VNP-190MX

190 MEGAPIXEL PIXEL SHIFTING CAMERA EQUIPPED WITH THERMOELECTRIC PELTIER

The VNP-190MX, a pixel shifting camera equipped with thermo-electric Peltier (TEC) cooled, is 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 14 degrees below ambient temperature to reduce noise significantly. Pixel shifting technology based on a precise piezoelectric stage allows image captures as high as 420 million pixels using the VNP-190MX camera. Its CoaXPress interface supports transmitting image data at up to 12.5 Gbps using two coaxial cables. This camera is ideal for applications such as FPD inspection, document / film scanning, research and scientific imaging.

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Main Features

* Nano Stage Pixel Shifting Mechanism
* Thermoelectric Peltier Cooled
* Extended Resolutions up to 420 Megapixels
* True Color Full Image Resolution
* Improved Fill Factor
* Progressive Scan Interline Transfer CCD Imager
* Flat Field Correction
* Pixel Defect Correction

Applications

* Flat Panel Display Inspection
* Electronics and Semiconductor Inspection
* Digitizing and Scanning
* Scientific Imaging

Specifications

Model		VNP-190MX-M/C 10
Resolution (H × V)	1× Mode	8856 × 5280, 46.8M
	4× Mode	17712 × 10560, 187.0M
Sensor		ON Semiconductor KAI-47051
Sensor Size(Optical Diagonal)		56.7 ㎜
Sensor Type		Progressive Scan Interline Transfer CCD
Pixel Size		5.5 ㎛ × 5.5 ㎛
Interface		CoaXPress
Max. Frame Rate	1× Mode	10.0 fps @ 46.8M (8856 × 5280)
	4× Mode	2.5 fps @ 187.0M (17712 × 10560)
Exposure Time (10 ㎲ step)		28 ㎲ - 60 s
Partial Scan (Max. Speed)		24 fps at 1056 Lines
Pixel Data Format		8 / 10 / 12 bit
Electronic Shutter		Global Shutter
Binning		2×, 4×
Exposure Mode		Free-Run, Timed and Trigger Width
Dynamic Range		66 dB
Shift Range		0 ~ 15 ㎛, 1 ㎚ step
Shift Resolution		0.001 ㎛
Shift Control		Manual Mode or Sequence Mode (4/9 Shot Mono, 4/16/36 Shot Color)
Shift Latency		< 5 ㎳
Cooling Method		Thermoelectric Peltier Cooling
Cooling Performance		14℃ below ambient temperature - Standard cooling with a fan
Dimension / Weight		120 ㎜ × 94 ㎜ × 171 ㎜, 2,300 g
Temperature		Operating: 10℃ ~ 40℃, Storage: -40℃ ~ 70℃
Lens Mount		M72-mount, Custom mount available upon request
Power		11~15 V DC, Typ. 36.0 W
Compliance		CE, FCC, KC
API SDK		Vieworks Imaging Solution 7.X

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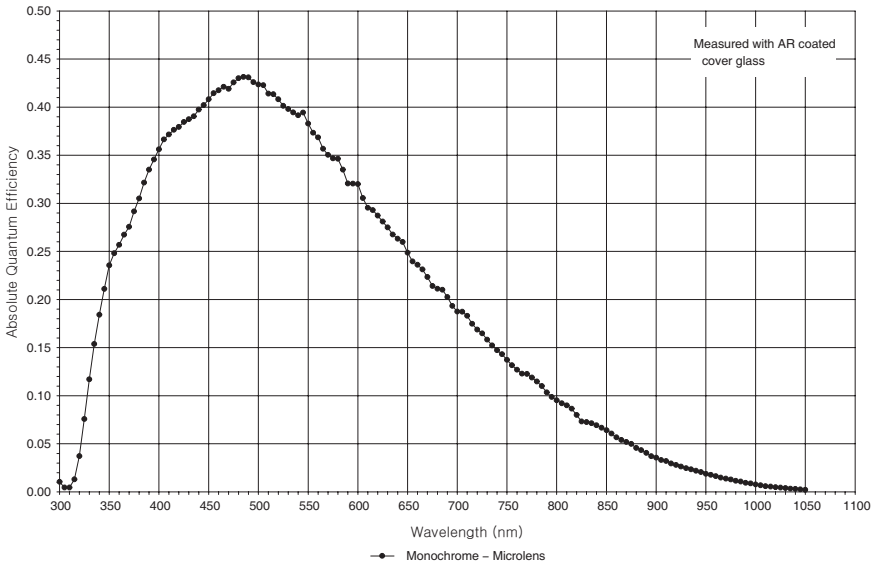
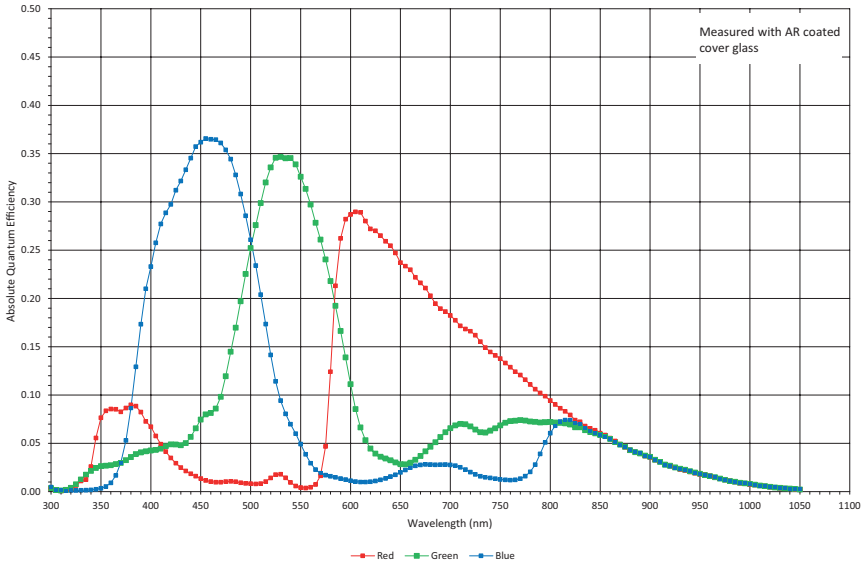
Quantum Efficiency Curves





