

VQ-4MC-M/C 180 F

Compact 4 Megapixel CMOS Digital Camera with Camera Link Interface



The VQ-4MC-180, a very compact solution for easy system integration, is a new 4 megapixel resolution CMOS camera with the Camera Link interface. The VQ-4MC camera uses the 4 megapixel CMOS image sensor (CMV4000) technology from AMS CMOSIS, and offers up to 180 frames per second at 2048 × 2048 resolution. Featured with high image uniformity and high speed image processing capability in a compact form factor, the VQ-4MC-180 camera is ideal for demanding applications such as PCB and semiconductor inspections.

VIEWWORKS

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Main Features

- 4 Megapixel Resolution (AMS CMOSIS)
- High Speed CMOS Image Sensor
- Global Shutter CMOS Technology
- Compact Form Factor of 29 mm × 29 mm
- Camera Link (Base / Medium / Full / 10 Tap) Interface
- Defect Pixel Correction
- Flat Field Correction

Applications

- Semiconductor Inspection
- PCB Inspection
- Machine Vision Inspection
- Research and Scientific Imaging
- Microscopy and Metrology

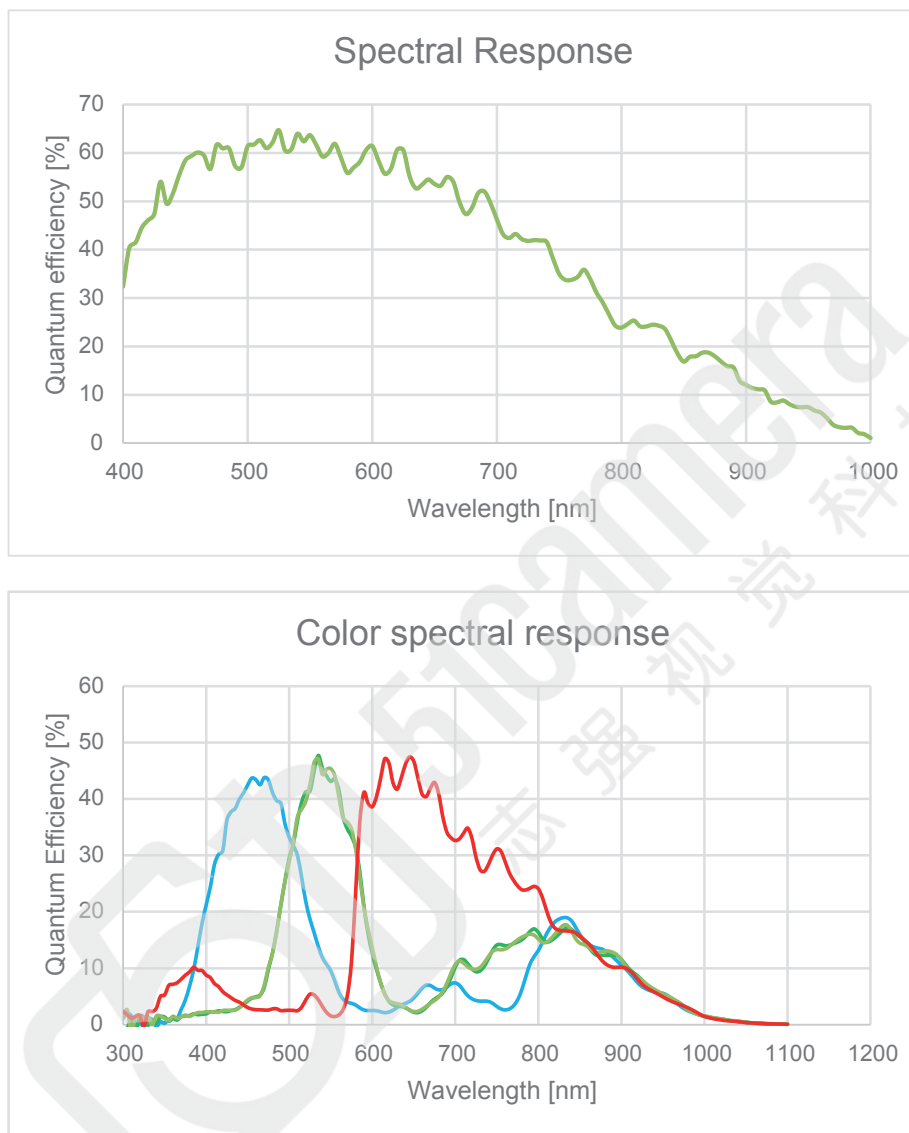
Specifications

Model	VQ-4MC-M/C 180 F
Resolution (H × V)	2048 × 2048
Sensor	AMS CMOSIS CMV 4000
Sensor Size (Optical Format)	11.26 mm × 11.26 mm (1")
Sensor Type	High Speed CMOS Image Sensor
Pixel Size	5.5 μm × 5.5 μm
Interface	Camera Link Base / Medium / Full / 10 Tap
Max. Frame Rate (@ 85 MHz)	2 Tap: 39.6 fps
	4 Tap: 79.1 fps
	8 Tap: 157.8 fps
	10 Tap: 180.0 fps
Exposure Time (1 μs step)	16 μs – 60 s
Pixel Data Format	8 bit (2/4/8/10 Tap), 10 bit (2/4/8 Tap)
Data Output Pixel Clock Speed	85 MHz / 68 MHz
Electronic Shutter	Global Shutter
Exposure Mode	Free-Run, Timed and Trigger Width
Dynamic Range	50 dB
Gain Control	1×, 2×, 3×, 4×
Black Level Control	0 ~ 63 LSB at 10 bit (1 LSB step)
Dimension / Weight	29 mm × 29 mm × 61 mm, 64 g
Temperature	Ambient Operating: -5°C ~ 40°C (Housing: 10°C ~ 50°C), Storage: -40°C ~ 70°C
Vibration / Shock	3G (20 ~ 200 Hz) XYZ / 10G 6 ms
Lens Mount	C-mount, Custom mount available upon request
Power	10 ~ 35 V DC, Typ. 5.0 W
Compliance	CE, FCC, KC
Configuration Software	Configurator

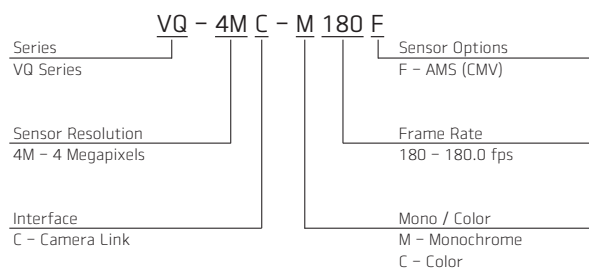
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Quantum Efficiency Curves

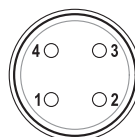


Ordering Scheme



Connector Specification

Power Input & Control I/O



Binder M5 4-pin connector (part # 09-3111-81-04)

Pin	Description
1	DC Power Input
2	General Purpose I/O
3	Camera Power Ground
4	General Purpose I/O Ground

Connector on camera body

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Mechanical Dimensions

Unit: mm

