

DFK 51AU02 Color Camera

The Imaging Source "51" Series USB 2.0 Camera



Only 50.6 x 50.6 x 56 mm

Lens not included

The Imaging Source DFK 51AU02 color camera has a USB 2.0 interface and is the perfect solution for many industrial automation, quality assurance, security, surveillance and medical applications. The color camera ships with the very sensitive $1/1.8$ " Sony CCD ICX274AQ sensor. With up to 12 images per second, the DFK 51AU02 is a low cost, yet highly versatile imaging solution. The camera includes a C to CS mount adapter, making it compatible to C and CS mount lenses. Using the optional CS to M12 board lens adapter, the camera is also compatible to M12 board lenses.

Drivers, SDKs, programming samples, extensions and end-user software for Microsoft Windows can be freely downloaded from our web site (see below). Community-driven, Open Source projects allow the camera to be used on Linux. Extensions for Microsoft Windows enable the camera to be integrated in to common machine vision software libraries, such as LabView. In addition, the camera is compatible to the Open Source computer vision library, OpenCV.

Features

- USB 2.0 interface.
- $1/1.8$ " Sony CCD ICX274AQ.
- Global shutter.
- 1,600 x 1,200 (1.9 MP).
- Up to 12 images per second.
- Compatible to C and CS mount lenses.
- Only 50.6 x 50.6 x 56 mm.

Accessories

- CS to C mount adapter (shipped as standard).
- CS to M12 board lens adapters.
- C and CS mount lenses.
- M12 board lenses.
- Standard USB 2.0 cable in various lengths.
- 5 m USB 2.0 cable with fixing screws.

Device Drivers

Device Driver for The Imaging Source USB 2.0 Cameras.

Software Development Kits (SDKs)

IC Imaging Control .NET Component, C++ Class Library, IC Imaging Control C Library, IC Imaging Control for VC++ 6.0, IC Imaging Control ActiveX and IC Imaging Control ActiveX Runtime Setup.

Programming Samples

Barcode Scanner C# Sample for IC Imaging Control.

Extensions

TWAIN Source for IC Imaging Control, Cognex VisionPro AIK Plugin for IC Imaging Control, ActivVisionTools Driver for IC Imaging Control, HALCON Extension for IC Imaging Control, LabVIEW Extension for IC Imaging Control and IC Matlab Plugin for Matlab 10.0.

End User Software

IC Capture, Image Acquisition.

Software Tools

Processor Idle State Manager.

DFK 51AU02 Specification

GENERAL BEHAVIOR

Video formats @ frame rate	1,600 x 1,200 (1.9 MP), RGB32 @ 12, 7.5, 3.75 FPS 1,600 x 1,200 (1.9 MP), Y800 @ 12, 7.5, 3.75 FPS
Sensitivity	0.15 lx
Dynamic range	8 bit

INTERFACE (OPTICAL)

IR cut filter	yes
Sensor specification	Sony ICX274AQ
Shutter	Global
Format	1/1.8 "
Resolution	H: 1,620 pixel, V: 1,220 pixel
Pixel size	H: 4.4 µm, V: 4.4 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)

Supply voltage	4.5 VDC to 5.5 VDC
Current consumption	approx 500 mA at 5 VDC

INTERFACE (MECHANICAL)

Dimensions	H: 50.6 mm, W: 50.6 mm, L: 56 mm
Mass	265 g

ADJUSTMENTS (MANUAL)

Shutter	1/10,000 s to 30 s
Gain	0 dB to 36 dB
Offset	0 to 511
Saturation	0 % to 200 %
White balance	-2 dB to 6 dB

ADJUSTMENTS (AUTOMATIC)

Shutter	1/10,000 s to 30 s
Gain	0 dB to 36 dB
Offset	0 to 511
White balance	-2 dB to 6 dB

