

# Mako G-032



## Description

### **\*Preliminary\***

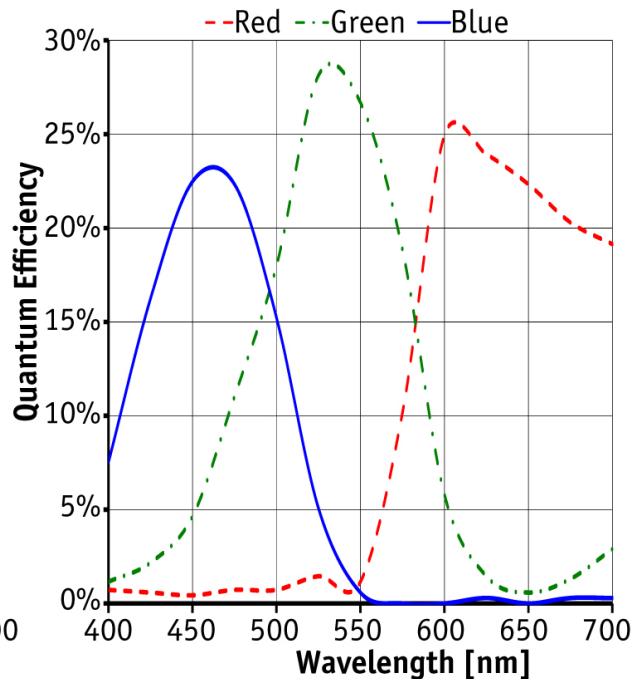
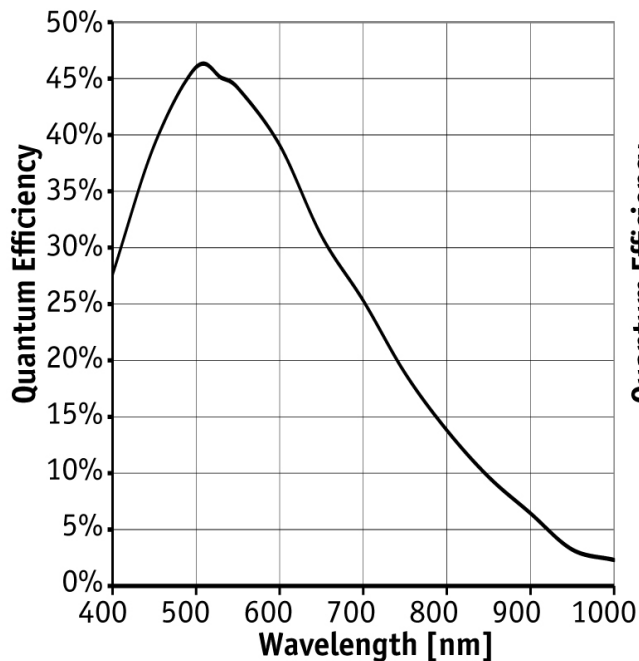
The Mako G-032B/C is an industrial GigE camera with Sony's ICX424 sensor. Mako cameras have the same 29 x 29 mm form factor and the same mounting positions as many analog cameras. All models include PoE, three optocoupled outputs, and a 64 MB image buffer. The image quality profits from the precisely aligned sensors.

- Sony ICX424 (type 1/3), 0.3 Megapixels
- Trigger
  - External trigger event: rising/falling/any edge, level high/low
  - External trigger delay: 0 to tbd seconds in 1  $\mu$ s increments
- Sync modes
  - Trigger ready, trigger input, exposing, readout, imaging, strobe, GPO
- Modular options
  - Various IR cut/pass filters, protection glass
  - CS-Mount
  - Angled head
  - White medical housing

## Specifications

Mako	G-032
<b>Interface</b>	IEEE 802.3 1000baseT
<b>Resolution</b>	658 x 492
<b>Sensor</b>	Sony ICX424
<b>Sensor type</b>	CCD Progressive
<b>Sensor size</b>	Type 1/3
<b>Cell size</b>	7.4 $\mu$ m
<b>Lens mount</b>	C-Mount
<b>Max frame rate at full resolution</b>	102 fps
<b>A/D</b>	14 bit
<b>On-board FIFO</b>	64 MB
	<b>Output</b>
<b>Bit depth</b>	8/12 bit
<b>Mono modes</b>	Mono8, Mono12, Mono12Packed
<b>Color modes YUV</b>	YUV411Packed, YUV422Packet, YUV444Packed
<b>Color modes RGB</b>	RGB8Packed, BGR8Packed
<b>Raw modes</b>	BayerRG8, BayerRG12, BayerRG12Packed
	<b>General purpose inputs/outputs (GPIOs)</b>
<b>Opto-coupled I/Os</b>	1 input, 3 outputs
	<b>Operating conditions/Dimensions</b>
<b>Operating temperature</b>	+ 5 °C ... + 45 °C
<b>Power requirements (DC)</b>	PoE /12 V - 24 V
<b>Body Dimensions (L x W x H in mm)</b>	60.5 x 29 x 29 mm, incl. connectors
<b>Regulations</b>	CE, FCC Class B, RoHS

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



## Smart features

- ROI (Region of Interest Readout)
- Exposure
  - Auto/one push/programmable
  - Exposure time 10  $\mu$ s to 93 s
- White balance
  - Auto/one push/programmable
- On-board debayering
- Hue, saturation
- Gain
  - Auto/one push/programmable
  - Manual gain control: 0 to 30 dB (1 dB/step)
- Look-up table (LUT), gamma correction
- DSP subregion (selectable ROI for auto features)
- Binning (up to 8 x 14, independent x and y binning)
- Stream hold
- StreamBytesPerSecond (easy bandwidth control)
- Event channel
- Chunk data
- 3 storable user sets

## **Applications**

The Mako is an inexpensive industrial GigE camera with a compact form factor. It is suitable for all typical machine vision applications:

- Robotics
- Quality control
- Inspection, surveillance
- Industrial imaging
- Machine vision
- Logistics