



2.0 Megapixel CCD Monochrome Color
with Versatile Camera Link™ Output



CS3970CL

Key Features

HIGH RESOLUTION 1/1.8 type Bayer array CCD delivers effective pixel count of 1628 (H) x 1236 (V) for excellent results

SQUARE GRIDS The CCD pixels arrayed in square grids facilitate faster, more accurate computation of image processing

CAMERA LINK™ enables fast, cost-effective set-ups, sends images to a PC, and allows operator to control camera functions from the PC

FULL-FRAME SHUTTER permits all pixels to be output so high resolution can be achieved without image deterioration

ALL-PIXEL READOUT MODE all signals output in 1/15 second

PARTIAL SCAN MODE scans 552 lines in the center of the screen

RANDOM TRIGGER SHUTTER grabs the shot image at arbitrary timing

SPECIFICATIONS

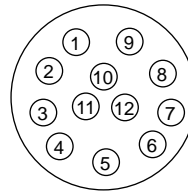
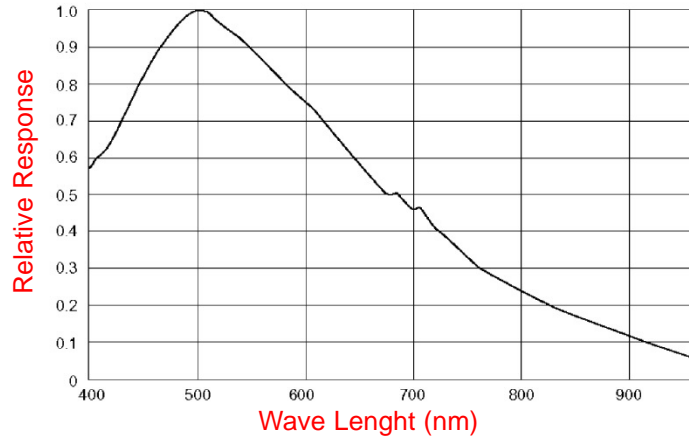
Image Sensor	1/1.8-type Interline CCD
Scanning System	Progressive Scan
Total Pixels	1688(H) x 1248(V)
Active Pixels	1628(H) x 1236(V)
Pixel Size	4.4(H) x 4.4(V) micron m
Frame Rate	
All Pixel Readout	15 FPS, 1628(H) x 1236(V)
Partial Scan	30 FPS, 1628(H) x 552(V)
High-Speed Draft	48 FPS, 1628(H) x 309(V)
Sync System	Internal Sync
Aspect Ratio	4:3
Subject Illumination	400 lux@F8, 3000K
Minimum Subject Illumination	2 lux
Video Output	Camera Link™ Compliant
Data Output	12/10/8 bit switching
Gain	0 to +12 dB (512 levels)
Setup	88 to 272 LSB (32 levels)
White Balance	OPWB/MANU Switching
Gamma Correction	OFF (1.0) Fixed
Electronic Shutter	1/30s to 10,000s
Shutter Speed	AE/MANU switching
Readout Mode	
All Pixel Readout	1/15 to 1/35000s (1250 levels)
Partial Scan	1/30 to 1/35000s (625 levels)
High-Speed Draft	1/48 to 1/35000s (313 levels)
Random Trigger Shutter	ON/OFF, Fixed, Pulse Width
Multiple Shutter	ON/OFF switching
Power Supply Voltage	DC12V±10% (ripple 50mV(p-p) or less)
Power Consumption	2.8W
Performance Guaranteed	0 to 40°C
Operation Guaranteed	-5 to 45°C
Lens Mount	C-Mount
Flange Back	17.526 mm
Dimensions	54mm(W) x 43mm(H) x 59mm(D)
Weight	150g
Operating Conditions	0 to 40°C, 10 to 90% Humidity

Typical Applications

Video image capture applications for the CS3970CL include machine vision, OCR/DCR reading, gauging, robotics, inspection, monochrome precision surveillance, scientific and nearly any OEM need.

Typical Spectral Response

(lens characteristics and light source is not reflected in table)

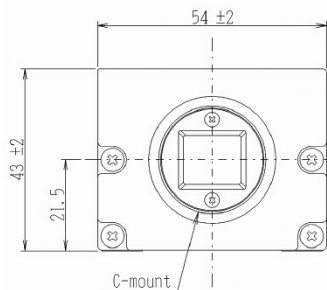
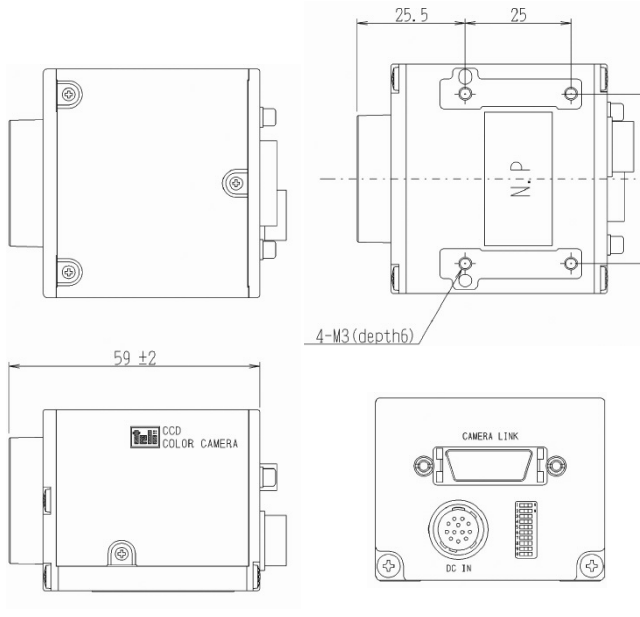


Power Supply & Sync Signal Input/Output DC IN

Pin Number	I/O	Signal Name
1	-	GND
2	I	+12V
3	-	GND
4	-	N.C.
5	-	GND
6	-	N.C.
7	-	N.C.
8	-	GND
9	-	N.C.
10	O	WEN
11	I	TRIG
12	-	GND

Video Output/Controlling Connector (Camera Link™) MDR 26-PIN

Pin Number	I/O	Signal Name
1	-	GND
2	O	TxOUT0-
3	O	TxOUT1-
4	O	TxOUT2-
5	O	Tx CLK OUT-
6	O	Tx OUT3-
7	I	Ser TC(RxD) +
8	O	Ser TFG (TxD) -
9	I	CC1(TRIG) -
10	I	CC2 (MULTI) +
11	I	CC3-
12	I	CC4+
13	-	GND
14	-	GND
15	O	Tx OUT0+
16	O	Tx OUT1+
17	O	Tx OUT2+
18	O	Tx CLK OUT+
19	O	Tx OUT3+
20	I	Ser TFG (RxD) -
21	O	Ser TFG (TxD) +
22	I	CC1(TRIG) +
23	I	CC2 (MULTI) -
24	I	CC3+
25	I	CC4-
26	-	GND



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