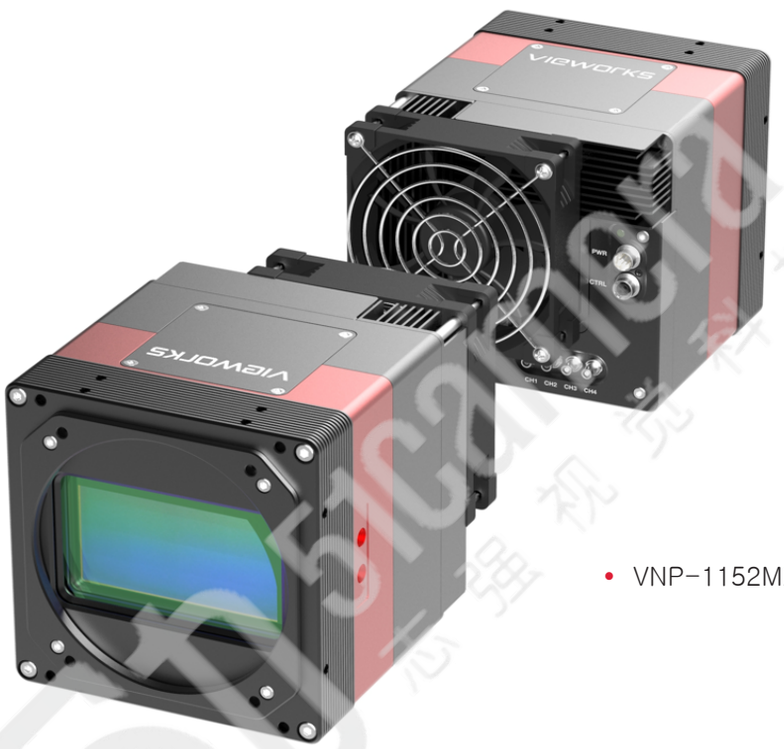
VNP-576/864/1152MX2 Series

576/864/1152 Megapixel Pixel Shifting Camera Equipped with Thermoelectric Peltier



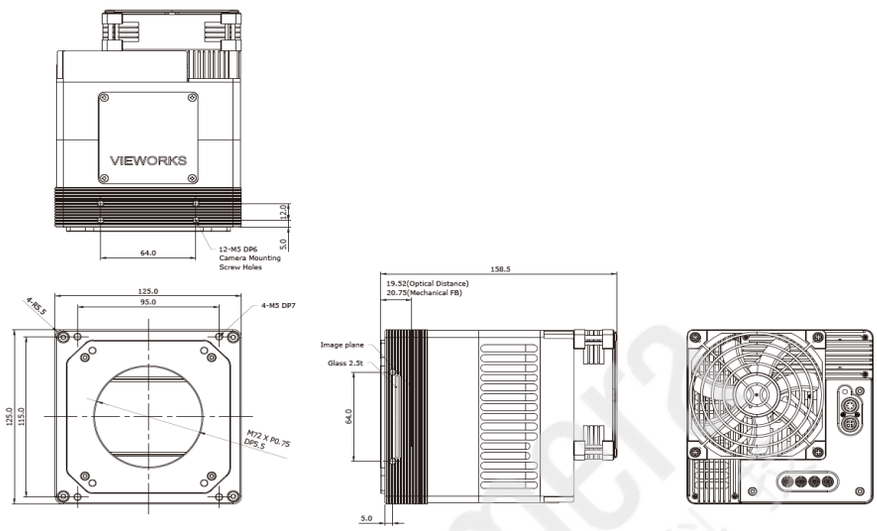
• VNP-1152MX2-M15K Image

CoaXPress®

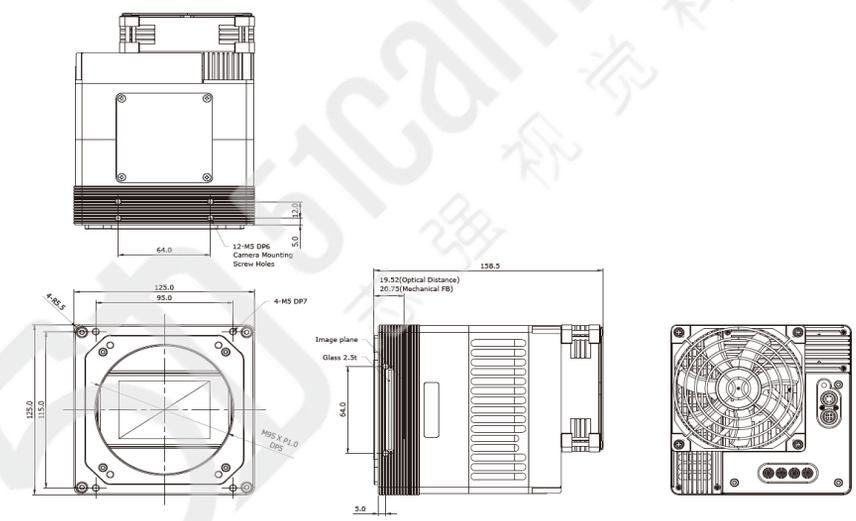
The VNP-576/864/1152MX2, pixel shifting cameras equipped with Thermo-electric Peltier (TEC) cooled, are designed not only for applications where extremely high resolution is required but also where high quality image is essential. The TEC maintains the operating temperature of the image sensor at up to 10±2℃ below ambient temperature to reduce noise significantly. Pixel shifting technology based on a precise piezoelectric stage allows image captures as high as 576/864/1152 million pixels at 3.75 fps.
The CoaXPress 2.0 interface adopted by this camera supports transmitting image data at up to 50 Gbps using four coaxial cables. This new camera delivers unique and unparalleled performance in the most demanding applications such as FPD, PCB and semiconductor inspections.

