnSemi KAI-11002
Sensor type	CCD Progressive
Cell size	9 $\mu$ m x 9 $\mu$ m
Cooling temperature	0 °C
Temporal dark noise	40 e-
Dark current	0.010 e-/pixel/s
Saturation capacity	54000 e-
Dynamic range	63 dB

Bigeye G	G-1100 Cool
Lens mount	F-Mount
Max frame rate at full resolution	1.58 fps
ADC	14 bit
Image buffer (RAM)	32 MByte
<b>Output</b>	
Bit depth	12 bit
Mono modes	Mono8, Mono12, Mono12Packed
<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 to 35 °C
Power consumption (@12 V)	max. <36 W, typ. <18 W
Mass	1320 g
Body dimensions (L × W × H in mm)	132.8 × 90 × 99 (including connectors)
Regulations	CE (2004/108/EC), RoHS (2011/65/EU), WEEE (2002/96/EC), FCC Class B



## Features

- Gain (6 dB)

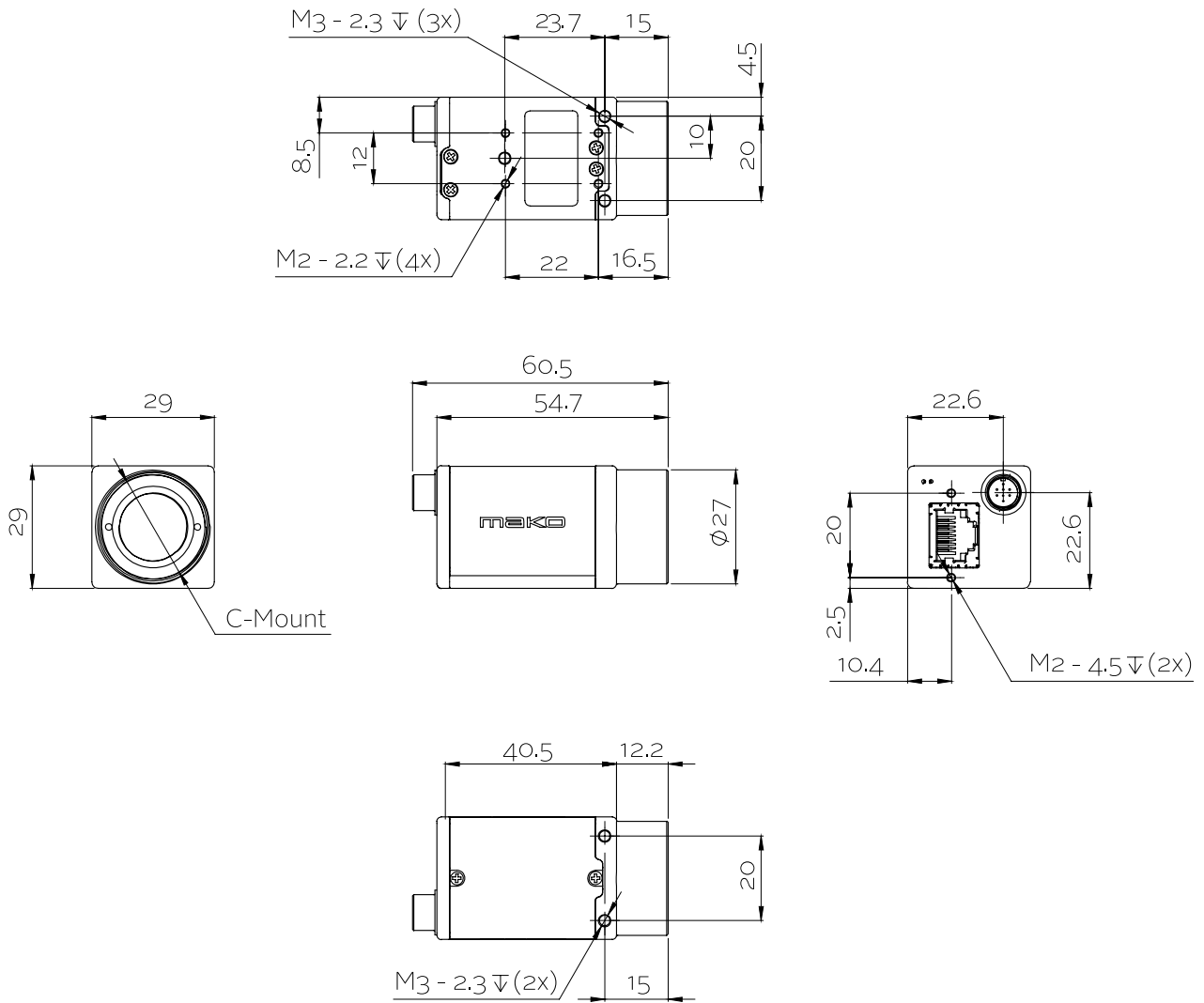


- Exposure time 1394  $\mu$ s to  $\approx$  71 minutes
- Binning (1x2, 2x1, 2x2)
- Gamma (0.45, 0.5, 0.7)
