

## Mako G G-419B NIR



- CMOSIS NIR enhanced sensor
- Power over Ethernet
- Ultra-compact design
- Affordable

### Description

GigE camera with CMOSIS CMV4000 sensor, NIR optimized, global shutter

Mako G-419B NIR is a GigE machine vision camera that incorporates the high quality Type 1 (16.0 mm diagonal) CMOSIS CMV4000 CMOS NIR enhanced sensor. At full resolution, this camera runs 49.3 frames per second. With a smaller region of interest, higher frame rates are possible. Mako G cameras have an ultra-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 MByte image buffer. The image quality profits from the precisely aligned sensor. By default NIR models ship with no optical filter.

Options:

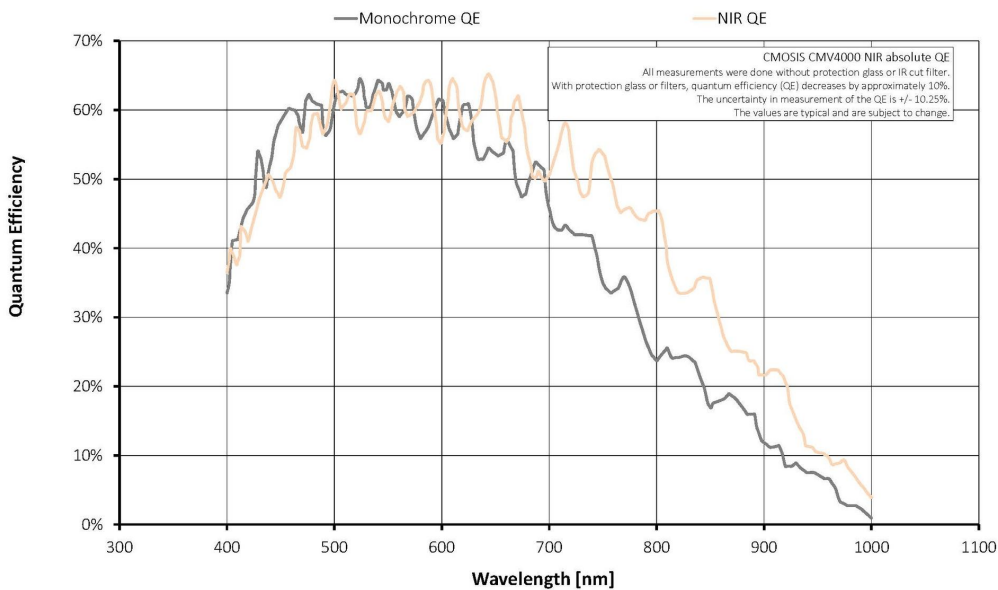
- Various optical filters and lens mount options
- White medical housing

See the Modular Concept for lens mount, optical filter, and case design options.

### Specifications

Mako G	G-419B NIR
Interface	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE)
Resolution	2048 (H) × 2048 (V)
Sensor	CMOSIS CMV4000 NIR
Sensor type	CMOS
Cell size	5.5 μm x 5.5 μm
Lens mount	C-Mount
Max frame rate at full resolution	26.3 fps
ADC	12 bit

Mako G	G-419B NIR
Image buffer (RAM)	64 MByte
<b>Output</b>	
Bit depth	8/12 bit
Mono modes	Mono8, Mono12, Mono12Packed
<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)	2.3 W @ 12 VDC; 2.7 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 26 dB; 1 dB increments)
- Auto exposure (manual exposure control: 41  $\mu$ s to 153 s; 1  $\mu$ s increments)
- Column defect masking
- Gamma correction
- Look-up table (LUT) (1)

