

Costar SI-M650CR

1/3" Compact CCIR Near IR Monochrome Camera



This 1/3" compact CCIR monochrome CCD camera with near IR capabilities is ideal for applications such as wafer inspection, photoluminescence and chemical imaging. The SI-M650CR supports standard CCIR and double speed with full resolution at 50 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

- 1/3" CCIR near IR monochrome CCD camera
- Compact size 29 (H) x 29 (V) x 45 (D) mm
- Standard CCIR supported, Double speed supported
- 752 (H) x 582 (V) 6.50 x 6.25 μm square pixels
- 50 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



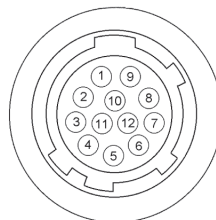
SI-M650CR Specifications

Specifications

| | |
|--------------------------|--|
| Scanning system | 2:1 interlace |
| Pixel clock | 28.375Mhz |
| Line frequency | 31.25Khz |
| Frame rate (full) | 50 frames/sec. |
| Effective pixel | 752 x 582 |
| Chip size | 6.00 (H) x 4.96 (V) mm |
| Cell size | 6.50 (H) x 6.25 (V) μm |
| Pixels in video | |
| Full | 50 frames/sec. |
| V binning | 100 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

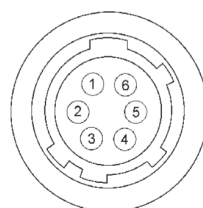
DC-IN/SYNC/Video out



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



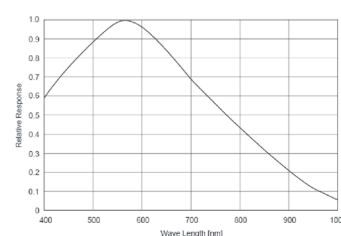
HIROSE HR 10A-7R-6PB

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

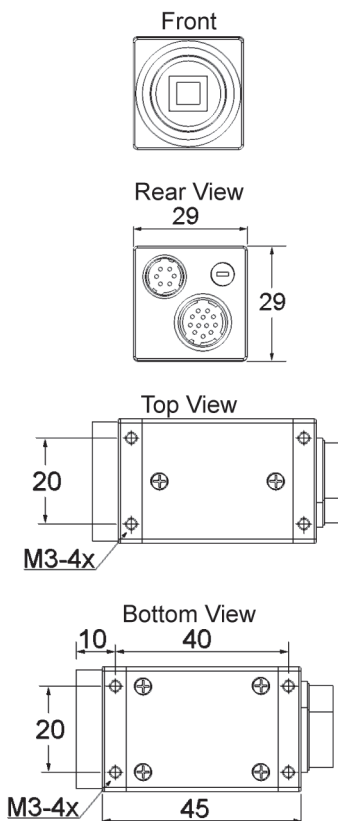
Plugs for cable

- 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-M650CR 4/07