- Three look-up tables (LUTs)
- Five storable user sets

#### **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



## Bigeye G

### G-132 Cool

- Exposure time up to more than 4200 s
- Excellent quantum efficiency

## Description

Peltier cooled CCD camera with Sony ICX285, -20 °C

The Bigeye G-132B Cool is a low noise CCD camera. It is distinguished by an outstandingly low dark current and an excellent quantum efficiency. The Bigeye G-132B Cool is designed to produce a superior image quality even at very long exposure times.

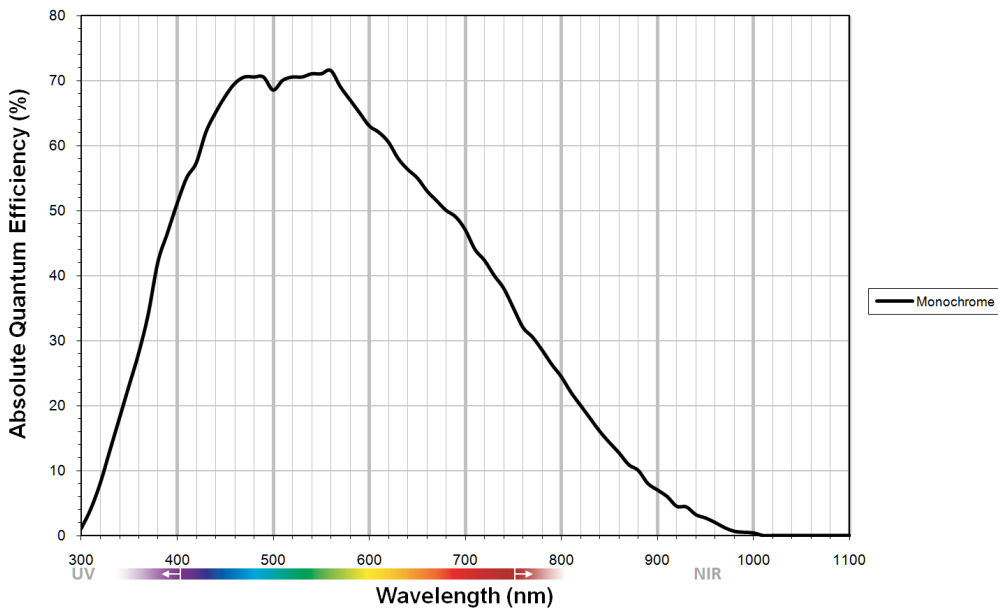
Benefits and features:

- GigE Vision, Multi-functional, user-configurable I/O interface
- Sony ICX285 EXview HAD CCD sensor, 1280 x 1024 pixels, quantum efficiency @530 nm: 72%, exposure time up to 4292 s ( $\approx$  71 min)
- Reliable operation under rough industrial conditions

