

# VP-103MC-M/C7I

High Resolution Thermoelectric Peltier Cooled Camera



The VP-103MC, the latest model of the industrial proven VP series, is the 103-megapixel resolution CMOS camera available with the Camera Link interface. The camera is based on the latest CMOS image sensor technology (GMAX32103) from Gpixel.

The VP-103MC offers up to 7.6 frames per second at  $11,264 \times 9,200$  resolution. These cameras use thermo-electric Peltier (TEC) cooling technology developed for and used by many demanding medical market customers. The TEC maintains the operating temperature of the CMOS image sensor at up to 15 degrees below ambient temperature. These cameras provide a stable operating condition and the ability to expose for a long period of time to increase camera sensitivity.

Featured with the stable operating capability and high resolution, these cameras are ideal for demanding applications such as FPD, PCB and semiconductor inspections.

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## Main Features

- Thermoelectric Peltier Cooled – 15°C below
- 103 Megapixel Resolution
- Camera Link Full Interface
- Global Shutter
- DSNU and PRNU Correction
- Flat Field Correction with Sequencer Control
- Hot Pixel Correction
- Dynamic Defective Pixel Correction

## Applications

- Flat Panel Display Inspection
- Electronics Inspection
- Semiconductor Inspection
- Document / Film Scanning

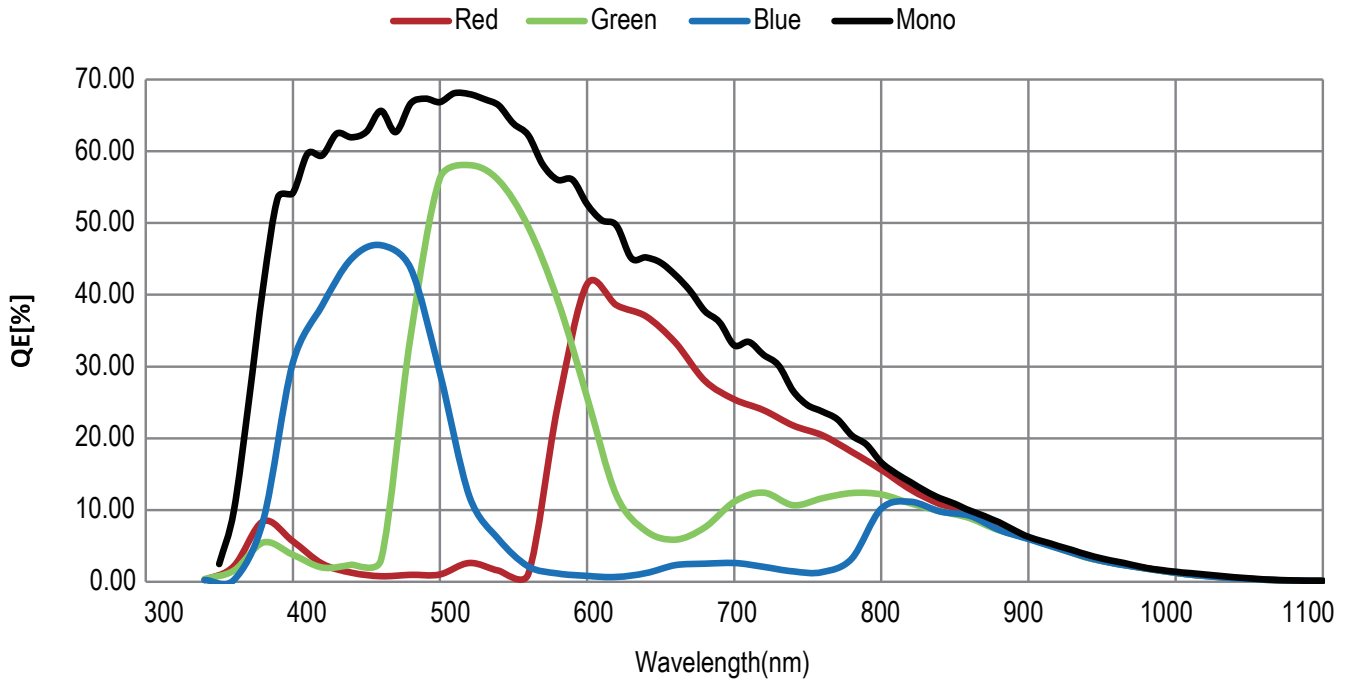
## Specifications

|                           |             |  |
|---------------------------|-------------|--|
| Model                     |             | VP-103MC-M/C7I   |
| Resolution (H × V)        |             | 11,264 × 9,200   |
| Sensor                    |             | GMAX32103  |
| Sensor Size (Diagonal)    |             | 36.1 mm × 29.4 mm (Photo Sensitive Area)                                 |
| Pixel Size                |             | 3.2 μm × 3.2 μm  |
| Interface                 |             | Camera Link Base/Medium/Full/10-taps, 2 channels of 26-pin SDR Connector |
| Max. Frame Rate (8 bit)   | 4-taps      | 3.0 fps  |
|                           | 8-taps      | 6.1 fps  |
|                           | 10-taps     | 7.6 fps  |
| Exposure Time (1 μs step) |             | 1 μs – 60 s (1 μs Step)  |
| Partial Scan (Max. Speed) |             | 224.8 fps  |
| Binning                   |             | ×1, ×2, ×4(Monochrome), Horizontal and Vertical Independent              |
| Pixel Data                | Mono        | 8/10/12 bit  |
| Format                    | Color       | GB Bayer 8/10/12 bit   |
| Electronic Shutter        |             | Global Shutter   |
| Exposure Mode             |             | Timed, TriggerWidth  |
| Dynamic Range             |             | Typical 66 dB at 12 bit  |
| Cooling Method            |             | Thermoelectric Peltier Cooling   |
| Cooling Performance       |             | 15±2°C below Ambient Temperature – Standard Cooling with a Fan           |
| Gain Control              | Analog      | 1.4× ~ 5.2×  |
|                           | Digital     | 1.0× ~ 32.0×   |
| Black Level Control       |             | 0 – 255 LSB at 12 bit  |
| Dimension / Weight        |             | 100 mm × 100 mm × 120 mm, 1.55 kg (with M72-mount)                       |
| Temperature               |             | Operating: 0°C ~ 40°C, Storage: -40°C ~ 70°C                             |
| Trigger Synchronization   |             | Free-Run, Hardware Trigger, Software Trigger, UserOutput0, CXP, Timer    |
| Lens Mount                |             | M72-mount  |
| Power                     | External    | 11 ~ 24 VDC  |
|                           | Dissipation | Typical 28 W, Maximum 30 W   |
| Compliance                |             | CE, FCC, KC  |

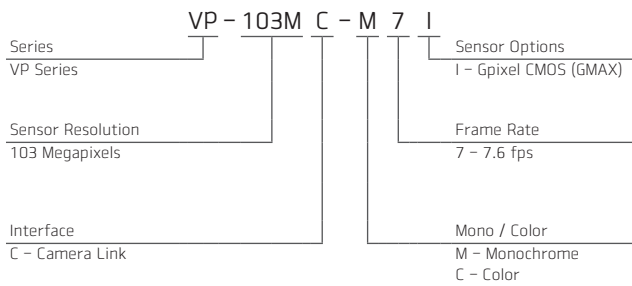
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## Relative Sensitivity Curves



## Ordering Scheme



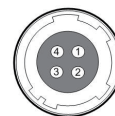
## Connector Specification

Power



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

Control



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

Connectors on Camera Body

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## Mechanical Dimensions

Unit: mm