Ordering Scheme

VNP – 190M X – M 10

Series
VNP Series

Sensor Resolution
190M – 190 Megapixels

Interface
X – CoaXPress

Frame Rate
10 – 10 fps

Mono / Color
M – Monochrome
C – Color

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)

Data Transfer / Communications

CH1: Master Connection
(75 Ω, DIN 1.0/2.3)

Connectors on camera body

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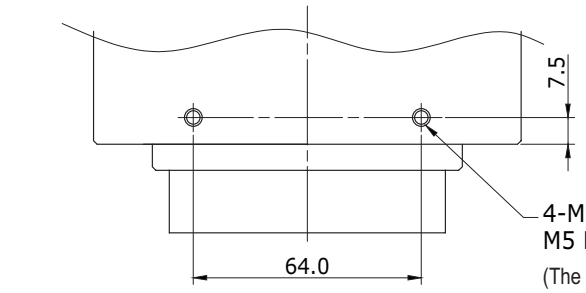
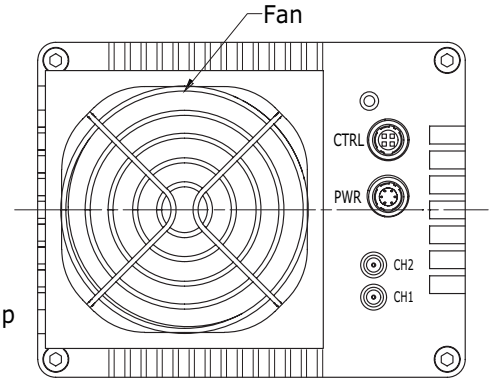
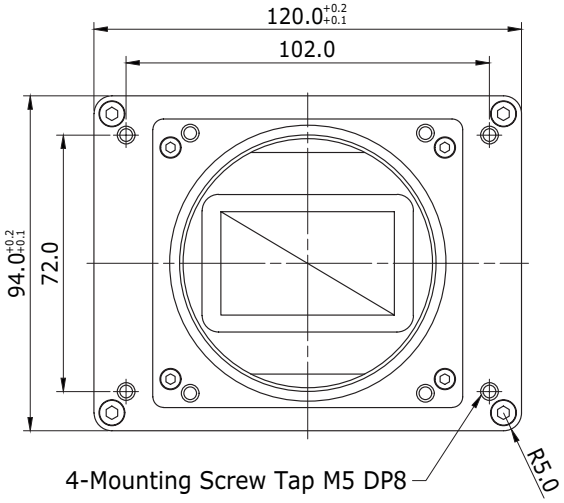
Mechanical Dimensions

Unit: mm





<Back View>



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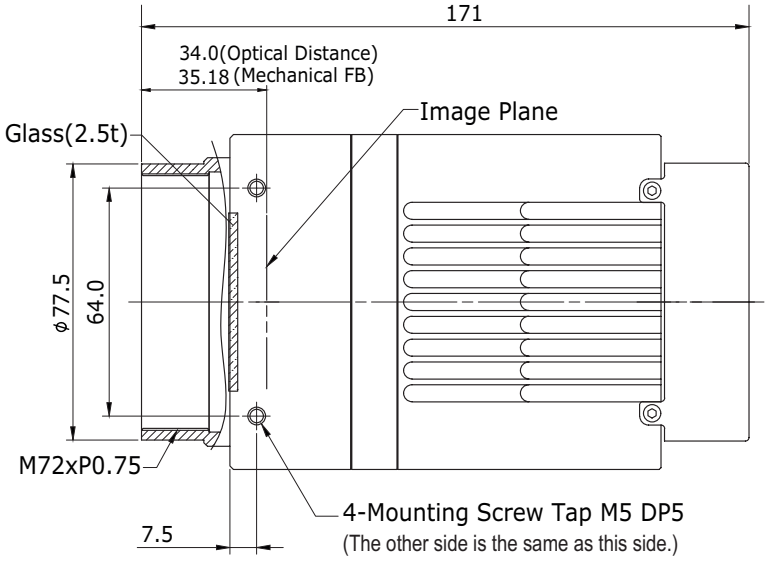

<Side View>

For more information please contact local distributor or
visit our website at http://www.vieworks.com.

D-17-680

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