## Specifications

Bigeye G	G-132 Cool
Interface	IEEE 802.3 1000baseT
Resolution	1280 (H) × 1024 (V)
Sensor	Sony ICX285
Sensor type	CCD Progressive
Cell size	6.45 $\mu$ m x 6.45 $\mu$ m
Cooling temperature	-20 °C
Temporal dark noise	8 e-
Dark current	0.003 e-/pixel/s
Saturation capacity	13000 e-
Dynamic range	65 dB
Lens mount	C-Mount, F-Mount

<b>Bigeye G</b>	<b>G-132 Cool</b>
Max frame rate at full resolution	12.5 fps
ADC	12 bit
Image buffer (RAM)	32 MByte
<b>Output</b>	
Bit depth	12 bit
Mono modes	Mono8, Mono12, Mono12Packed
<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 to +35 °C
Power consumption (@12 V)	max. <36 W, typ. <18 W
Mass	1270 g
Body dimensions (L × W × H in mm)	100.8 × 90 × 99 (including connectors)
Regulations	CE (2004/108/EC), RoHS (2011/65/EU), WEEE (2002/96/EC), FCC Class B



## Features

- Gain (6 dB)
- Binning (2x1, 2x2)
- Exposure time 80077  $\mu$ s to 4294 seconds ( $\approx$  71 min)



- Three look-up tables (LUTs)
- Gamma (0.45, 0.5, 0.7)
- Five storable user sets

#### **Easy integration**

The Bigeye G-132B 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.

## Applications

The Bigeye G-132B Cool is a prime quality CCD camera with dual level Peltier cooling. It is best suited for applications with the highest demands on image quality, especially under low-light conditions.

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





## Bigeye G

### G-132 NIR Cool

- Sensitive in both the visible and NIR spectrum
- Exposure time up to more than 4200 s

## Description

NIR optimized camera with Sony ICX285, Peltier cooling -20 °C

The Bigeye G-132B NIR Cool is distinguished by high performance both in the visible spectrum and the NIR spectrum; its Sony ICX285 CCD sensor is modified for enhanced NIR sensitivity.

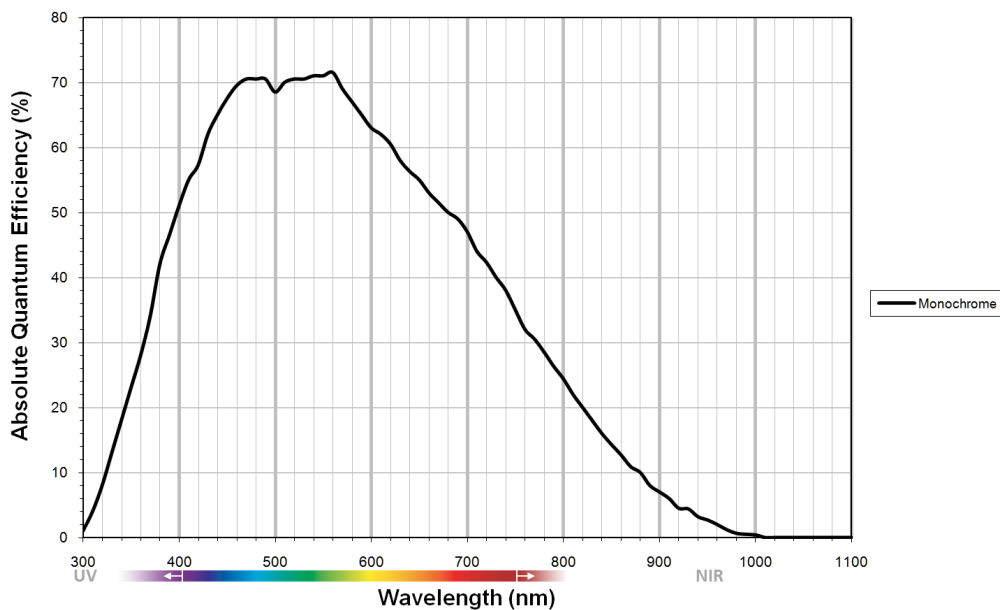
Benefits and features:

