VP-31MX-M/C 35 H

31MP Thermoelectric Peltier Cooled Camera

CoaXPress®

The VP-31MX-35 H, the latest model of the industrial proven VP series, is a new 31 megapixel CoaXPress camera and based on the latest CMOS image sensor technology (IMX342) from Sony Semiconductor Solutions Corporation. The VP-31MX-35 H offers up to 35.4 frames per seconds at 6464 × 4852 resolution. This camera uses thermo-electric Peltier (TEC) cooling technology developed for and used by many demanding medical market customers. The TEC maintains the operating temperature of the image sensor at up to 15±2℃ below ambient temperature. The VP-31MX camera provides a stable operating condition and the ability to expose for a long period of time to increase the camera's sensitivity.
Featuring high-speed and high-resolution with stable performance, this camera is ideal for demanding applications such as FPD, PCB and semiconductor inspections.

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Main Features

- Thermoelectric Peltier Cooled – 15±2℃ below
- 31 Megapixel Resolution
- CoaXPress Interface up to 35.4 fps at 25 Gbps using 4 CH
- Flat Field Correction with Sequencer Control
- PRNU Correction
- Hot Pixel Correction
- Defective Pixel Correction
- Frame Averaging
- GenICam Compatible – XML based Control

Applications

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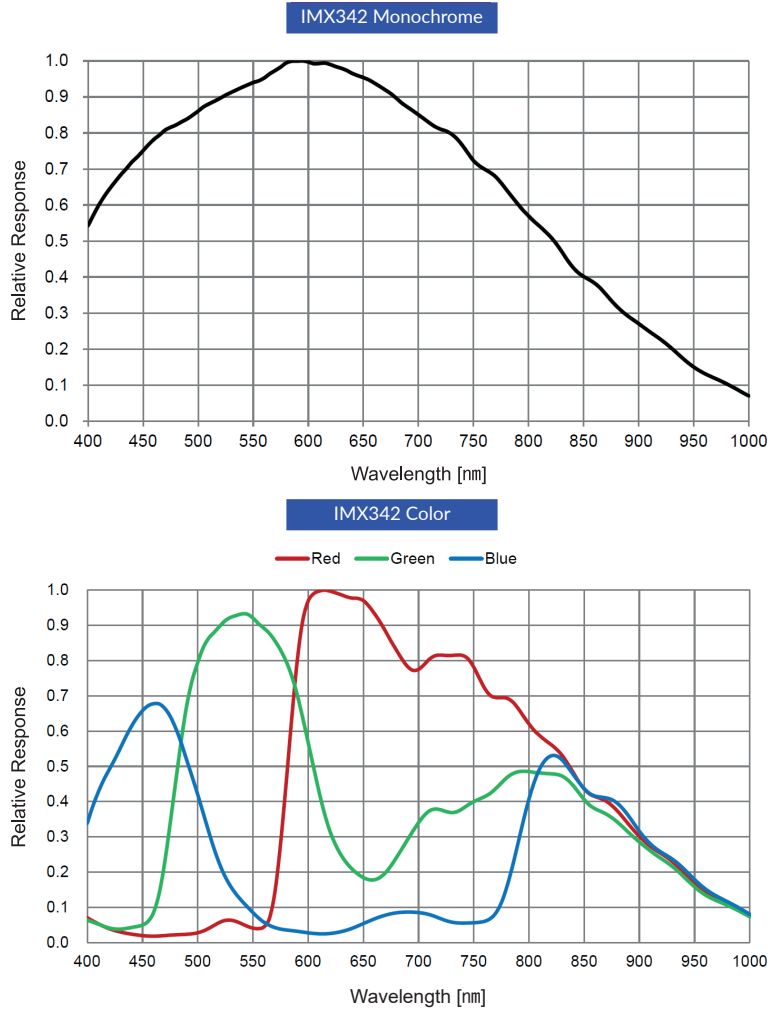- Semiconductor Inspection
- Document / Film Scanning

Specifications

Model		VP-31MX-M/C 35 H
Resolution (H × V)		6464 × 4852
Sensor		SONY IMX342
Optical Format (Diagonal)		APS-C (27.9 ㎜)
Pixel Size		3.45 ㎛ × 3.45 ㎛
Interface		CoaXPress (CXP-3 / CXP-6)
Max. Frame Rate	8 bit	35.4 fps
	10 bit	35.4 fps
	12 bit	25.8 fps
Exposure Time		2.4 ㎲ – 60 s
Partial Scan (Max. Speed)		1464.7 fps at 4 Lines
Binning	Sensor	×1, ×2 (Horizontal and Vertical Dependent)
Pixel Data Format	Mono	Mono 8 / Mono 10 / Mono 12
	Color	RG Bayer 8 / RG Bayer 10 / RG Bayer 12
Electronic Shutter		Global Shutter
Trigger Synchronization		Free-Run, Hardware Trigger, Software Trigger or CXP
External Trigger		3.3 V ~ 24.0 V, 10 ㎃, Logical Level Input, Optically Isolated
Software Trigger		Asynchronous, Programmable via Camera API
Dynamic Range		72 dB
Gain Control		1× ~ 32×
Black Level Control		0 ~ 255 LSB at 12 bit
Cooling Method		Thermoelectric Peltier Cooling
Cooling Performance		15±2℃ below ambient temperature – Standard cooling with a fan
Dimension / Weight		90.0 ㎜ × 90.0 ㎜ × 129.3 ㎜, 1261.4 g (with F-mount)
Temperature		Operating: 0℃ ~ 40℃, Storage: -40℃ ~ 70℃
Lens Mount		F-mount, Custom mount available upon request
Power	External	11 ~ 24 V DC
	Dissipation	Typ. 30.0 W
Compliance		CE, FCC, KC (in preparation)
API SDK		Vieworks Imaging Solution 7.X

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Relative Sensitivity Curves

IMX342 Monochrome

IMX342 Color

—Red —Green —Blue

Ordering Scheme

VP – 31M X – M 35 H

Series
VP Series

Sensor Resolution
31M – 31 Megapixels

Interface
X – CoaXPress

Sensor Options
H – Sony CMOS (IMX)

Frame Rate
35 – 35.4 fps

Mono / Color
M – Monochrome
C – Color
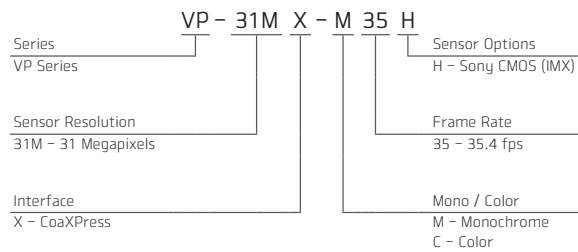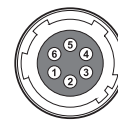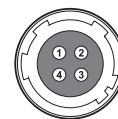
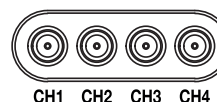# Connector Specification

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 CH2 CH3 CH4

CH1: Master Connection
75 Ω , DIN 1.0/2.3

Connectors on camera body

Mechanical Dimensions

Unit: mm

90.0₋₀.₀₅⁰

90.0₋₀.₀₅⁰

129.3

46.5 (Optical FB)
47.83±0.2 (Mechanical FB)

55.0

Image Plane

12.8

8-M5 DP 7
Camera Mounting Screw Holes

PWR CTRL

CH4
CH3
CH2
CH1

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