

# VL-8K7C-M80F-1 VL-8K7C-M80F-2 VL-16K3.5C-M50F-1

High Sensitivity & High Speed Line Scan Cameras



The VL Series offers two different high-resolution line scan camera models with 8k and 16k CMOS sensors delivering greater speed and more sensitivity than ever before. The VL-16K3.5C-M50F-1 delivers a maximum line rate of 50 kHz at 16k resolution. Even higher line rate, up to 80 kHz at 8k resolution can be achieved using the VL-8K7C-M80F-2 camera. All VL camera models have exposure control with 100× anti-blooming. This camera series is ideal for demanding applications such as flat panel display inspection, printed circuit board inspection, and high-performance document scanning.

**VIEWWORKS**

vision.viewworks.com

# VL-8K7C-M80F-1 / VL-8K7C-M80F-2 / VL-16K3.5C-M50F-1

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## Main Features

- CMOS Line Scan
- Up to 80 kHz at 8k Resolution /  
Up to 50 kHz at 16k Resolution
- CMOS Dual Line Scan Technology (VL-8K7C-M80F-2)
- 100× Anti-blooming
- Exposure Control
- Pre-emphasis Function
- Programmable User Setting Commands

## Applications

- Flat Panel Display Inspection
- Printed Circuit Board Inspection
- High Performance Document Scanning
- Printing and Packaging System

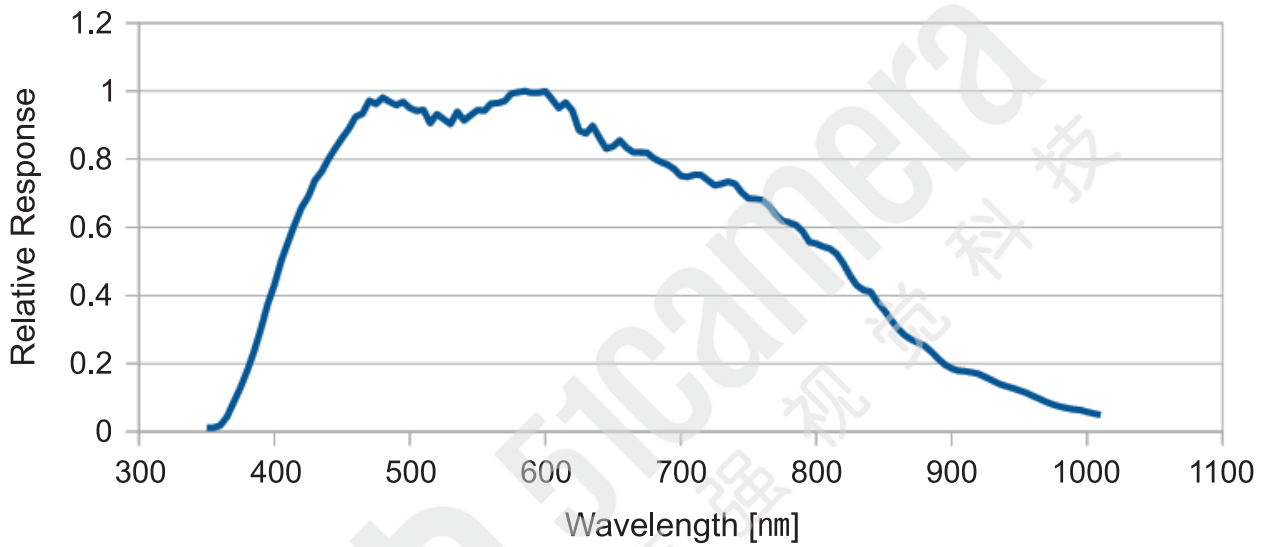
## Specifications

Model	VL-8K7C-M80F-1	VL-8K7C-M80F-2	VL-16K3.5C-M50F-1
Resolution (H × V)	8192 × 1	8192 × 2	16384 × 1
Sensor (AMS)	Dragster DR-1x8k-7	Dragster DR-2x8k-7	Dragster DR-16k-3.5
Sensor Type	Linear CMOS		
Pixel Size	7.0 μm × 7.0 μm		3.5 μm × 3.5 μm
Sensor Output	2/4/8 Tap		2/4/8/10 Tap
Interface	Camera Link Base / Medium / Full, 26-pin MDR Connector		
Max. Line Rate	80 kHz		50 kHz
Exposure time	2.00 μs ~ 10000.00 μs (0.01 μs step)		
Pixel Data Format	8 bit (2/4/8 Tap) / 10 bit (2/4 Tap) / 12 bit (2/4 Tap)		8 bit (2/4/8/10 Tap) / 10 bit (2/4 Tap) / 12 bit (2/4 Tap)
Camera Link Pixel Clock Speed	50/60/70/85 MHz		
Dual Line Mode	Supported		N/A
Acquisition Mode	Single Line	Single/Dual Line	Single Line
Image Direction	CC3 or Programmable		N/A
Trigger Synchronization	Free-Run, External Sync, External Sync Converter		
Dynamic Range	65 dB	66 dB	64 dB
Black Level	0 ~ 2048 LSB at 12 bit		
Digital Gain	1.00× ~ 32.00×		
Max. Cable Length	10 m (@ 85 MHz, Standard Camera Link Cable)		
Lens Mount	M72 × 0.75 mm (Sensor to Camera Front: 12 mm)		
Dimension / Weight	80 mm × 80 mm × 43 mm / 390 g		
Temperature	Ambient Operating: 0 °C ~ 40 °C (Housing: 10 °C ~ 50 °C), Storage: -40 °C ~ 70 °C		
Power	External	8 ~ 28 VDC	
	Dissipation	Typ. 8.0 W	
Compliance	CE, FCC, KC	CE, FCC, KC, UL	CE, FCC, KC, UKCA, UL
Configuration Software	Configurator		

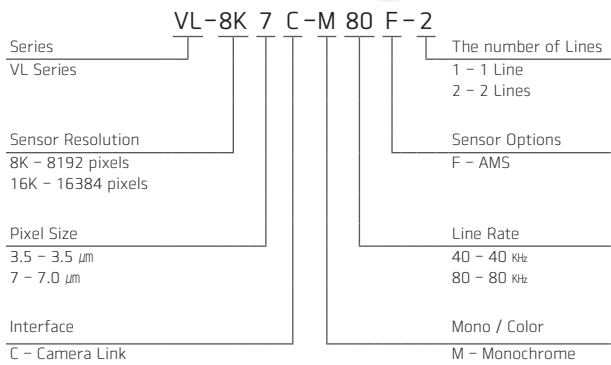
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## Quantum Efficiency



## Ordering Scheme



## Connector Specification

Power



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

Control



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

Connectors on camera body

# VL-8K7C-M80F-1 / VL-8K7C-M80F-2 / VL-16K3.5C-M50F-1

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## Mechanical Dimensions

Unit: mm

