



# **CV-M50**

## **Industrial Monochrome CCD Camera**



- *High resolution monochrome 1/2" Hyper HAD IT CCD sensor*
- *CCIR: 752 (h) x 582 (v) pixels. EIA: 768 (h) X 494 (v) pixels*
- *Extreme sensitivity*
- *Improved dynamic range and smear performance*
- *High S/N ratio >56 dB*
- *Interlaced or non-interlaced scanning*
- *Field or frame integration mode*
- *Electronic or asynchronous shutter*
- *Long time exposure with external VD pulses*
- *HD/VD synchronization input or output. – TTL level*
- *Exposure enable (EEN) and write enable (WEN) output*
- *Sub-pixel accuracy possible*
- *Frame grabber friendly interface*
- *Rugged and compact construction*

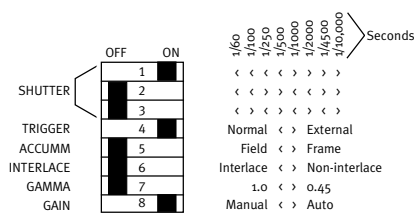
***The leading manufacturer in high performance camera solutions***

# Specifications for CV-M50

Specifications	CV-M50C	CV-M50E
Scanning system	625 lines 25 frames/sec.	525 lines 30 frames/sec.
CCD sensor	Monochrome 1/2" Hyper HAD IT CCD	
Sensing area	6.6 mm (h) x 4.8 mm (v)	
Picture elements effective	752 (h) x 582 (v)	768 (h) x 494 (v)
Elements in video out	737 (h) x 575 (v)	758 (h) x 486 (v)
Cell size	8.6 (h) x 8.3 (v) $\mu\text{m}$	8.4 (h) x 9.8 (v) $\mu\text{m}$
Resolution (horizontal)	560 TV lines	570 TV lines
Resolution (vertical)	575 TV lines	485 TV lines
Sensitivity	0.5 Lux, F1.4	
S/N ratio	>56 dB (AGC off, Gamma 1)	
Video output	Composite VBS signal 1.0 Vpp, 75 Ohm	
Gamma	0.45 - 1.0	
Gain	Manual - Automatic Potmeter - AGC	
Scanning	2:1 interlace - non-interlace	
Accumulation	Field - frame	
Synchronization	Int. X-tal. Ext HD/VD or random trigger	
HD sync. input/output	4V, 75 Ohm*	
VD sync. input/output	4V, 75 Ohm*	
Trigger input	4V, 75 Ohm*	
Trigger input duration	>HD interval	
WEN output (write enable)	4V, 75 Ohm	
EEN output (exposure enable)	4V, 75 Ohm	
Pixel clock out (optional)	4V, 75 Ohm sine	
Internal shutter	Off, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4500, 1/10,000 sec.	
Trigger shutter	1/60, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4500, 1/10,000 sec.	
Long time exposure	1 field to $\infty$ 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 jumpers.  
Factory setting: HD/VD input. Inputs TTL or 75 Ohm terminated by internal jumpers. Factory setting: 75 Ohm terminated.

## Switch Setting

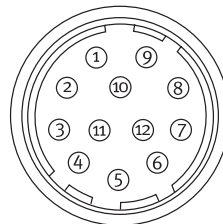


## Ordering Information

CV-M50C 1/2" Monochrome Camera CCIR.  
CV-M50E 1/2" Monochrome Camera EIA.

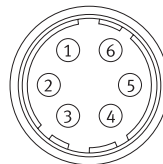
## Connection Description

### DC-IN/SYNC.



- Pin 1 Ground  
2 +12V DC  
3 Ground  
4 Video output  
5 Ground  
6 HD in/(HDout)  
7 VD in/(VD out)  
8 Ground  
9 Pixel clock out (sine) optional\*\*  
10 Ground  
11 +12V DC  
12 Ground

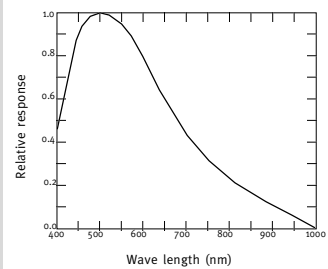
### TRIGGER



- Pin 1 N.C.  
2 EEN out  
3 Ground  
4 N.C.  
5 Trig. in/VD out  
6 WEN pulse out

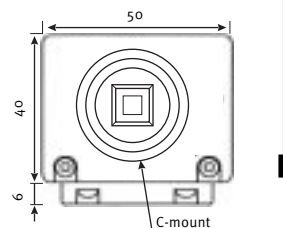
\*\* Pixel clock output by internal jumper setting.

## Spectral Sensitivity

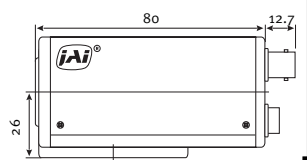


## Dimensions

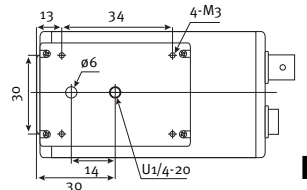
### Front view



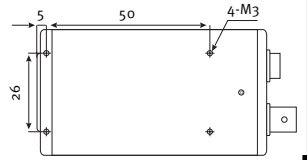
### Side view



### Bottom view



### Top view



JAI Corporation, Japan  
German Industry Center  
1-18-2 Hakusan, Midori-ku  
Yokohama,  
Kanagawa 226-0006, Japan  
Phone +81 45 933 5400  
Fax +81 45 931 6142  
www.jai-corp.co.jp

JAI A-S, Denmark  
Camera Solutions  
Produktionsvej 1, 2600 Glostrup  
Copenhagen, Denmark  
Phone +45 4491 8888  
Fax +45 4491 8880  
www.jai.dk

JAI UK Ltd., England  
Audley House  
Northbridge Road  
Berkhamsted  
Herts HP4 1EH, England  
Phone +44 1442 879 669  
Fax +44 1442 879 281

Costar, USA  
43517 Ridge Park Drive  
Temecula, CA 92590  
United States of America  
Phone +1 909 699 9000  
Fax +1 909 308 9188  
www.costar-usa.com



THE MECHADEMIC COMPANY

Visit our web site on [www.jai.dk](http://www.jai.dk)