# VC-50MC

# 50 MEGAPIXEL CMOS DIGITAL CAMERA WITH CAMERA LINK INTERFACE



The VC-50MC, the latest member of the industrial proven VC series, is a 50 megapixel resolution CMOS camera with the Camera Link interface. The VC-50MC uses the latest 50 megapixel CMOS imaging sensor (CMV50000) technology from AMS CMOSIS, and offers up to 17.5 frames per second at 7920 × 6004 resolution. Equipped with the Vieworks' innovative technologies proved by world's top FPD manufacturers, the VC-50MC camera offers not only highly uniformed images but also high speed image processing capabilities. Featured with high quality image uniformity and high resolution, this camera is ideal for demanding applications such as FPD, PCB and semiconductor inspections.



#### Main Features

- \* 50 Megapixel Resolution (AMS CMOSIS)
- \* High Speed Progressive Scan CMOS Imager
- \* Global Shutter CMOS Technology
- \* Camera Link (Base / Medium / Full) Interface
- \* Pixel Defect Correction
- \* Flat Field Correction
- \* DSNU and PRNU Correction

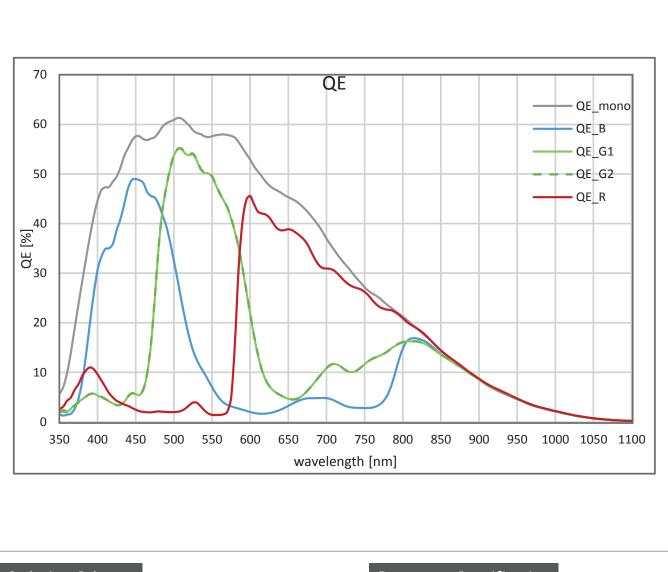
## Applications

- \* Flat Panel Display Inspection
- \* PCB Inspection
- \* Machine Vision Inspection
- \* Microscopy and Metrology

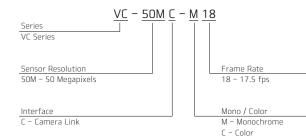
# Specifications

| Model                         | VC-50MC-M/C 18  |
|-------------------------------|---|
| Resolution (H $	imes$ V)      | 7920 × 6004   |
| Sensor                        | AMS CMOSIS CMV 50000  |
| Sensor Size                   | 36.43 mm $	imes$ 27.62 mm (Diagonal: 45.72 mm, Optical Format: 35 mm) |
| Sensor Type                   | High Speed CMOS Image Sensor  |
| Pixel Size                    | 4.6 $\mu$ m $	imes$ 4.6 $\mu$ m                                       |
| Interface                     | Camera Link Base / Medium / Full                                      |
| Max. Frame Rate (@ 85 м⊧)     | 2 Tap: 3.5 fps  |
|                               | 3 Tap: 5.2 fps  |
|                               | 4 Tap: 7.1 fps  |
|                               | 8 Tap: 14.1 fps   |
|                               | 10 Tap: 17.5 fps  |
| Exposure Time (1 µs step)     | 1 µs - 60 s   |
| Pixel Data Format             | 8 bit (2/3/4/8/10 Tap), 10 bit (2/4/8 Tap), 12 bit (2/4 Tap)          |
| Data Output Pixel Clock Speed | 85 MHz / 65 MHz   |
| Electronic Shutter            | Global Shutter  |
| Exposure Mode                 | Free-Run, Timed and Trigger Width                                     |
| Dynamic Range                 | 64 dB   |
| Gain Control                  | 1× ~ 30× (1/1024 step)  |
| Black Level Control           | 0 ~ 256 LSB at 12 bit (1 LSB step)                                    |
| Dimension / Weight            | 68 mm $	imes$ 68 mm $	imes$ 102 mm, 432 g                             |
| Temperature                   | Operating: −5°C ~ 40°C, Storage: −40°C ~ 70°C                         |
| Vibration / Shock             | 3G (20 ~ 200 Hz) XYZ / 10G 6 ms                                       |
| Lens Mount                    | F-mount, Custom mount available upon request                          |
| Power                         | 10 ~ 24 V DC, Typ. 9.0 W  |
| Compliance                    | CE, FCC, KC   |
| Configuration Software        | Configurator  |
|                               |   |

## Quantum Efficiency Curves



### Ordering Scheme



## Connector Specification

#### Power

Control



1 2 3: +12V DC, 4 5 6: GND (HR10A-7R-6PB)

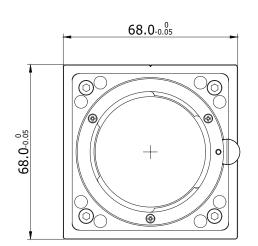


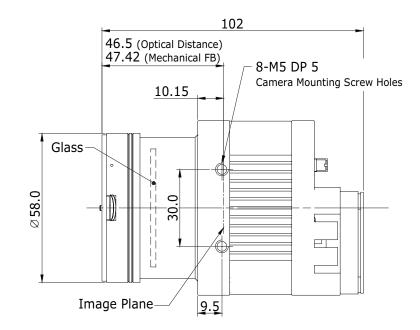
1: Trigger IN+, 2: Trigger IN-3: Strobe Out-(GND), 4: Strobe OUT+ (HR10A-7R-4S)

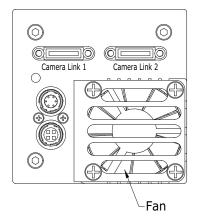
Connectors on camera body

### **Mechanical Dimensions**

Unit: mm









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