

❖ CV-L107 CL

3 CCD RGB Line Scan Camera



- 3 CCD line scan camera with Camera Link output
- Dichroic RGB beam splitter prism with 3 sensors
- 3 sensors with 2048 pixels, 14 μm x 14 μm
- 28.7 mm scanning width
- Video output in Camera Link: 24 bit in base configuration. 30 bit in medium
- Scan rate up to 19048 lines per second at 40 MHz pixel clock
- Edge pre-select and pulse width trigger modes
- One-push auto white balance
- Two point flat-field and shading correction
- Knee and binning functions for extended dynamic
- Built-in diagnostics
- Lens adapter for Nikon F-mount or P-mount (M42x1)
- Short ASCII commands set-up via RS 232C or Camera Link
- Setup by Windows NT/2000/XP software



Specifications for CV-L107 CL

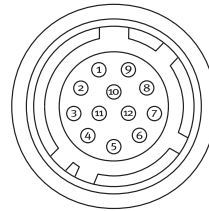
| Specifications | CV-L107 CL |
|--|--|
| Scanning system | Line sensor with internal clock |
| Pixel clock | 40.00 MHz |
| Scan rate | Max. 19048 lines/second (2100 pixels per line) |
| Sensor | 3 line sensors mounted on RGB beam splitter prism |
| Sensor scanning width | 28.7 mm |
| Cell size | 14 (h) x 14 (v) μm |
| Active pixels | 3 x 2048 (h) 3 x 1024 (h) with 2:1 binning |
| Sensitivity | 7.5 mV/n/cm ² (Gain 0 dB, 525 μs exp., 100% video on G) |
| Sensitivity | 162 Lux (Gain 0 dB, 525 μs exp., 100% video on G) |
| S/N ratio | 58 dB on green with gain = -3 dB |
| Video output | 24 bit in CL base configuration 30 bit in CL medium configuration |
| Gain | Master (G). -3 dB to +12 dB R and B. -9 dB to +9 dB |
| White balance | Manual, fixed or one-push Adjustable range 2800 K to 9000 K Fixed: 3900 K, 4600 K or 5600 K |
| Knee function | Individual RGB knee point and slope |
| Shading correction | Individual RGB flat or RB to G (One-push. Range -20%) |
| Flat-field correction | Two point pixel-to-pixel correction |
| Synchronization | Internal X-tal or external trigger |
| Trigger modes | No-shutter, shutter-select and pulse width control |
| Scan rate | Internal generator 18.6 to 19048 lines/sec. in 1024 steps. External trigger pulse up to 19048 lines/sec. |
| Programmable exposure | 50 nsec. to 53.8 msec. in 25 ns increments |
| Functions controlled by RS 232C or CL | Trigger modes, scan rate, exposure time, gain/black level, shading correction, flat-field correction, white balance, knee-function, diagnostics |
| Diagnostics | Test pattern. (Color bar, gray pattern and white) LED for power |
| Lens mount | Nikon F-mount. (Standard) P-mount (M42x1) (Optional) |
| Sensor alignment | Better than ± 0.1 pixel |
| Operating temperature | -5°C to +45°C |
| Humidity | 20 – 80% non-condensing |
| Storage temp./humidity | -25°C to +60°C/20 – 80% non-condensing |
| Vibration | 3G (20Hz to 200Hz, XYZ direction) |
| Shock | 50G |
| Regulations | CE (EN50081-1 and EN50082-2) IEC61000-4-2 Conforming level 4 FCC Part15 Class B RoHS |
| Power | 12V DC \pm 10%. 15W |
| Dimensions (H x W x D) | 90 mm x 90 mm x 90 mm |
| Weight | 860 g |

Ordering Information

CV-L107CL. 3 CCD RGB Line Scan Camera. F-mount.
CV-L107CL. 3 CCD RGB Line Scan Camera. P-mount (M42 x 1 thread).

Connection Pin-out

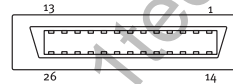
DC In / Trigger



HIROSE HR10A-10R-12PB-01

| Pin | Signal | Function |
|-----|----------------------|----------|
| 1 | Ground | |
| 2 | +12V DC | |
| 3 | Ground | |
| 4 | Reserved | |
| 5 | Ground | |
| 6 | RXD RS 232C* | |
| 7 | TXD RS 232C* | |
| 8 | Ground | |
| 9 | XEEN output | |
| 10 | Trigger input (TTL)* | |
| 11 | +12V DC | |
| 12 | Ground | |

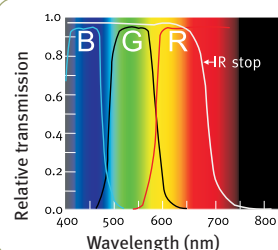
Camera Link Interface



| Pin | Signal | Function |
|-----|---------------------------------|-----------|
| 1 | 14 GND | |
| 2 | 15 X0-/X0+ | CL Data |
| 3 | 16 X1-/X1+ | CL Data |
| 4 | 17 X2-/X2+ | CL Data |
| 5 | 18 Xclk-/Xclk+ | CL Clk |
| 6 | 19 X3-/X3+ | CL Data |
| 7 | 20 SerTC+/SerTC- Serial in * | |
| 8 | 21 SerTFG-/SerTFG+ Serial out * | |
| 9 | 22 CC1-/CC1+ | Trigger * |
| 10 | 23 CC2-/CC2+ | Not used |
| 11 | 24 CC3-/CC3+ | Not used |
| 12 | 25 CC4-/CC4+ | Not used |
| 13 | 26 GND | |

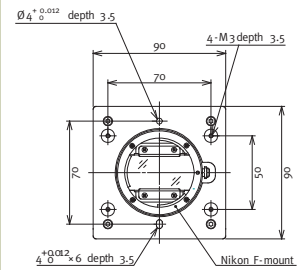
*) In Camera Link or 12 pin Hirose
Note:
Camera Link base configuration shown.
For medium configuration refer to Camera
Link specifications or operation manual.

Spectral Response

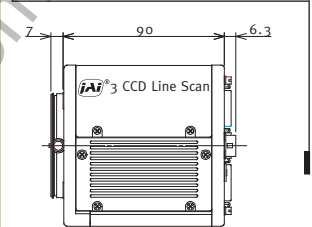


Dimensions

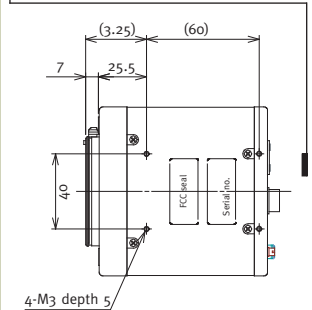
Front view



Side view



Bottom view



Rear view

