



vieworks

# VH-310G / VH-2MG / VH-4MG / VH-5MG /

VGA/2M/4M/5M MEGA PIXEL RESOLUTION, HIGH SPEED,  
GigE INTERFACE, PROGRAMMABLE DIGITAL CAMERA



VH series is a Progressive Scan type high-resolution industrial Area Scan camera. All functions can be programmed and updated in the field without any disassembling process. The variety of resolutions from VGA to 5 megapixels provide flexibility and makes the VH series suitable for a wide range of applications such as Machine Vision, Research, Scientific and Remote Sensing applications.

## Main Features

- \*GigE Interface
- \*Kodak & Sony Progressive Scan IT CCD Imager
- \*8/10/12 bit Data Output, User Defined LUT
- \*Flat Field Correction
- \*Field Upgradeable Firmware
- \*Defective Pixel Compensation
- \*Available in Color or Monochrome

## Applications

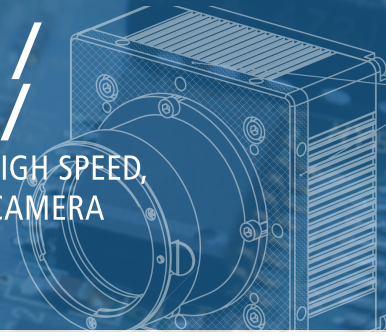
- \*Flat Panel Display Inspection
- \*Research and Scientific Imaging
- \*Machine Vision Inspections
- \*Microscopy and Metrology
- \*Remote Sensing and Scanning

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# VH-310G / VH-5MG / VH-4MG / VH-5MG /

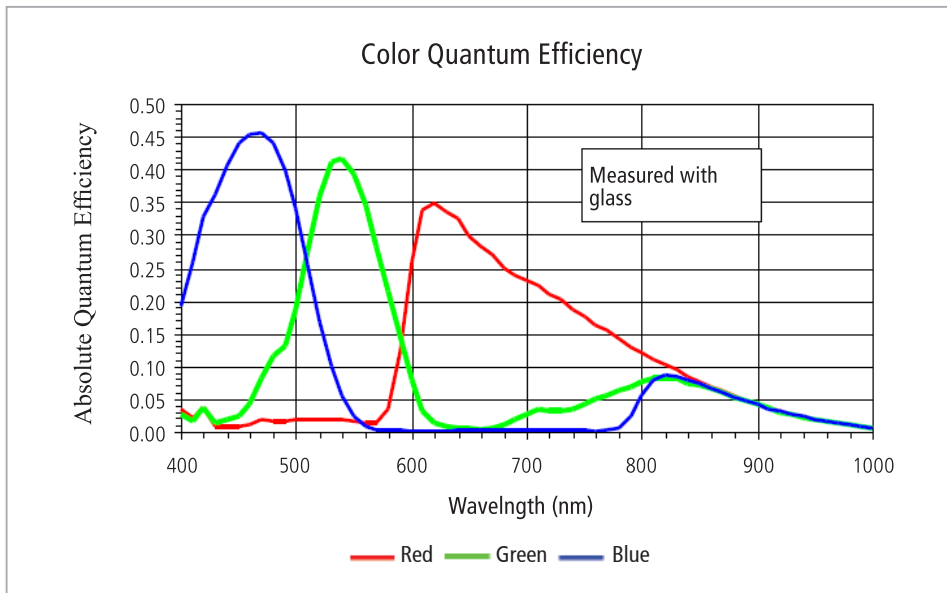
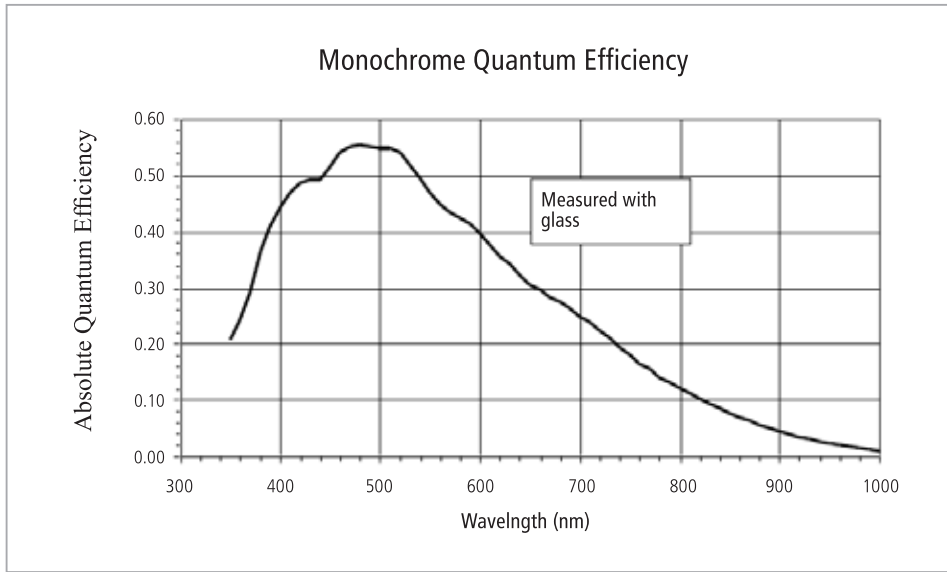
VGA/2M/4M/5M MEGA PIXEL RESOLUTION, HIGH SPEED,  
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## Specifications

