

# Mako G

## G-234



- Latest Sony CMOS sensor
- Ultra-compact (60.5 × 29 × 29 mm)
- Affordable
- PoE

## Description

**GigE Vision camera with Sony IMX249 sensor, global shutter; 40 frames per second**

Mako G-234B/G-234C is an industrial GigE camera with Sony's IMX249 CMOS sensor. Mako G cameras have the same compact form factor and the same mounting positions as many analog cameras. All models include Power over Ethernet (PoE), three opto-isolated outputs, and a 64 MB image buffer. The image quality profits from the precisely aligned sensors. #

### Options:

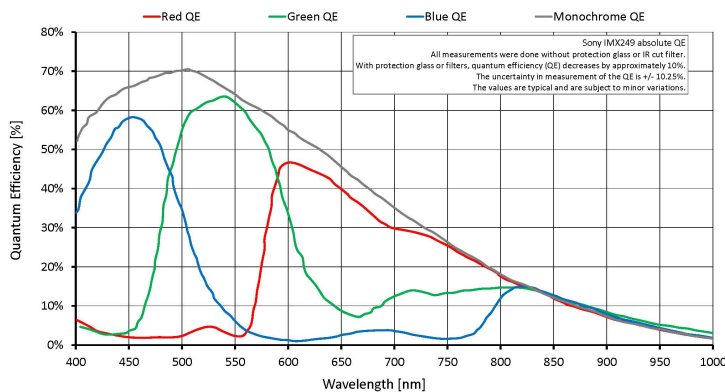
- Various optical filters and lens mounts
- White medical housing

See the [#Modular Concept](#) for lens mount, optical filter, and case design options.

## Specifications

Mako G	G-234
Interface	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE)
Resolution	1936 (H) × 1216 (V)
Sensor	Sony IMX249
Sensor type	CMOS
Cell size	5.86 μm x 5.86 μm
Lens mount	C-Mount
Max frame rate at full resolution	41.2 (10-bit) fps
ADC	12 bit
Image buffer (RAM)	64 MByte
<b>Output</b>	
Bit depth	10/12 bit

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Mono modes	Mono8, Mono12, Mono12Packed
Color modes YUV	YUV411Packed, YUV422Packed, YUV444Packed
Color modes RGB	RGB8Packed, BGR8Packed
Raw modes	BayerRG8, BayerRG12, BayerRG12Packed
<b>General purpose inputs/outputs (GPIOs)</b>	
Opto-isolated I/Os	1 input, 3 outputs
<b>Operating conditions/dimensions</b>	
Operating temperature	+5 °C to +45 °C housing temperature
Power requirements (DC)	12 to 24 VDC; PoE
Power consumption (@12 V)	2.4 W @ 12 VDC; 2.8 W PoE
Mass	80 g
Body dimensions (L × W × H in mm)	60.5 × 29 × 29 (including connectors)
Regulations	CE, RoHS, REACH, WEEE, FCC, ICES



## Features

Image optimization features:

- Auto gain (manual gain control: 0 to 40 dB)
- Auto exposure#
- Auto white balance
- Binning



- Color correction, hue, saturation (color models only)
- Decimation
- Gamma correction
- Look-up tables (LUTs)
- Region of interest (ROI), separate ROI for auto features
- Reverse X/Y

Camera control features:

- Event channel
- Image chunk data
- Storable user sets
- StreamBytesPerSecond (easy bandwidth control)
- StreamHold
- Sync out modes: Trigger ready, input, exposing, readout, imaging, strobe, GPO
- Temperature monitoring
- 10-bit/12-bit sensor readout mode

## Technical drawing





## Applications

Mako G-234B/G-234C 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