



# *CV-M30*

## *Monochrome Double Speed Camera*



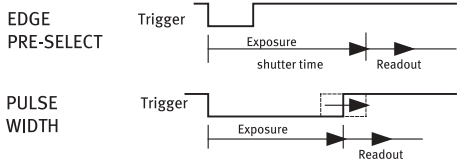
- *1/2" monochrome CCD camera*
- *768 (h) x 494 (v) pixels in interlaced mode*
- *Normal or double speed scanning. 15.7 or 31.5 kHz*
- *Interlaced or non-interlaced in both scanning modes*
- *30 or 60 interlaced frames per second*
- *60 or 120 fields per second in non-interlaced mode*
- *Partial scanning 1/2 or 1/3 for rates up to 240 or 360 fields per second*
- *Internal, external HD/VD or random trigger synchronization*
- *Shutter speeds from 1/60 to 1/10,000 second*
- *Shutter speeds from 1/120 to 1/20,000 second in double speed*
- *Edge pre-select and pulse width external trigger modes*
- *Exposure enable EEN and write enable WEN output*
- *Easy setup by switches*
- *Compact housing with C-mount*

*The leading manufacturer of high performance camera solutions*

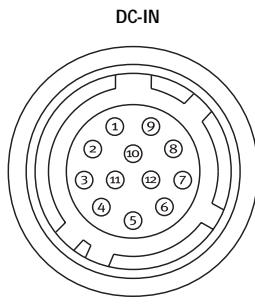
# Specifications for CV-M30

Specifications	CV-M30
<b>Scanning system</b> Normal speed	2:1 interlaced 525 lines 30 frames/sec. Non-interlaced 262 lines 60 frames/sec.
Double speed	2:1 interlaced 525 lines 60 frames/sec. Non-interlaced 262 lines 120 frames/sec.
<b>Pixel clock</b> Normal speed	14.35 MHz
Double speed	28.7 MHz
<b>Line frequency</b> Normal speed	15.734 kHz
Double speed	31.468 kHz
Clock pulses per line	912
CCD sensor	1/2" monochrome IT CCD
Sensing area	6.4 (h) x 4.8 (v) mm
Cell size	8.4 (h) x 9.8 (v) μm
Effective pixels	768 (h) x 494 (v)
<b>Pixels in video output</b> Normal speed: 2:1 interlaced	756 (h) x 485 (v) 30 frames/sec.
Non-interlaced	756 (h) x 242 (v) 60 field/sec.
1/2 partial	756 (h) x 111 (v) 120 fields/sec.
1/3 partial	756 (h) x 67 (v) 180 fields/sec.
Double speed: 2:1 interlaced	756 (h) x 485 (v) 60 frames/sec.
Non-interlaced	756 (h) x 242 (v) 120 field/sec.
1/2 partial	756 (h) x 111 (v) 240 fields/sec.
1/3 partial	756 (h) x 67 (v) 360 fields/sec.
Sensitivity on sensor	0.1 Lux (Max gain, 50% video)
S/N ratio	>58 dB
Video output	Composite 1.0 Vpp, 75 Ω
Gamma	0.45 – 1.0
Gain	Manual – Automatic
Gain range	-3 to +12 dB
Synchronization	Int. X-tal. Ext. VD/HD, random trigger
Trigger, VD, HD input	4 V ± 2 V TTL or 75 Ω terminated
WEN, EEN output	4 Vpp from 75 Ω
Trigger modes	Continuous, Edge pre-select, Pulse width control
Trigger input	In edge pre-select >1H In pulse width >1H to ≤1field
<b>Shutter speed</b> Normal speed	Off (1/60), 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4500, 1/10,000 sec.
Double speed	Off (1/120), 1/200, 1/500, 1/1000, 1/2000, 1/4000, 1/9000, 1/20,000 sec.
Pulse width control	>2 H to ≤1 field. (>80 μsec. to ≤9 msec.)
Camera setup by switches on rear	Shutter, Scanning, Read out, Trigger, Gain
Internal settings	Trigger mode, Gamma, VD/HD termination
Operating temperature	-5°C to +45°C
Humidity	20 – 80% non-condensing
Power	12V DC ± 10%. 3.8 W
Lens mount	C-mount
Dimensions	40 x 50 x 80 mm (HxWxD)
Weight	240g

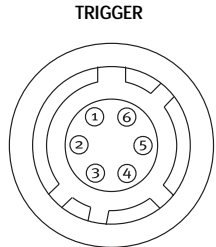
## Trigger Modes



## Connection Description



- HIROSE HR10A-10R-12P
- Pin 1 Ground
  - 2 +12V DC
  - 3 Ground
  - 4 Video output
  - 5 Ground
  - 6 HD input
  - 7 VD input/Trigger input \*
  - 8 Ground
  - 9 WEN/EEN output \*
  - 10 Ground
  - 11 +12V DC
  - 12 Ground

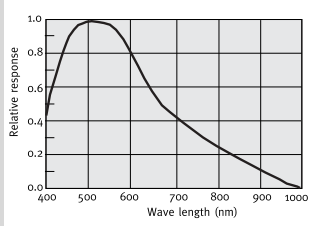


- HIROSE HR10A-7R-6P
- Pin 1 Read out control
  - 2 EEN output
  - 3 Ground
  - 4 N.C.
  - 5 VD/Trigger input \*
  - 6 WEN output

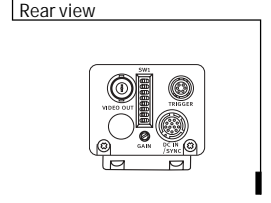
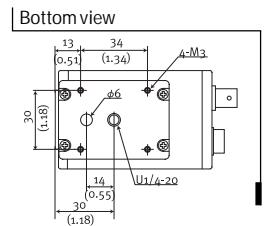
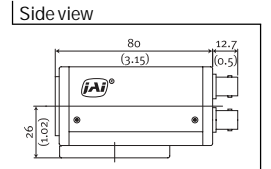
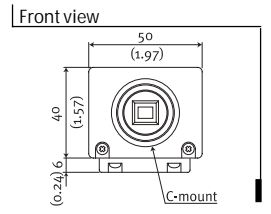
\* Signals can be changed by internal switches and jumpers.

Plugs for cable:  
12 pin: HIROSE HR10A-10P-12S  
6 pin: HIROSE HR10A-7P-6S

## Spectral Sensitivity



## Dimensions



## Switch Setting

SW 1	OFF		ON	
	1	2	3	4
SHUTTER	Off	1/100	1/250	1/500
SCAN mode 1	Normal	External	AGC	2:1 Interface
READOUT	Normal	External	AGC	Non-Interface
SCAN mode 2	Normal	External	AGC	Part. scan 1/2 N.I.
TRIGGER	Normal	External	AGC	Part. scan 1/3 N.I.
GAIN	Normal	External	AGC	

## Ordering Information

CV-M30 1/2" Monochrome Double Speed Camera

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