Model	VH-310G-M72/C72	VH-310G-M264/C264	VH-2MG	VH-4MG	VH-5MG
Active Image	640(H) × 480(V)	640(H) × 480(V)	1600(H) × 1200(V)	2048(H) × 2048(V)	2448(H) × 2056(V)
Pixel Clock	30 MHz	50 MHz			60 MHz
Pixel size	9.0 μm × 9.0 μm	7.4 μm × 7.4 μm			3.45 μm × 3.45 μm
Video Output	8/10/12 bits, 1Tap	8/10/12 bits, 1 or 2 Tap			8/10/12 bits, 2 Tap
Camera Interface	GigE				
Max. Frame Rate	72 fps (single)	264 fps (dual) / 140 fps (single)	42 fps (dual) / 23 fps (single)	20 fps (dual) / 11 fps (single)	16 fps (dual)
Exposure Time	1/40000 sec ~7 sec (10 us step)	1/40000 sec ~7 sec (10 us step)	1/20000 sec ~7 sec (10 us step)	1/14000 sec ~7 sec (10 us step)	1/14000 sec ~7 sec (10 us step)
Partial Scan	215 fps at 100 Lines (max. speed)	930 fps at 100 Lines (max. speed)	136 fps at 150 Lines (max. speed)	73 fps at 256 Lines (max. speed)	52 fps at 256 Lines (max. speed)
Gamma Correction	User defined LUT (Look Up Table)				
Black Offset	Adjustable (0~127 LSB at 12 bit , 256 step)				
Video Gain	Analog: 0 ~ 32 dB, 900 step				
Trigger Mode	Mode( free run , standard, fast, double, overlap ) Programmable exposure time, Programmable trigger polarity				
External Trigger	External, 3.3V - 5.0V, 10mA, optically isolated				
Dynamic Range	> 60 dB		> 62 dB		>54 dB
Lens Mount	C-mount		C-mount, F-mount optional		
Power	10~14V DC , MAX. 8W				
Environmental	-5°C~+40°C, storage :-30°C~65°C				
Mechanical	49mmX49mmx61.4mm, 210g (w/ C-mount adaptor)		68mmX68mmx62.1mm, 455g (w/ C-mount adaptor) 68mmX68mmx91.1mm, 495g (w/ F-mount adaptor)		

# Quantum Efficiency Curves




## Ordering Scheme

<b>VH - 5MG- M16B0</b>	
<b>Series</b>	<b>Sensor Option</b>
VH series	A0 - Kodak B0 - Sony
<b>Sensor Resolution</b>	<b>Frame Rate</b>
310 - VGA	16 - 16 fps
2M - 2 Mega-pixels	20 - 20 fps
4M - 4 Mega-pixels	42 - 42 fps
5M - 5 Mega-pixels	264 - 264 fps
<b>Interface</b>	<b>Mono / Color</b>
C - Camera Link	M - Monochrome C - Color


