

# Mako G

## G-419



- Ultra-compact (60.5 × 29 × 29 mm)
- Affordable
- PoE
- CMOS CMV4000 sensor

## Description

### GigE camera with CMOSIS CMV4000 sensor, global shutter

Mako G-419B/C is an industrial GigE camera with the CMOSIS CMV4000 sensor. Mako cameras have the same compact 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.

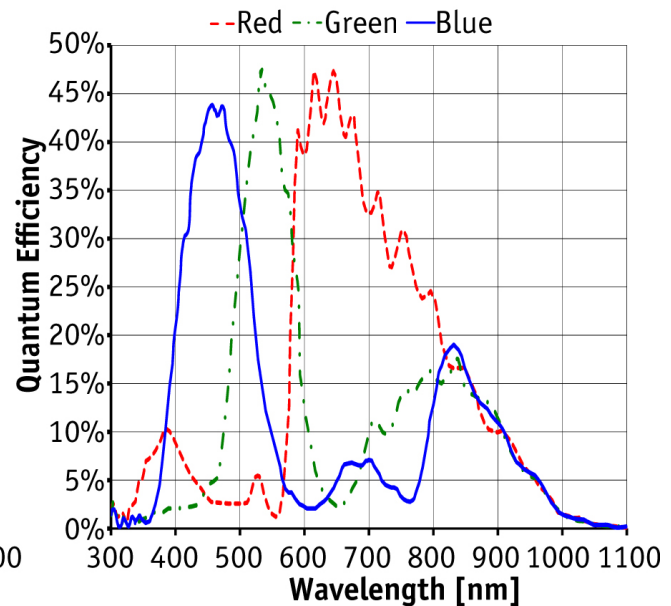
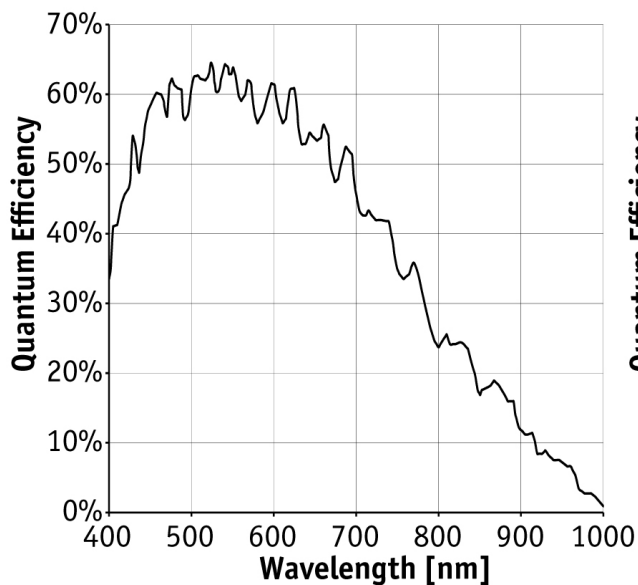
#### Options

- Various IR cut/pass filters, protection glass, various lens mounts
- White medical housing

## Specifications

Mako G	G-419
Interface	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE)
Resolution	2048 × 2048
Sensor	CMOSIS CMV4000
Sensor type	CMOS Progressive
Sensor size	Type 1
Cell size	5.5 μm
Lens mount	C/CS-Mount
Max frame rate at full resolution	26.3 fps
ADC	12 bit
On-board FIFO	64
	<b>Output</b>
Bit depth	8/12 bit

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Mono modes	Mono8, Mono12, Mono12Packed
Color modes YUV	YUV411Packed, YUV422Packed, YUV444Packed
Color modes RGB	RGB8Packed, BGR8Packed, RGBA8Packed, BGRA8Packed
Raw modes	BayerGB8, BayerGB12, BayerGB12Packed
<b>General purpose inputs/outputs (GPIOs)</b>	
TTL I/Os	
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)	PoE /12 V - 24 V
Power consumption (@12 V)	2.7 W (PoE) / 2.3 W (non-PoE)
Mass	80 g
Body dimensions (L × W × H in mm)	60.5 × 29 × 29 mm, incl. connectors
Regulations	CE, FCC Class B, RoHS



## Features

- Camera temperature monitoring
- Column defect masking
- ROI, separate ROI for auto features
- Auto gain (manual gain control: 0 to 26 dB)
- Auto exposure (manual exposure control: 41  $\mu$ s to 153 s)



- Auto white balance
- LUTs (look-up tables)
- Gamma
- Hue, saturation, color correction
- StreamBytesPerSecond (easy bandwidth control)
- Stream hold
- Sync out modes: Trigger ready, input, exposing, readout, imaging, strobe, GPO
- Event channel
- Chunk data
- Storable user sets

## Technical drawing





## Applications

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