MechanicalDimensions

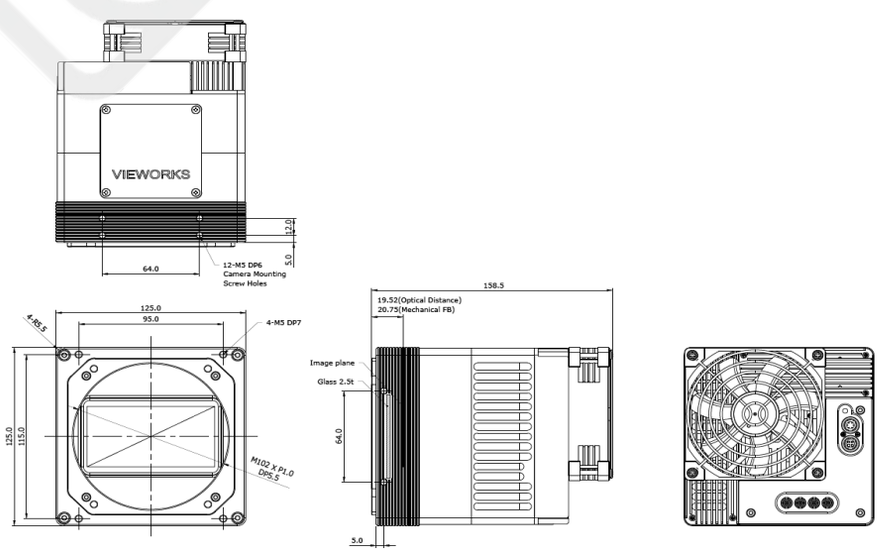
- VNP-576MX2 (unit:mm)



- VNP-864MX2 (unit:mm)



- VNP-1152MX2 (unit:mm)



41-3, Burim-ro 170 beon-gil, Dongan-gu, Anyang-si, Gyeonggi-do, 14055 Republic of Korea
Tel +82-70-7011-6161 Fax +82-31-386-8631 E-mail vision@vieworks.com Web vision.vieworks.com

VNP-576/864/1152MX2 Series

576/864/1152 Megapixel Pixel Shifting Camera Equipped with Thermoelectric Peltier

Main Features

- Nano Stage Pixel Shifting Mechanism
- Thermoelectric Peltier Cooled - 10±2℃ below
- CoaXPress 2.0 Interface up to 15 fps at 50 Gbps using 4 Channels
- Global Shutter CMOS Technology
- DSNU and PRNU Correction
- Pixel by Pixel PRNU Correction
- Flat Field Correction with Sequencer Control
- Defective Pixel Correction

Applications

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

Specifications

Model		VNP-576MX2-M15K	VNP-864MX2-M/C15K	VNP-1152MX2-M15K
Resolution (H×V)	1× (1 Shot)	12000 × 12000	17984 × 12000	24000 × 12000
Sensor		Vieworks Sensor (SCG 144M)	Vieworks Sensor (SCG 216M-M/C)	Vieworks Sensor (SCG 288M)
Sensor Size (Diagonal)		42.0 ㎜ × 42.0 ㎜	63.0 ㎜ × 42.0 ㎜	84.0 ㎜ × 42.0 ㎜
Pixel Size		3.5 ㎛ × 3.5 ㎛		
Interface		CoaXPress 2.0 (CXP-6/10/12)		
Max. Frame Rate		15 fps at 8bit		
Exposure Time (1 ㎲ step)		100 ㎲ - 7 s (1 ㎲ step)		
Pixel Data Format		Mono: 8 bit, 10 bit, 12 bit Color (VP-216MX2-C15K only): RG Bayer 8bit, 10bit, 12bit		
Electronic Shutter		Global Shutter		
Trigger Synchronization		Free-Run, Hardware Trigger, Software Trigger, UserOutput0, CXP, Timer		
Dynamic Range		62 ㏈ at 12 bit		
Gain Control	Analog	1× ~ 4×		
	Digital	1× ~ 32×		
Black Level Control		0 ~ 255 LSB at 12 bit		
Shift Range		0 ~ 14 ㎛, 1 ㎚ step		
Shift Resolution		0.001 ㎛		
Shift Control		Manual Mode or Sequence Mode		
Shift Latency		< 5 ㎳		
Cooling Method		Thermoelectric Peltier Cooling		
Cooling Performance (Standard cooling with a fan)		10±2℃ below ambient temperature	10±2℃ below ambient temperature	7±1℃ below ambient temperature
Dimension / Weight		125 ㎜ × 125 ㎜ × 157 ㎜, 3.3 ㎏		
Temperature		Operating: 0℃ ~ 40℃, Storage: -40℃ ~ 70℃		
Lens Mount (Custom mount available upon request)		M72-mount,	M95-mount	M102-mount
Power	External	11 ~ 24 VDC		
	Dissipation	Typ. 40.0 W		
API SDK		Vieworks Imaging Solution 7.X		