- GigE Vision, multi-functional, user-configurable I/O interface
- Sony ICX285 EXview HAD CCD sensor, 1280 x 1024 pixels, extended sensitivity ranging from 350 nm to 1000 nm, peltier cooling, stabilized to -20 °C, exposure time up to 4292 s (≈ 71 min)
- Reliable operation under rough industrial conditions

## Specifications

Bigeye G	G-132 NIR Cool
Interface	IEEE 802.3 1000baseT
Resolution	1280 (H) × 1024 (V)
Sensor	Sony ICX285
Sensor type	CCD Progressive
Cell size	6.45 μm x 6.45 μm
Cooling temperature	-20 °C
Temporal dark noise	tdb
Dark current	tdb
Saturation capacity	tdb
Dynamic range	tdb
Lens mount	C-Mount

<b>Bigeye G</b>	<b>G-132 NIR Cool</b>
Max frame rate at full resolution	12.5 fps
ADC	12 bit
Image buffer (RAM)	32 MByte
<b>Output</b>	
Bit depth	12 bit
Mono modes	Mono8, Mono12, Mono12Packed
<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 to 35 °C
Power consumption (@12 V)	max. <36 W, typ. <18 W
Mass	1270 g
Body dimensions (L × W × H in mm)	100.8 × 90 × 99 (including connectors)
Regulations	CE (2004/108/EC), RoHS (2011/65/EU), WEEE (2002/96/EC), FCC Class B



## Features

- Gain (6 dB)
- Exposure time 80077  $\mu$ s to 4294 seconds ( $\approx$  71 min)
- Binning (2x1, 2x2)



- Three look-up tables (LUTs)
- Gamma (0.45, 0.5, 0.7)
- Five storable user sets

#### **Easy integration**

The Bigeye G-132 NIR 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.

## Applications

The Bigeye G-132B NIR Cool is a prime quality CCD camera that is sensitive both in the visible and the NIR spectrum. It is optimal for applications requiring 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
- Solar cell/wafer inspection



# Bigeye G

## G-283 Cool

- Specially made for scientific applications
- Exposure time up to more than 4200 s

## Description

### Cooled CCD camera with Sony ICX674

The Bigeye G-283B Cool is a Peltier cooled low-noise camera for the highest demands. It is made for scientific applications with low light conditions requiring long exposure times. The camera features an excellent dynamic range and an outstanding signal-to-noise ratio.

Benefits and features:

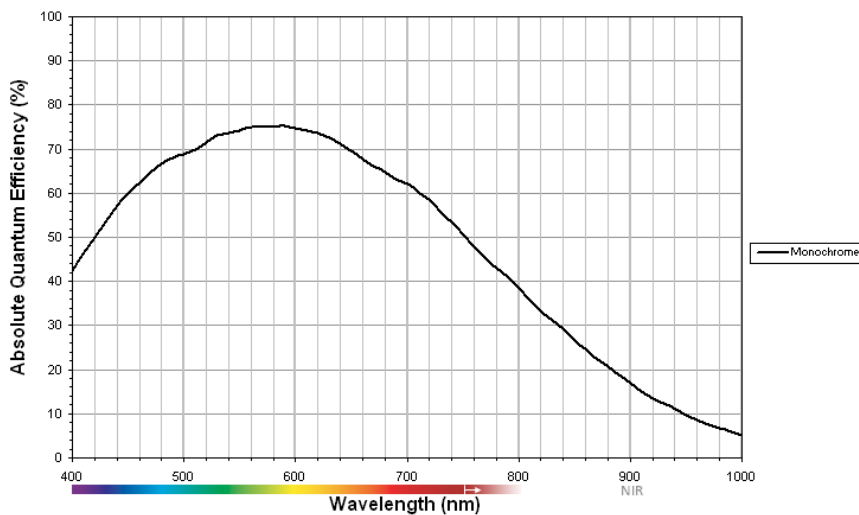
- GigE Vision, multi-functional, user-configurable I/O interface
- Sony ICX674 EXview HAD II sensor, 1928 x 1452 pixels, quantum efficiency @530 nm: 73%, exposure time up to 4292 s ( $\approx$  71 min)
- Reliable operation under rough industrial conditions

