



Three Layer 5.0MP CMOS Color Camera with IEEE1394.b Interface

3-Layer CMOS



Key Features

THREE LAYER CMOS: The CSF5M7C3L18M incorporates the Foveon X3® 5.0 megapixel CMOS sensor with 1440 x 1080 x 3 matrix. Matching the performance of a 3CCD, this sensor features three separate layers of pixel sensors (RGB) to capture light at every pixel location which significantly sharpens the image with little interference and moiré.

FIREWIRE B: Compatibility with standard Firewire (IEEE1394.b-2002) components allow for easier, more cost-effective integration. Transfer rate is 800Mbps maximum. Standard is bilingual (Digital Camera Ver1.31).

2 x 2 BINNING READOUT: Provides high-speed readout by the binning of 2 x 2 pixel resulting in 700 x 525 images at 20 FPS (YUV422 16bit or RGB 24bit). Full image is 1400 x 1050 at 7 FPS.

FULL-FEATURED PERFORMANCE: Camera's feature set includes manual control gain, color correction, random trigger shutter, scalable video, one-push and manual white balance, Gamma correction and detail enhancer.

REMOTE HEAD: 29mm camera head allows greater freedom in mounting.

CSF5M7C3L18NR Specifications

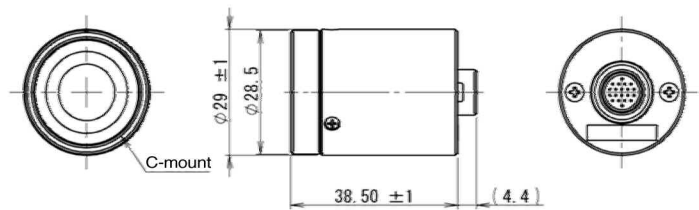
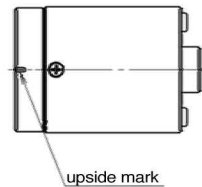
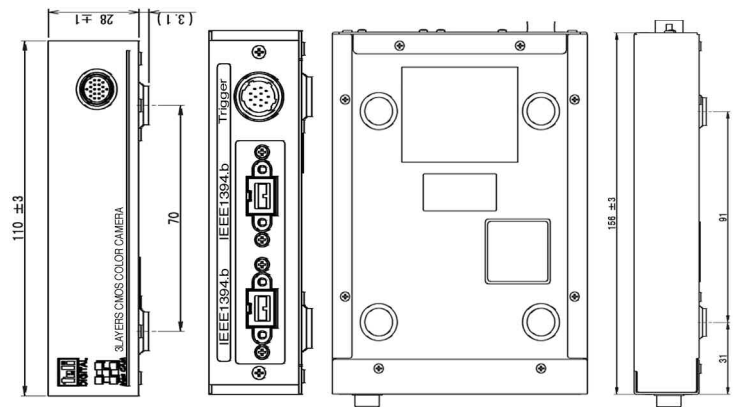
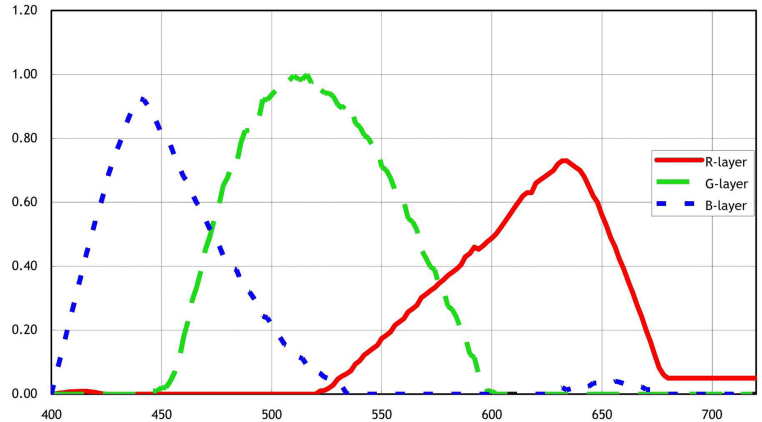
Image Sensor	Three-layer (RGB) Single Chip CMOS Foveon X3® 5.0 megapixel
Total Pixels	1440 (H) x 1088 (V) x 3 (L)
Effective Pixels	1420 (H) x 1060 (V) x 3 (L)
Video Out Pixels	1400 (H) x 1000 (V) x 3 (L)
Frame Rate	1400 x 1000 @ 7 FPS 700 x 500 @ 25 FPS
Scanning Area	1/1.8 type
Pixel Size	5.00µm (H) x 5.00µm (V)
Scan Method	Progressive
Sync Method	Internal
Base Clock Frequency	40.000 MHz ±100ppm
Sensitivity	3000lx, F8, 5000K
Minimum Subject Illumination	50lx (F1.4, GAIN Max, Video 50%, Gamma ON)
Shutter	Rolling, Global
Random Trigger Shutter	Yes
Video Output	IEEE 1394b-2002 (800Mbps)
Protocol	IIDC 1394 Digital Camera Spec Ver1.31
Output Mode	RGB 24bit/YUV422 16bit
Output Pixels	350 (H) x 250 (V) - 1400 (H) x 1000 (V) 165 (H) x 125 (V) - 700 (H) x 500 (V)
Gain	Software adjustable
Setup Level	0LSB to 32LSB
White Balance	Manual, One Push
Manual Setting Range	3000K to 6500K
Manual Setting Method	R-gain and B-gain set independent
One Push Effective Range	3000K to 6500K
One Push Effective Area	Full Screen
Gamma Correction	ON/OFF Switching
Lens Mount	C-mount
Dimensions	
Camera Head	29mm x 38.5mm (1.14" x 1.51")
Control Unit	110mm (W) x 28mm (H) x 156mm (D) 4.33" (W) x 1.1" (H) x 6.14" (D)
Weight	
Camera Head	60 g (2.1 ounce)
Control Unit	480 g (16.9 ounce)
Operating Temperature	0 to 40° C (32° to 104° F)
Cable Length	3.0 meters (9.84 ft)
Power Supply	DC +8 to +24 V
Power Consumption	3.8 W (Max)

Typical Applications

Video image capture applications for this camera include endoscope, microscope, chip monitor, wire bender and a variety of medical and industrial imaging tasks.

Typical Spectral Response

Lens characteristics and light source characteristics are not reflected in this table. IR cut filter characteristics are included.



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