

Preliminary

VP-101MX-M/C 9 H VP-151MX-M/C 6 H

High Resolution Thermoelectric Peltier Cooled Camera



CoaXPress®

The VP-101MX and VP-151MX, the latest models of the industrial proven VP series, are equipped with the CoaXPress interface and based on the latest CMOS image sensor technology (IMX461 and IMX411) from Sony Semiconductor Solutions Corporation. The VP-101MX-9 offers up to 8.7 frames per second at 11656 × 8742 resolution. For even higher resolution applications, the VP-151MX-6 offers up to 6.2 frames per second at 14192 × 10640 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.

Pyramid Imaging

VP-101MX-9 H / VP-151MX-6 H

High Resolution Thermoelectric Peltier Cooled Camera

Main Features

- Thermoelectric Peltier Cooled – 15°C below
- 101 or 151 Megapixel Resolution
- CoaXPress Interface
- Electronic Rolling 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

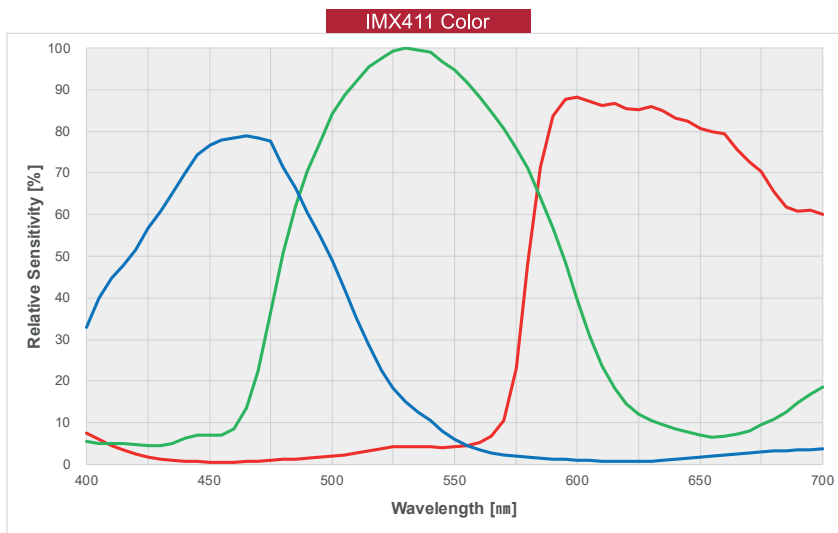
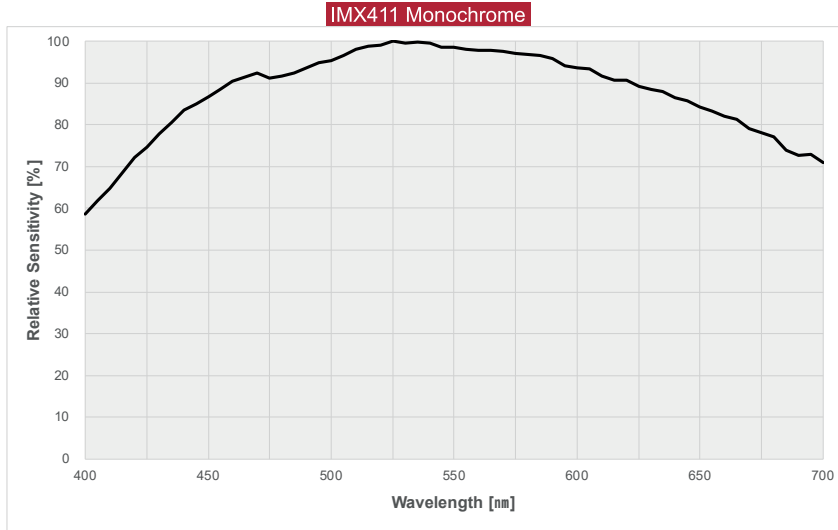
Specifications