## Connector Specifications

**Power**



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

**Control**

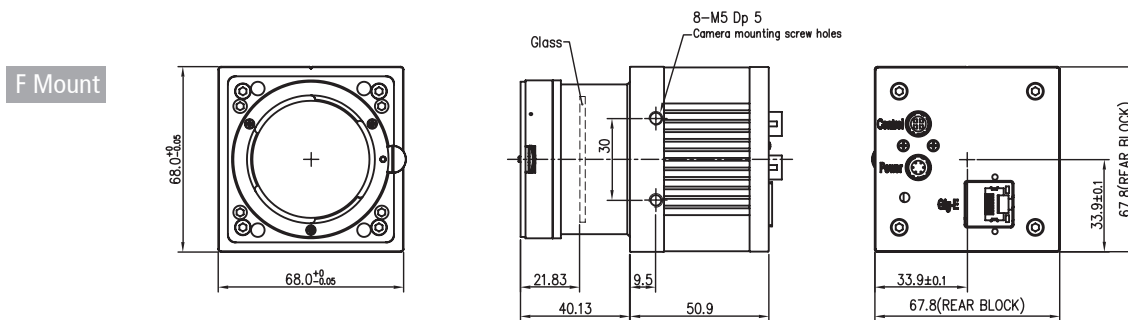
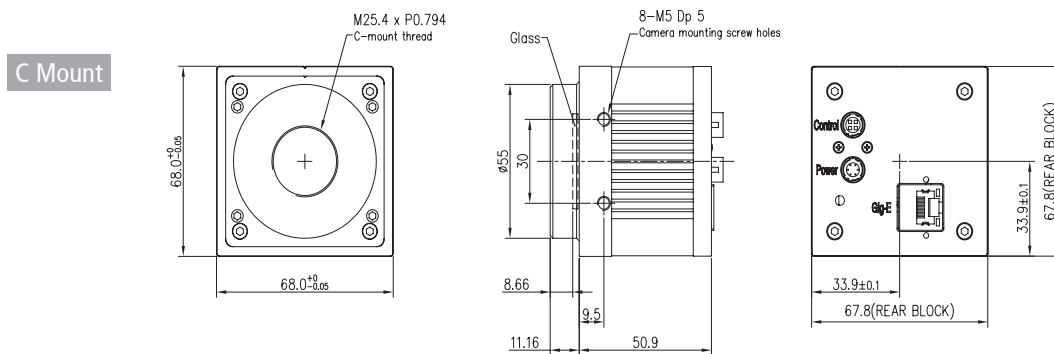
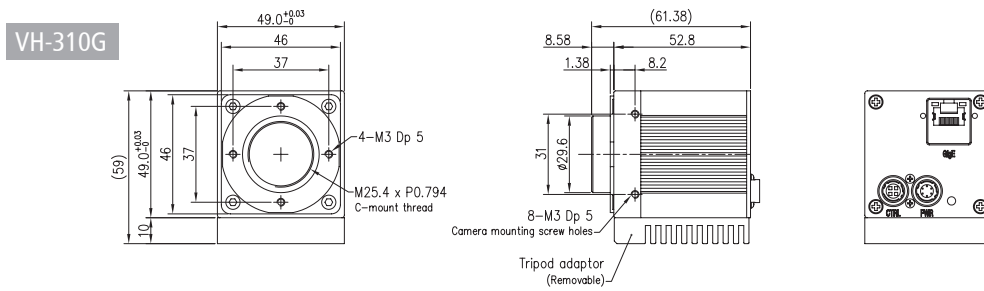


1 : Trigger IN+, 2 : Trigger IN-  
3 : Strobe OUT- (GND), 4 : Strobe OUT+ (HR10A-7R-4SB)

Connectors on camera body

# Mechanical Dimensions

Unit : mm



For more information please contact local distributor or visit our website at [www.viewworks.com](http://www.viewworks.com)

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ISO-9001, ISO-13485

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