



# ***CV-M300***

## ***Industrial Monochrome CCD Camera***



- ***New improved monochrome 2/3" Hyper HAD IT CCD sensor***
- ***CCIR: 752 (h) x 582 (v) pixels. EIA: 768 (h) x 494 (v) pixels***
- ***Increased sensitivity and improved dynamic range***
- ***Reduced smear level***
- ***High S/N ratio > 58 dB***
- ***Interlaced or non-interlaced scanning***
- ***Field or frame integration mode***
- ***Asynchronous reset (two trigger modes)***
- ***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-M300

| Specifications               | CV-M300C  | CV-M300E                          |
|------------------------------|---|-----------------------------------|
| Scanning system              | 625 lines<br>25 frames/sec.   | 525 lines<br>30 frames/sec.       |
| CCD sensor                   | Monochrome 2/3" Hyper HAD IT CCD                                    |                                   |
| Sensing area                 | 8.8 mm (h) x 6.6 mm (v)   |                                   |
| 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                    | 11.6 (h) x 11.2 (v) $\mu\text{m}$                                   | 11.6 (h) x 13.5 (v) $\mu\text{m}$ |
| Resolution (horizontal)      | 560 TV lines  | 580 TV lines                      |
| Sensitivity                  | 0.5 Lux, F1.4   |                                   |
| S/N ratio                    | >58 dB (AGC off, Gamma 1)   |                                   |
| Video output                 | Composite VS signal 1.0 Vpp, 75 Ohm                                 |                                   |
| Gamma                        | 0.45 - 1.0  |                                   |
| Gain                         | Manual - Automatic<br>Potentiometer - AGC                           |                                   |
| Gain range                   | 0 to +18 dB   |                                   |
| Scanning                     | 2:1 interlace - non-interlace                                       |                                   |
| Accumulation                 | Field - frame   |                                   |
| Synchronization              | Int. X-tal. or Ext. HD/VD or random trigger                         |                                   |
| HD sync. input/output        | 4 Vpp, 75 Ohm*  |                                   |
| VD sync. input/output        | 4 Vpp, 75 Ohm*  |                                   |
| Trigger input                | 4 Vpp, 75 Ohm*  |                                   |
| Trigger input duration       | >1 HD interval  |                                   |
| WEN output (write enable)    | 4 Vpp, 75 Ohm*  |                                   |
| EEN output (exposure enable) | 4 Vpp, 75 Ohm*  |                                   |
| Pixel clock out (optional)   | 4 Vpp, 75 Ohm, sine   |                                   |
| Internal shutter             | Off, 1/100, 1/250, 1/500, 1/1000, 1/2000,<br>1/4500, 1/10,000 sec.  |                                   |
| Trigger shutter mode 1       | 1/50, 1/100, 1/250, 1/500, 1/1000, 1/2000,<br>1/4500, 1/10,000 sec. |                                   |
| Trigger shutter mode 2       | Continuous variable 1/77 - 1/10,000 sec.                            |                                   |
| Long time exposure           | 1 field to $\infty$<br>Duration between ext. VD pulses              |                                   |
| Operating temperature        | -5°C to +45°C   |                                   |
| Humidity                     | 20 - 80% non-condensing   |                                   |
| Power                        | 12V DC $\pm$ 10%. 3.6 W   |                                   |
| Lens mount                   | C-mount   |                                   |
| Dimensions                   | 40 x 50 x 80 mm (HxWxD)   |                                   |
| Weight                       | 230 g   |                                   |

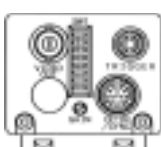
\* HD sync., VD sync./ (Trigger) input or output by internal jumpers.  
Factory setting: HD/VD input. Inputs TTL or 75 Ohm terminated by internal jumpers. Factory setting: 75 Ohm terminated.

## Switch Setting

|           |     |    |   |
|-----------|-----|----|---|
|           | OFF | ON |   |
| SHUTTER   | 1   | 2  | 3 |
| TRIGGER   | 4   |    |   |
| ACCUMM    | 5   |    |   |
| INTERLACE | 6   |    |   |
| GAMMA     | 7   |    |   |
| GAIN      | 8   |    |   |

|              |              |              |              |                    |                |                            |             |                |
|--------------|--------------|--------------|--------------|--------------------|----------------|----------------------------|-------------|----------------|
| 1/60         | 1/100        | 1/250        | 1/500        | 1/1000             | 1/2000         | 1/4500                     | 1/10,000    | Seconds        |
| <<<<<<>>>>>> | <<<<<<>>>>>> | <<<<<<>>>>>> | <<<<<<>>>>>> | Normal <> External | Field <> Frame | Interlace <> Non-interlace | 1.0 <> 0.45 | Manual <> Auto |

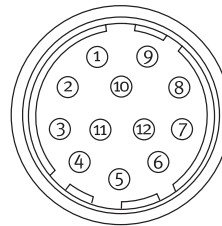


## Ordering Information

CV-M300C 2/3" Industrial Monochrome Camera. CCIR  
CV-M300E 2/3" Industrial Monochrome Camera. EIA

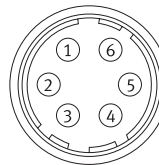
## Connection Description

### DC-IN/SYNC.



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

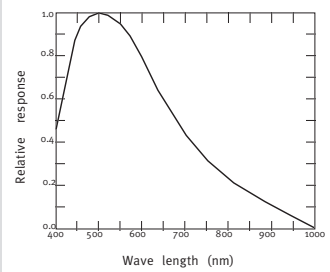
### TRIGGER



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

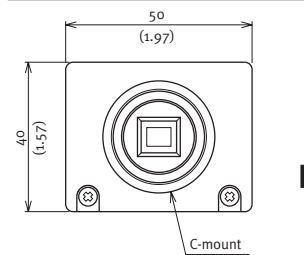
\*\* Pixel clock output by internal jumper setting.

## Spectral Sensitivity

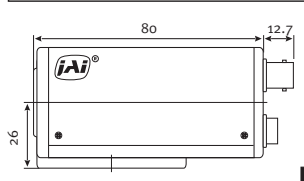


## Dimensions

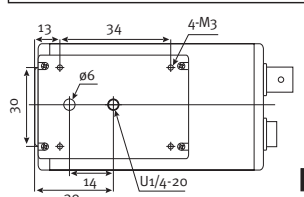
### Front view



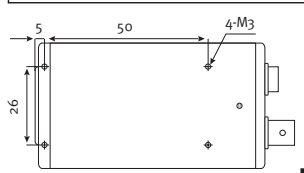
### Side view



### Bottom view



### Top view



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