

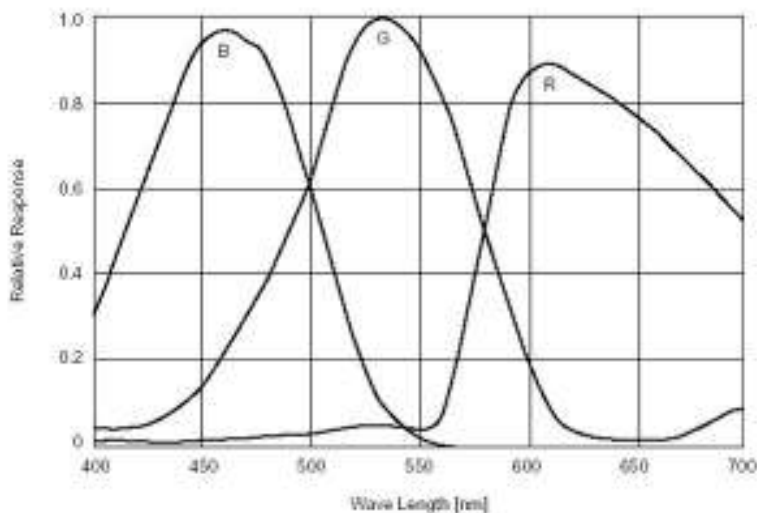
1. Description

Imaging System consists of a color CMOS camera, digital frame grabber, power/data cable, software modules and drivers for Windows, and source code examples for DOS. Typical applications include machine vision, biological or technical imaging, and robotics. The frame grabber and software allow single frame data capture and camera control via I²C interface incorporated into the frame grabber. Camera accepts lenses with standard C-mount connection.

2. Optical specifications

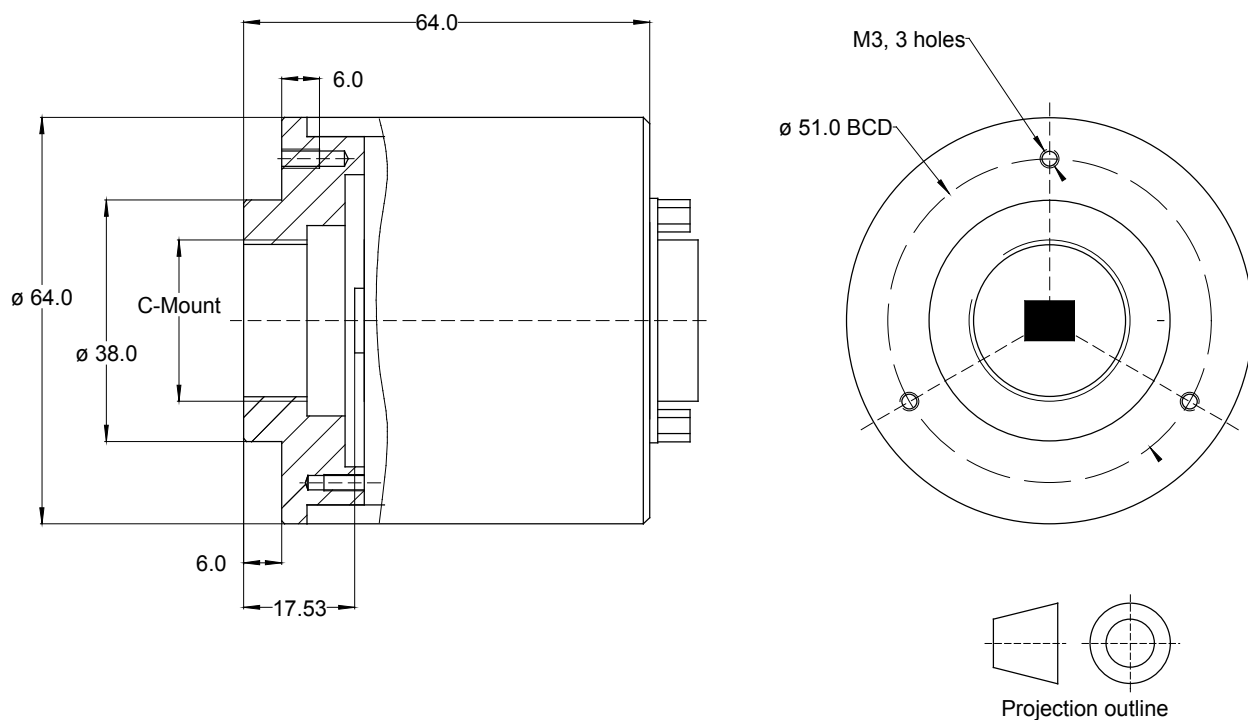
Parameter	Value	Units
Frame size	2592 x 1944	pixels
Pixel size	2.775 x 2.775	microns
Sensitive area size	7.33 x 5.44	mm
Frame rate	3	fps
Scanning mode	Frame readout	-
Pixel depth	5	bits
Spectral sensitivity range	400-850	nm
Sensor's optical format	2 / 3" (C-mount)	-
Flange back length	0.69 (17.53)	in, (mm)

Photosensitive elements of the array are NOT covered with a heat-absorbing glass window to eliminate the influence of ambient near infrared radiation.



3. Mechanical specifications

Parameter	Value	Units
Flange mounting diameter tolerance	-0.05 .. +0.00	mm
Flange mounting depth tolerance	-0.05 .. +0.00	mm
Weight	200	grams
Flange material	Aluminum, anodized flat black	-
Cover material	Aluminum, anodized	-
Attachment thread	C-mount type (1"x32TPI)	-
Operating temperature range	-10 .. +60	Celsius deg
Protection	IP 54	-
Maximum allowable shock	3	G
Maximum allowable relative humidity	Up to 90% permissible	%
Output connector	15-pin D, male	-



4. Software, frame grabber specifications

PCI-bus frame grabber allocates 8 Mbytes of memory in the 32-bit PCI memory space. Pixel intensity values can be randomly read directly from the frame grabber's on-board memory. Frame grabber controls the digital camera via incorporated I²C interface to set video and windowing parameters, initiates single frame snapshot, or reset the camera. The frame grabber can be accessed in both DOS and Windows modes. Customers can create their own applications under DOS or Windows environments. Detailed information on the camera's parameters as well as the source code examples are included. They demonstrate how to read image data, control camera parameters, and use the 32-bit memory areas.

For the DOS mode, a 32-bit DOS extender or a 32-bit compiler is required. **No drivers required for the DOS mode.** For Windows, the frame grabber can be directly accessed with the use of drivers provided. WDM drivers are compatible with Windows 98, Me, NT, 2000, and XP.

Important note for the color camera version: the frame grabber does not have a hardware image processor to convert the Bayer pattern into full-color image. This is to be done in application software.

Images must undergo the following procedures:

1. Color interpolation from the Bayer pattern into R-G-B image
2. White balancing depending on the illuminating light such as daylight, U30, cool white, or incandescent "A"

Colorimetric constants and examples of the equations are provided in the source code files supplied.

5. Available options

1. Signal conditioning for light field gauging or metrology applications
2. Signal conditioning for intensity/color reproduction applications
3. Power/Data cable up to 10 meters
4. Heat-absorbing glass
5. Lens engineering and sourcing

Notice

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