Model	VP-101MX-M/C 9 H	VP-151MX-M/C 6 H
Resolution (H × V)	11656 × 8742	14192 × 10640
Sensor	SONY IMX461	SONY IMX411
Sensor Size (Diagonal)	43.83 mm × 32.87 mm (55 mm)	53.36 mm × 40.01 mm (66.7 mm)
Pixel Size	3.76 μm × 3.76 μm	3.76 μm × 3.76 μm
Interface	CoaXPress	
Max. Frame Rate	8.7 fps (with Overlapped Acquisition)	6.2 fps (with Overlapped Acquisition)
Exposure Time (1 μs step)	1 μs – 60 s	1 μs – 60 s
Pixel Data Format	8 / 10 / 12 bit	
Electronic Shutter	Rolling Shutter	
Trigger Synchronization	Overlapped Acquisition	Free-Run
	Non-overlapped Acquisition	Hardware Trigger, Software Trigger or CXP
Dynamic Range	78 dB	
Gain Control	1× ~ 32×	
Black Level Control	0 ~ 127 LSB at 12 bit	
Cooling Method	Thermoelectric Peltier Cooling	
Cooling Performance	15 below ambient temperature – Standard cooling with a fan	
Dimension / Weight	100 mm × 100 mm × 88 mm, 1.5 kg (with M-72 mount)	110 mm × 110 mm × 83 mm, 1.5 kg (with M-72 mount)
Temperature	Operating: 0°C ~ 40°C, Storage: -40°C ~ 70°C	
Software Trigger	Asynchronous, Programmable via Camera API	
Lens Mount	M72-mount, Custom mount available upon request	
Power	10 ~ 24 V DC, Typ. 26.0 W	
API SDK	Vieworks Imaging Solution 7.X	Vieworks Imaging Solution 7.X

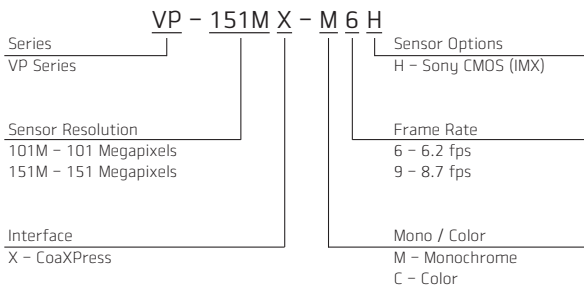
VP-101MX-9 H / VP-151MX-6 H

High Resolution Thermoelectric Peltier Cooled Camera

Relative Sensitivity Curves



Ordering Scheme



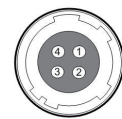
Connector Specification

Power



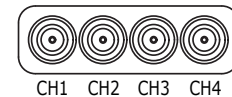
1 2 3: +12V DC, 4 5 6: GND
(HR10A-7R-6PB)

Control



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

Data Transfer / Communications



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

Connectors on camera body

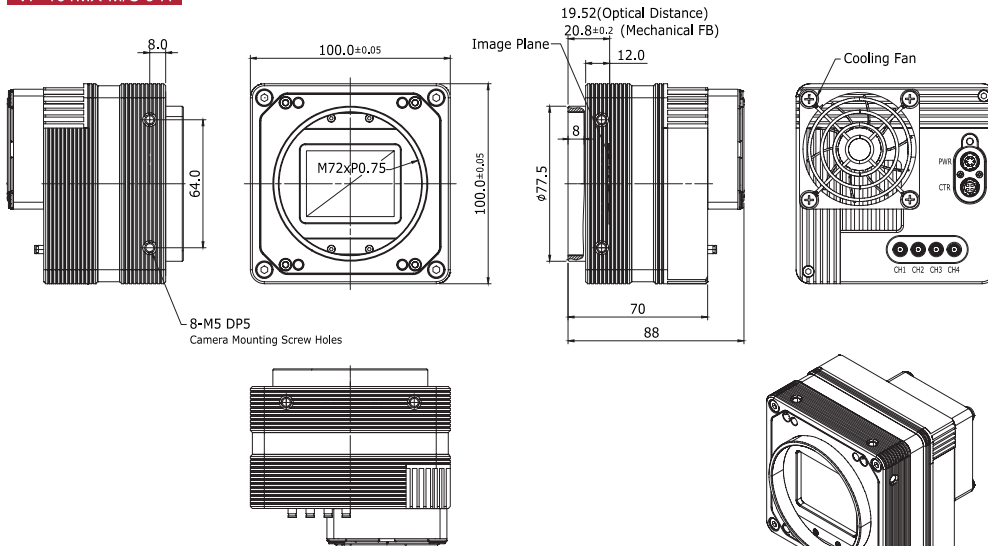
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High Resolution Thermoelectric Peltier Cooled Camera

Mechanical Dimensions

Unit: mm

VP-101MX-M/C 9 H



VP-151MX-M/C 6 H

