

❖ CV-A55 IR

Monochrome Interlaced



- *Compact 1/2" monochrome CCD camera*
- *EIA: 768 (h) x 494 (v) pixels. CCIR: 752 (h) x 582 (v) pixels.*
- *Improved sensitivity, dynamic range with NIR response*
- *High S/N ratio >56 dB*
- *Gain control range from -3 dB to +24 dB*
- *Shutter speeds from off to 1/10,000 second in 8 steps*
- *1.0 or 0.45 gamma selectable*
- *Flexible pin-out and I/O configuration via DIP switches*
- *Edge pre-select, pulse width control and frame delay trigger modes*
- *Asynchronous reset (trigger) for "image on demand" operation*
- *Interlaced or non-interlaced scanning. Field or frame accumulation*
- *Integration mode for long time exposure*
- *Easy setting of features and functions via rear panel switches*
- *C-mount with adjustable back focus*



Specifications for CV-A55 IR

Specifications	CV-A55 IR EIA	CV-A55 IR CCIR
Sensors	1/2" interlaced scan IT CCD	
	ICX428ALL	ICX429ALL
Active pixels	768 (h) x 494 (v)	752 (h) x 582 (v)
Active area	6.45 (h) x 4.84 (v)	6.47 (h) x 4.83 (v)
Cell size	8.4 (h) x 9.8 (v) μm	8.6 (h) x 8.3 (v) μm
Scanning	525 lines EIA	625 lines CCIR
Synchronization	Internal/External auto select	
	$fH=15.734\text{ KHz}$ $fV=59.94\text{ Hz}$	$fH=15.625\text{ KHz}$ $fV=50.00\text{ Hz}$
Pixel clock	14.318 MHz	14.1875 MHz
TV Resolution	570 (h) x 350 (v)	560 (h) x 420 (v)
S/N ratio	>56 dB (0 dB gain)	
Sensitivity	0.04 lux (Max. gain, shutter OFF, 50% video)	
Video output	1.0 V p-p, 75 Ω , VS (DC coupled)	
AGC	ON/OFF (back panel selectable)	
Gain	Manual -3 to +24 dB	
Gamma	1.0/0.45 Selectable	
Lens mount	C-mount	
Power requirement	12V DC $\pm 10\%$, $\leq 100\text{ mA}$, 1.2W	
Operating temperature	-5°C to +45°C	
Vibration	10G (20Hz to 200Hz, XYZ)	
Shock	70G, 11 ms, half-sine	
Dimensions (H x W x L)	35 mm x 44 mm x 58 mm	
Weight	125 g	

Switch Settings

The CV-A55 IR operates in the following modes that can be selected by the DIP switches on the rear panel.

GAIN SW1



SHUTTER			TRIGGER		FIELD/FRAME	GAMMA	GAIN
S1	S2	S3	S4	S5	S6	S7	S8

DEFAULT							
OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
No Shutter			Normal		Field	$\gamma=1$	Manual

OFF	OFF	ON	OFF	ON	ON	ON	ON
1/100* or 1/120			EPS		Frame	$\gamma=0.45$	Auto

OFF	ON	OFF	ON	OFF
1/250		PWC		

OFF	ON	ON	ON	ON
1/500		FDR		

ON	OFF	OFF
1/1000		

ON	OFF	ON
1/2000		

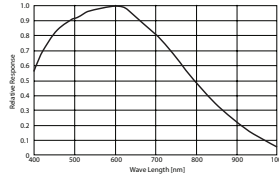
ON	ON	OFF
1/4000		

ON	ON	ON
1/10000		

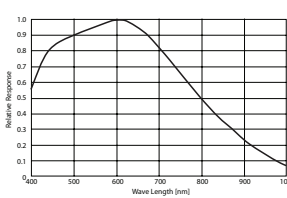
*CCIR version

Spectral Response

CV-A55 IR (EIA)

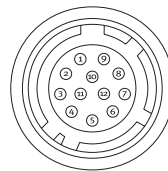


CV-A55 IR (CCIR)



Connector Pin-out

DC-IN/VIDEO OUT
EXT.HD/VD IN



HIROSE HR10A-10P-12S

12-Pin Connector

Pin #	Signal
1	GND
2	+12V DC input
3	GND
4	Video Output ¹
5	GND/NC ²
6	VINIT/HD IN/SYNC OUT ²
7	VD IN/CLK OUT/VD OUT ²
8	GND
9	HD IN/VINIT/HD OUT ²
10	NC
11	NC/Integration ²
12	GND/NC ²

¹ This video output is parallel with BNC output

² The selection of signals is done by internal switches. DEFAULT setting is listed first. Refer to manual for instructions.

Ordering Information

Camera

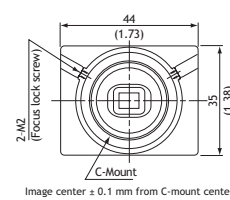
RoHS Compliant CV-A55 IR E (EIA), CV-A55 IR C (CCIR)

Optional Accessories (MUST BE ORDERED SEPARATELY)

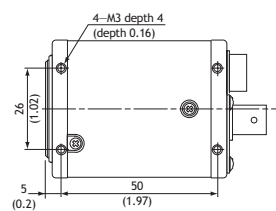
Power Cable	12P-02S
Power Supply	PD-12 Series

Dimensions

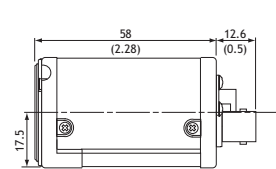
Front view



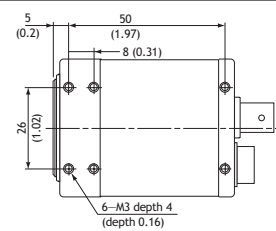
Top view



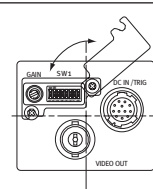
Side view



Bottom view



Rear view



See the possibilities

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