



CV-A70 CL

Digital Progressive Scan Color Camera



- ***Compact 1/2" digital progressive scan color camera***
- ***RGB primary color mosaic filter (Bayer) for host based RGB decoding***
- ***Color version of CV-A10CL***
- ***782 (h) x 582 (v) 8.3µm square pixels***
- ***60 fps with full resolution***
- ***250 fps with 1/8 partial scan***
- ***8 or 10 bit output via Camera Link***
- ***High speed shutter from 1/60 to 1/300,000 second***
- ***Edge pre-select, pulse width and sensor gate trigger modes***
- ***Programmable exposure, auto shutter and smearless readout***
- ***LVAL synchronous or asynchronous accumulation***
- ***Reset Continuous Trigger (RCT)***
- ***Iris video output, auto shutter and AGC allow a wider light range***
- ***Setup by Windows NT/2000/XP software via RS 232C or Camera Link***

The leading manufacturer of high performance camera solutions

Specifications for CV-A70 CL

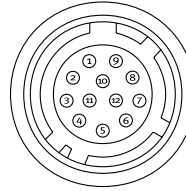
Specifications	CV-A70 CL
Scanning system	Progressive scan
Pixel clock	36.15 MHz
Line frequency	37.5 kHz (964 pixel clock/line)
Frame rate for full frame	60 frames/sec. (625 lines/frame)
CCD sensor	1/2" progressive scan color
Sensing area	6.4 (h) x 4.8 (v) mm
Cell size	8.3 (h) x 8.3 (v) μ m
Effective pixels	782 (h) x 582 (v)
Pixels in video output	
Full	768 (h) x 576 (v) 60 fps
1/2 partial	768 (h) x 287 (v) 112 fps
1/4 partial	768 (h) x 143 (v) 177 fps
1/8 partial	768 (h) x 71 (v) 250 fps
Sensitivity on sensor	1.3 Lux (Max. gain, 50% video)
S/N ratio	>54 dB
Video output.	
Digital	8 or 10 bits in Camera Link
Auto iris lens video output	0.7 Vpp
Gain	Manual -3 to +12 dB Automatic -3 to +9 dB
Gamma	1.0
Synchronization	Int. X-tal. Ext. HD/VD or random trigger
Ext HD/VD input (Normal mode only)	4 V \pm 2 V. TTL or 75 Ω terminated
Inputs	Camera Link TTL Ext. trigger Ext. trigger TTL 4V \pm 2 V
Outputs	Camera Link TTL Pixel clock, LVAL, FVAL, DVAL, EEN XEEN
Trigger modes	Continuous, Edge pre-select, Pulse width control, Sensor gate control and Reset continuous trigger
Accumulation	LVAL synchronous or asynchronous
Shutter speed EPS	1/60 to 1/300,000 second
Programmable exposure	1/8 line to 625 lines. (3.3 μ s to 16.7 ms)
Pulse width control	2 lines to 120 frames. (66.7 μ s to 2 s)
Auto shutter range	1/60 to 1/25,000
Readout modes	Partial scan. Full, 1/2, 1/4, 1/8 Smearless
Control interface	RS 232C or Camera Link
Functions controlled by CL serial or RS 232C	Shutter, Trigger, Scanning, Readout, Polarity, Black level, Gain
Operating temperature	-5°C to +45°C
Humidity	20 - 80% non-condensing
Storage temp./humidity	-25°C to +60°C / 20% to 90%
Vibration	10G (20Hz to 200Hz XYZ)
Shock	70G
Regulations	CE (EN50081-1 and EN50082-1), FCC part 15 class B
Power	12V DC \pm 10%. 4 W
Lens mount	C-mount
Dimensions	35 x 44 x 80 mm (HxWxD)
Weight	150g

Ordering Information

CV-A70 CL 1/2" Digital Progressive Scan Color CCD Camera

Connection Description

DC-IN/TRIGGER

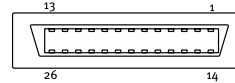


HIROSE HR10A-10R-12PB-01

- | | | |
|-----|----|-----------------------------|
| Pin | 1 | Ground |
| | 2 | +12V DC |
| | 3 | Ground |
| | 4 | Auto iris lens video output |
| | 5 | Ground |
| | 6 | HD input/RXD RS 232C * |
| | 7 | VD input/TXD RS 232C * |
| | 8 | Ground |
| | 9 | XEEN output |
| | 10 | Trigger 1 input (TTL)* |
| | 11 | N/C |
| | 12 | Ground |

Camera Link interface

26 pin MDR connector
3M 10226-1A10JL

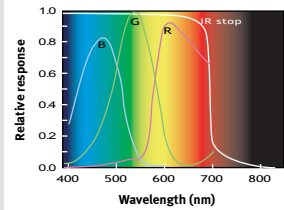


- | Pin | Signal | Function | |
|-----|--------|-----------------|-------------|
| 1 | 14 | GND | |
| 2 | 15 | X0-/X0+ | CL Data |
| 3 | 16 | X1-/X1+ | CL Data |
| 4 | 17 | X2-/X2+ | CL Data |
| 5 | 18 | Xclk-/Xclk+ | CL Clk |
| 6 | 19 | X3-/X3+ | CL Data |
| 7 | 20 | SerTC+/SerTC- | Serial in* |
| 8 | 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 | |

Camera Link base configuration.

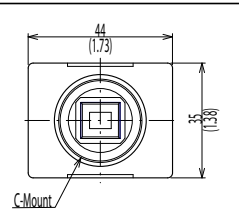
*) In Camera Link or 12 pin Hirose

Spectral Sensitivity

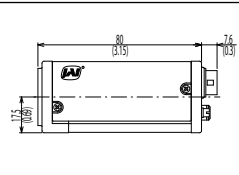


Dimensions

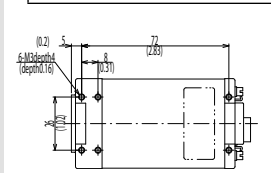
Front view



Side view



Bottom view



Rear view

