



# Bigeye P-132 Solar

**GiGE** VISION **Camera Link**

## Description

### Solar cell inspection camera, peltier cooling -20°C

The Bigeye P-132B Solar Cool is optimized for solar cell inspection. Its ICX285 CCD sensor is modified for enhanced NIR sensitivity. The camera is distinguished by high performance both in the visible spectrum, and in the typical electroluminescence spectrum of solar wafers. The compact, robust metal housing has a hermetically sealed vacuum section. It ensures maintenance-free operation for many years even under rough conditions.

- ICX285 ExView HAD CCD sensor, enhanced NIR sensitivity
- Peltier cooling to -20° Celsius absolute
- 12.5 fps at max. resolution, 25 fps with binning
- Exposure time 100 µs sec to 1000 seconds
- Superior signal/noise ratio, optimized for solar cell inspection
- Options:
  - GigE (standard) or Camera Link interface

### Models:

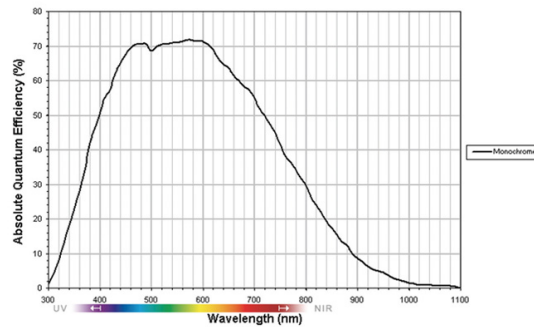
Bigeye P-132B Solar Cool (GigE)

Bigeye CL-132B Solar Cool (Camera Link)

## Specifications

<b>Bigeye</b>		<b>P-132 Solar</b>	
<b>Interface</b>		IEEE 802.3 1000baseT	
<b>Resolution</b>		1280 x 1024	
<b>Sensor</b>		Sony ICX285	
<b>Sensor type</b>		CCD Progressive	
<b>Sensor size</b>		Type 2/3	
<b>Cell size</b>		6.45 µm	
<b>Lens mount</b>		C-Mount	
<b>Max frame rate at full resolution</b>		12 fps	
<b>A/D</b>		14 bit	
		<b>Output</b>	
<b>Bit depth</b>		12 bit	
		<b>Operating conditions/Dimensions</b>	
<b>Operating temperature</b>		0 °C ... 35 °C	
<b>Power requirements (DC)</b>		12 V	
<b>Power consumption (12 V)</b>		33.6 W	
<b>Mass</b>		1410 g	
<b>Body Dimensions (L x W x H in mm)</b>		111 x 90 x 99 incl. connectors, w/o lens	
<b>Regulations</b>		CE, RoHS (2002/95/EC)	

[Download technical drawing \(click here\)](#)



## Smart features

- Binning (2 x 2)
- Gain (6 dB)
- Exposure time 100  $\mu$ s to 1000 seconds
- 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:

- BCG LUT (brightness, contrast, gamma)
- Auto contrast
- Auto brightness
- Analyze multiple regions (rectangular, circle) within the image
- Real-time statistics and histogram display
- ... and more

## Applications

The Bigeye P-132B Solar Cool is optimized for solar cell inspection. The spectral range of its sensor is optimized for image acquisition both in the visible and in the NIR spectral range of solar cells. For this reason, the complete solar cell inspection can be realized with just one camera.

Solar cell/wafer inspection, visible and NIR:

- Glass inspection
- Assembling inspection
- Electroluminescence
- Micro cracks detection
- Defects
- Efficiency