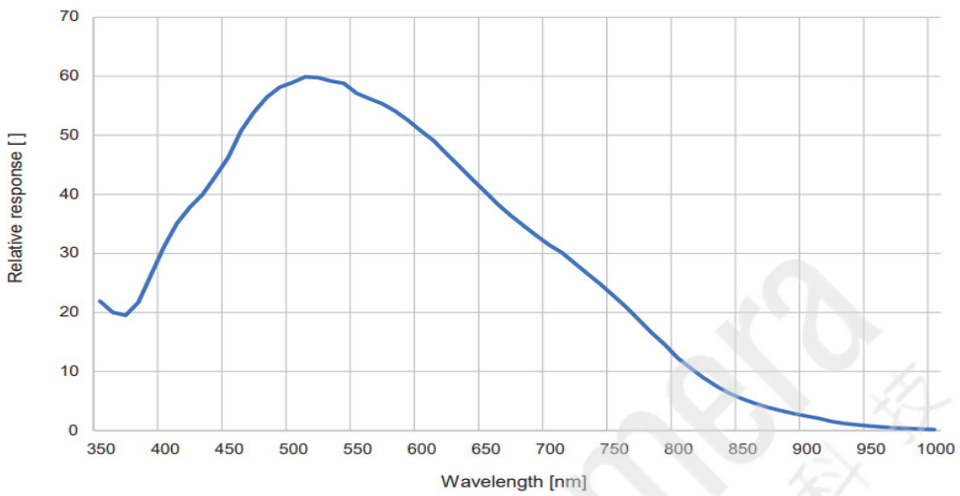
VNP-576/864/1152MX2 Series

576/864/1152 Megapixel Pixel Shifting Camera Equipped with Thermoelectric Peltier

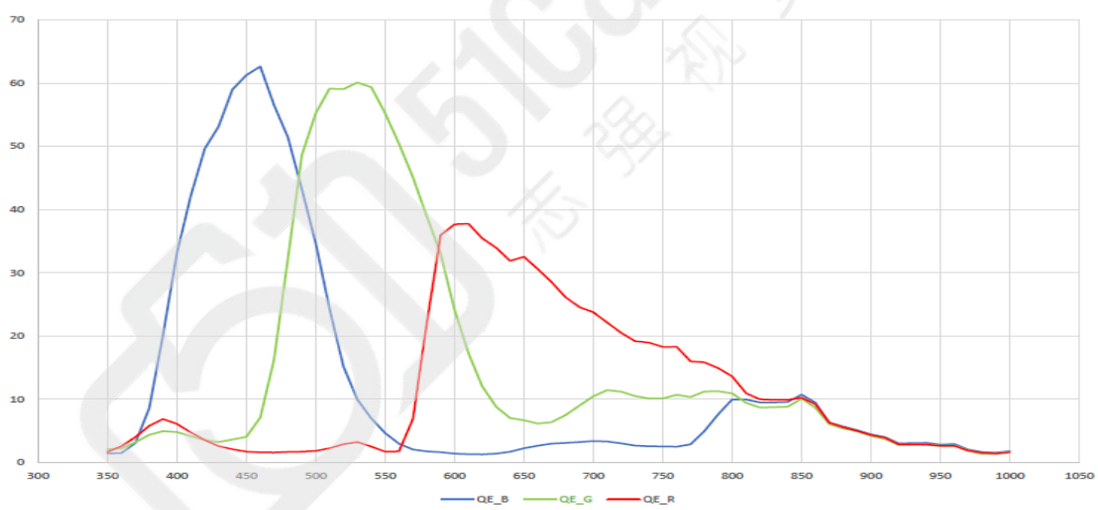
Spectral Response

* The sensitivity data may not match the measurement on the finished product necessarily because it is measured based on the wafer.

- Mono



- Color (VNP-864MX2-C15K only)



Ordering Scheme

VNP-576M X2 -M 15

Series
VNP Series

Sensor Resolution
576, 864,1152
Megapixels

Interface
X2 - CoaXPress 2.0

Frame Rate
15 - 15 fps

Mono / Color
M - Monochrome
C - Color

Connector Specification

Power

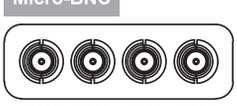
1, 2, 3: +24 VDC
4, 5, 6: GND
(HR10A-7R-6PB)

Control

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

Data Transfer / Communications

Micro-BNC



CH1: Master Connection
75 Ω, Micro-BNC (HD-BNC)

Connectors on camera body