

Costar SI-M650ER

1/3" Compact EIA Near IR Monochrome Camera



This 1/3" compact EIA monochrome CCD camera with near IR capabilities is ideal for applications such as wafer inspection, photoluminescence and chemical imaging. The SI-M650ER supports standard EIA and double speed with full resolution at 60 frames per second. The 2:1 interlace scanning provides clear image capture. Advanced features such as programmable exposure, frame-delay readout, flexible trigger mode, V binning support and Windows-based set-up software give the user maximum flexibility for a variety of applications.

Product Features

- 1/2" EIA near IR monochrome CCD camera
- Compact size 29 (H) x 29 (V) x 45 (D) mm
- Standard EIA supported, Double speed supported
- 768 (H) x 494 (V) 6.35 x 7.40 μm square pixels
- 60 frames per second with full resolution
- V binning supported
- Internal, external HD/VD or random trigger synchronization
- Edge pre-select, pulse width control and start/stop trigger modes
- Shutter speeds from 1 to 1/400,000 second continuous
- Programmable exposure
- Frame-delay readout in combination with pulse width controlled shutter
- Exposure enable EEN, write enable WEN and pixel clock output
- Built in White Cross Pattern Generator
- Short ASCII commands for fast mode setup via serial port
- Setup by Windows 98/NT/2000 software via RS232C
- RS232C supports 9600, 19,200, 38,400 bps
- Support flexible trigger mode for customer defines



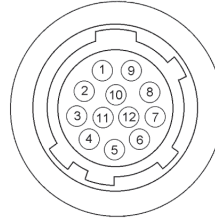
SI-M650ER Specifications

Specifications

Scanning system	2:1 interlace
Pixel clock	28.636Mhz
Line frequency	31.625Khz
Frame rate (full)	60 frames/sec.
Effective pixel	768 x 494
Chip size	6.00 (H) x 4.96 (V) mm
Cell size	6.35 (H) x 7.40 (V) μm
Pixels in video	
Full	60 frames/sec.
V binning	120 frames/sec.
Sensitivity	0.1 Lux
S/N ratio	>56db
Video output	Composite VS signal 1Vpp 75Ω Video signal 0.7 Vpp
Gamma	0.45 / 1
HD/VD sync input/ output	4V, 75Ω
WEN output	4V, 75Ω
EEN output	4V, 75Ω
Pixel clock out.	4V, 75Ω
Trigger mode	Continuous, single trigger, Pulse width control, Start/stop Frame delay readout mode
Shutter	Continuous by software (1/40k sec. to ∞ frames)
RS232C control function	Trigger mode, Shutter speed, HD input/output, VD input/output, HD/VD input termination, Trigger input termination, WEN/EEN/PCLK output enable, Gamma/AGC/Manual Gain, Setup level, White clip level, Async/Sync trigger select, Double/Normal Speed, Read out mode
Operating temperature	- 5° C to + 45° C (23° F to 113° F)
Storage temperature	- 25° C to + 60° C (- 13° F to +140° F)
Humidity	20 % to 80 %, non-condensing
Power	12V ± 1.8W
Lens mount	C-mount
Dimensions	29 (H) x 29 (V) x 45 (D) mm
Weight	70g

Connection Description

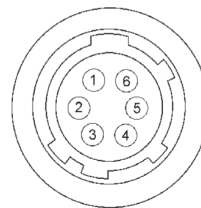
DC-IN/SYNC/Video out



HIROSE HR10A-10R-12PB-01

- Pin 1 Ground
2 +12V DC
3 Ground
4 Video out
5 Ground
6 HD/EEN/VD/WEN in/out, Trigger in
7 HD/VD/WEN in/out, Trigger in
8 Ground
9 Trigger in/Pixel clock Out
10 WEN out
11 Trigger in/Pixel clock Out
12 Ground

RS232C/Trigger IN



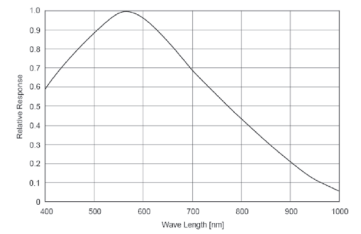
HIROSE HR 10A-7R-6PB

- Pin 1 TXD
2 RXD
3 Ground
4 NC
5 Trigger in
6 EEN/WEN/SYNC

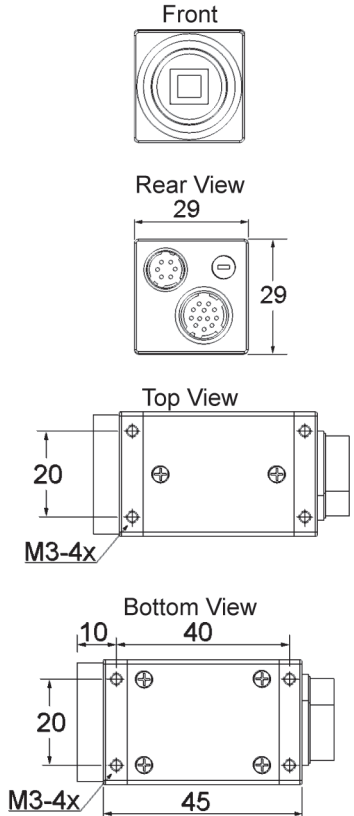
Plugs for cable

- 12 pin: Hirose HR 10A-10P-12S
6 pin: Hirose HR10A-7P-6S

Spectral Sensitivity



Dimensions



Design and specifications subject to change without notice. Conversion: 1" = 25.4mm
Measurement conversions are approximate.

Form SI-M650ER 4/07