



# **CV-M50**

## **Industrial Monochrome CCD Camera**



- *High resolution 1/2" monochrome CCD camera*
- *CCIR: 752 (h) x 582 (v) pixels. EIA: 768 (h) X 494 (v) pixels*
- *Improved sensitivity, dynamic range and smear performance*
- *High S/N ratio >56 dB*
- *Interlaced or non-interlaced scanning*
- *Field or frame accumulation*
- *Internal, external HD/VD or random trigger synchronization*
- *HD/VD synchronization input/output. – TTL or 75 Ohm*
- *Edge pre-select, pulse width control and start/stop trigger modes*
- *Long time exposure with external VD pulse interval*
- *Exposure enable EEN, write enable WEN and pixel clock output*
- *Frame grabber friendly interface*
- *Rugged and compact construction*

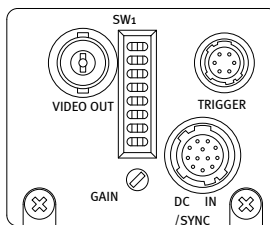
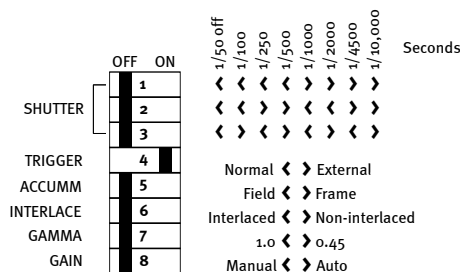
***The leading manufacturer of high performance camera solutions***

# Specifications for CV-M50

Specifications	CCIR	EIA
Scanning system	625 lines 25 frames/sec.	525 lines 30 frames/sec.
Pixel clock	14.25 MHz	14.35 MHz
CCD sensor	1/2" Monochrome IT CCD	
Sensing area	6.5 (h) x 4.8 (v) mm	
Effective pixels	752 (h) x 582 (v)	768 (h) x 494 (v)
Pixels in video output	737 (h) x 575 (v)	758 (h) x 486 (v)
Cell size	8.6 (h) x 8.3 (v) $\mu$ m	8.4 (h) x 9.8 (v) $\mu$ m
Sensitivity on sensor	0.05 Lux (Max. gain, 50% video)	
S/N ratio	>56 dB	
Video output	Composite VS signal 1.0 Vpp, 75 $\Omega$	
Gamma	1.0 - 0.45	
Gain	Manual - Automatic 0 to +15 dB	
Scanning	2:1 interlaced - non-interlaced	
Accumulation	Field - frame	
Synchronization	Int. X-tal. Ext HD/VD or random trigger	
HD sync. input/output	4V, 75 $\Omega$ *	
VD sync. input/output	4V, 75 $\Omega$ *	
Trigger input	4V, 75 $\Omega$ *	
Trigger input duration	>64 $\mu$ sec. to <1 msec.	
WEN output (write enable)	4V, 75 $\Omega$	
EEN output (exposure enable)	4V, 75 $\Omega$	
Pixel clock out (optional)	4V, 75 $\Omega$ , sine	
Shutter speed	Off, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4500, 1/10,000 sec.	
Edge pre-select shutter	1/60, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4500, 1/10,000 sec.	
Pulse width control	>1H (64 $\mu$ sec.) to <60 msec.	
Start/stop	1/77 to 1/10,000 second	
Long time exposure	1 field to * Duration between ext. VD pulses	
Operating temperature	-5°C to +45°C	
Humidity	20 - 80% non-condensing	
Storage temp./humidity	-25°C to 60°C/20% - 90%	
Power	12V DC $\pm$ 10%. 2.5W	
Lens mount	C-mount	
Dimensions	40 x 50 x 80 mm (HxWxD)	
Weight	245 g	

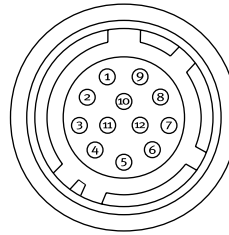
\* HD sync., VD sync./ (Trigger) input or output by internal straps. HD/VD input from factory. Inputs TTL or 75 Ohm terminated by internal straps. 75 Ohm terminated from factory.

## Switch Setting



## Connection Description

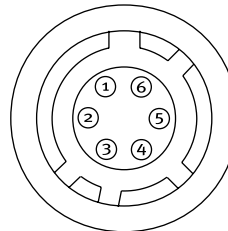
### DC-IN/SYNC.



HIROSE HR10A-10R-12P

- Pin 1 Ground  
2 +12V DC  
3 Ground  
4 Video output  
5 Ground  
6 HD input/HD output  
7 VD input/VD output  
8 Ground  
9 Pixel clock output  
10 Ground  
11 +12V DC  
12 Ground

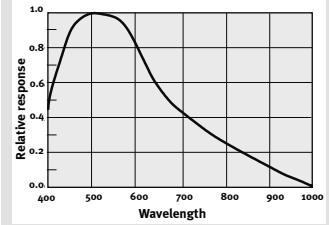
### TRIGGER



HIROSE HR10A-7R-6P

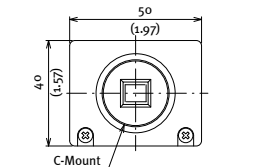
- Pin 1 N.C.  
2 EEN output  
3 Ground  
4 N.C.  
5 Trigger input  
6 WEN output

## Spectral Sensitivity

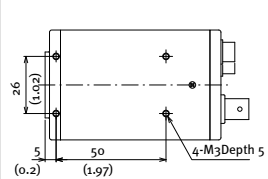


## Dimensions

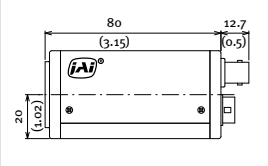
### Front view



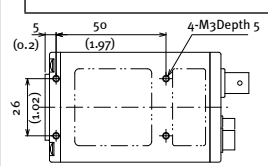
### Top view



### Side view



### Bottom view



## Ordering Information

CV-M50C 1/2" Industrial Monochrome CCD Camera. CCIR

CV-M50E 1/2" Industrial Monochrome CCD Camera. EIA



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