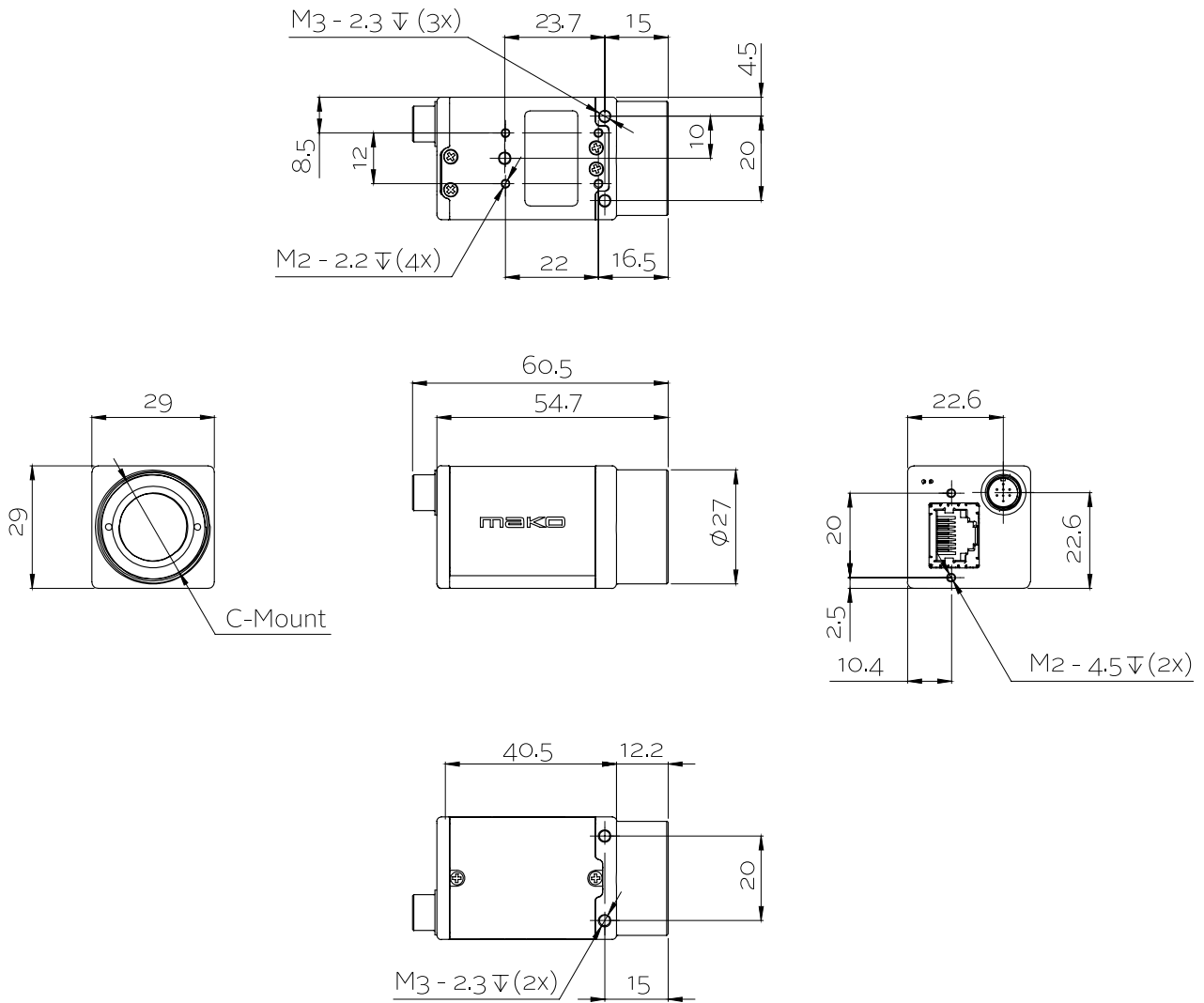


- Piecewise Linear HDR mode
- Region of interest (ROI), separate ROI for auto features

Camera control features:

- Event channel
- Image chunk data
- Storable user sets
- StreamBytesPerSecond (easy bandwidth control)
- Stream hold
- Sync out modes: Trigger ready, input, exposing, readout, imaging, strobe, GPO
- Temperature monitoring (main board only)

## Technical drawing





## Applications

Mako G-419B NIR is suitable for a wide range of applications including:

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