## Specifications

Bigeye G	G-283 Cool
Interface	IEEE 802.3 1000baseT
Resolution	1928 (H) $\times$ 1452 (V)
Sensor	Sony ICX674
Sensor type	CCD Progressive
Cell size	4.54 $\mu$ m $\times$ 4.54 $\mu$ m
Cooling temperature	-10 $^{\circ}$ C
Temporal dark noise	8 e <sup>-</sup>
Dark current	0.020 e <sup>-</sup> /pixel/s
Saturation capacity	18000 e <sup>-</sup>
Dynamic range	67 dB

<b>Bigeye G</b>	<b>G-283 Cool</b>
Lens mount	C-Mount
Max frame rate at full resolution	5.7 fps
ADC	14 bit
Image buffer (RAM)	32 MByte
<b>Output</b>	
Bit depth	14 bit
Mono modes	Mono8, 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 to 35 °C
Power consumption (@12 V)	max. <36 W, typ. <18 W
Mass	1250 g
Body dimensions (L × W × H in mm)	100.8 × 90 × 99 (including connectors)
Regulations	CE (2004/108/EC), RoHS (2011/65/EU), WEEE (2002/96/EC), FCC Class B

**Spectral sensitivity**



## Features

- Gain (6 dB)



- Exposure time 9083  $\mu$ s to 4294 seconds ( $\approx$  71 min)
- Binning (2x1, 2x2)
- Gamma 0.45, 0.5, 0.7
- Three look-up tables (LUTs)
- Five storable user sets

### **Easy integration**

The Bigeye G-283B 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.

## Applications

The Bigeye G-283B Cool is a low noise CCD camera with an excellent signal/noise ratio. It is best suited for applications with the highest demands on image quality. Thanks to the Peltier cooling, it 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



# 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.

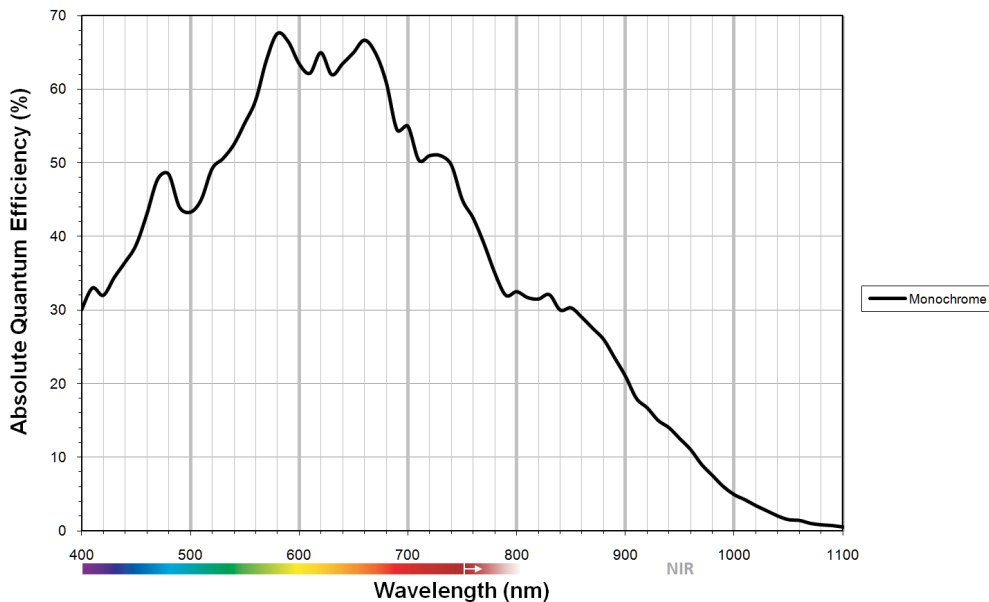
Benefits and features:

- 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 (H) × 2048 (V)
Sensor	OnSemi KAF-6303E
Sensor type	CCD Progressive
Cell size	9.0 $\mu$ m × 9.0 $\mu$ m
Cooling temperature	+5 °C
Temporal dark noise	21 e-
Dark current	0.008 e-/pixel/s
Saturation capacity	56000 e-

<b>Bigeye G</b>	<b>G-629 Cool</b>
Dynamic range	69 dB
Lens mount	F-Mount
Max frame rate at full resolution	0.67 fps
ADC	14 bit
Image buffer (RAM)	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 to 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 (including connectors)
Regulations	CE (2004/108/EC), RoHS (2011/65/EU), WEEE (2002/96/EC), 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 Allied Vision'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



## Bigeye G G-629 NIR Cool

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

### Description

#### Cooled 6 Megapixel camera, visible and NIR spectrum

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.

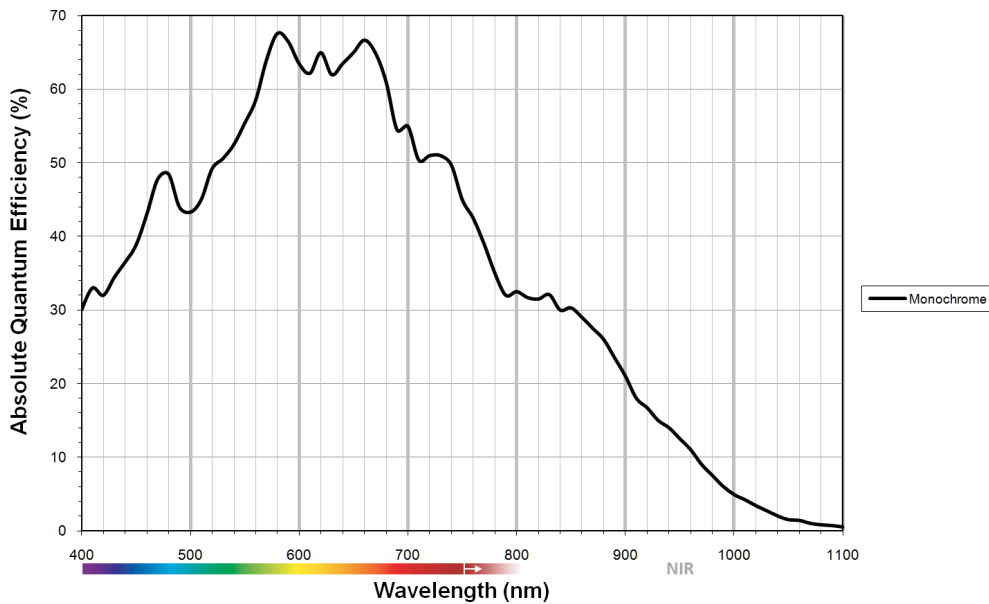
#### Benefits and features

- 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 NIR Cool
Interface	IEEE 802.3 1000baseT
Resolution	3072 (H) × 2048 (V)
Sensor	OnSemi KAF-6303E
Sensor type	CCD Progressive
Cell size	9.0 $\mu$ m x 9.0 $\mu$ m
Cooling temperature	+5 °C
Temporal dark noise	tbd
Dark current	tbd
Saturation capacity	tbd

<b>Bigeye G</b>	<b>G-629 NIR Cool</b>
Dynamic range	tbd
Lens mount	F-Mount
Max frame rate at full resolution	0.67 fps
ADC	14 bit
Image buffer (RAM)	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 to +35 °C
Power consumption (@12 V)	max. <37.2 W, typ. <18 W
Mass	1460 g
Body dimensions (L × W × H in mm)	131.55 × 90 × 109 (including connectors)
Regulations	CE (2004/108/EC), RoHS (2011/65/EU), WEEE (2002/96/EC), 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 Allied Vision'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