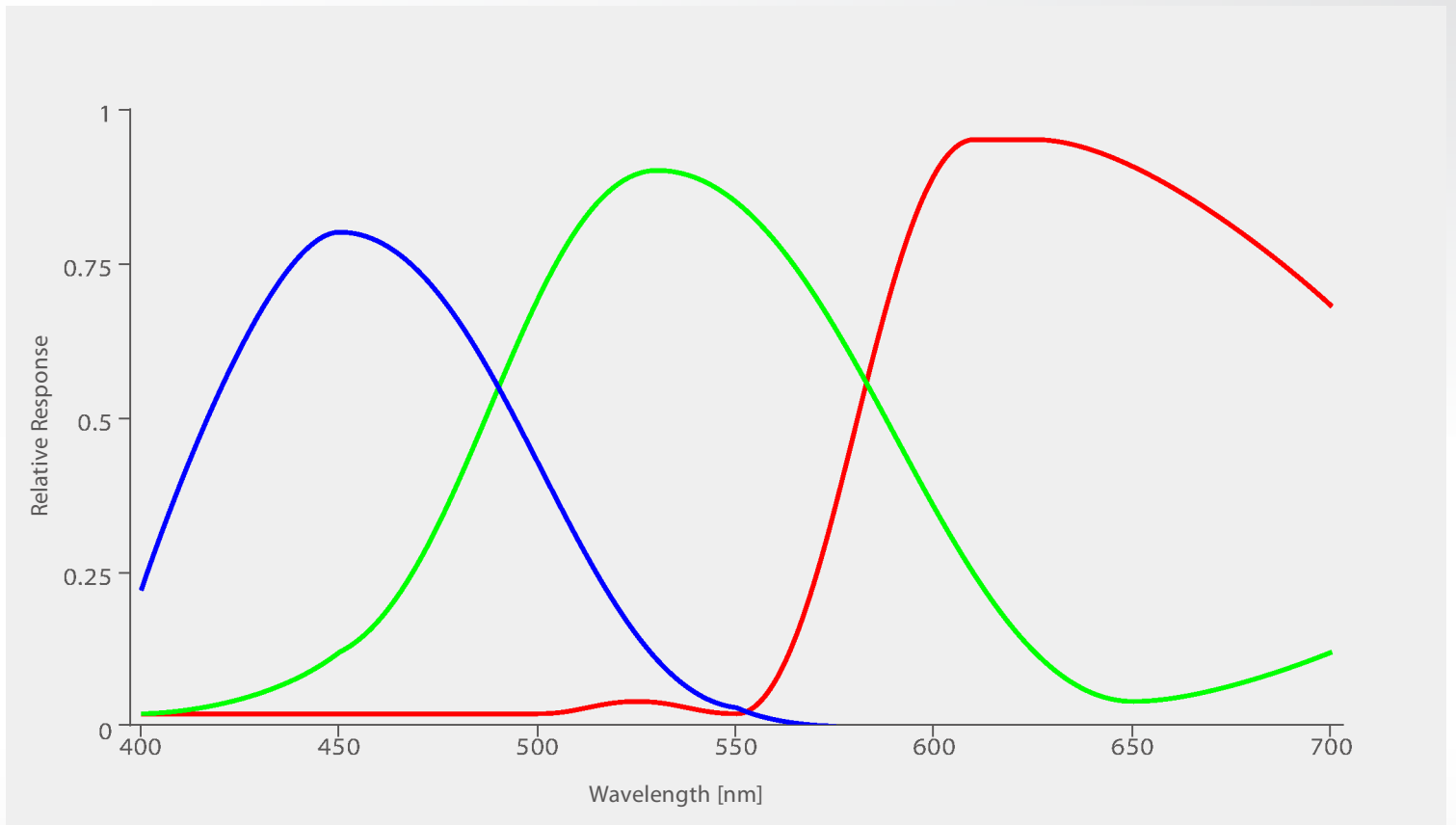
ENVIRONMENTAL

Temperature (operation)	-5 °C to 45 °C
Temperature (storage)	-20 °C to 60 °C
Humidity (operation)	20 % to 80 % non-condensing
Humidity (storage)	20 % to 95 % non-condensing

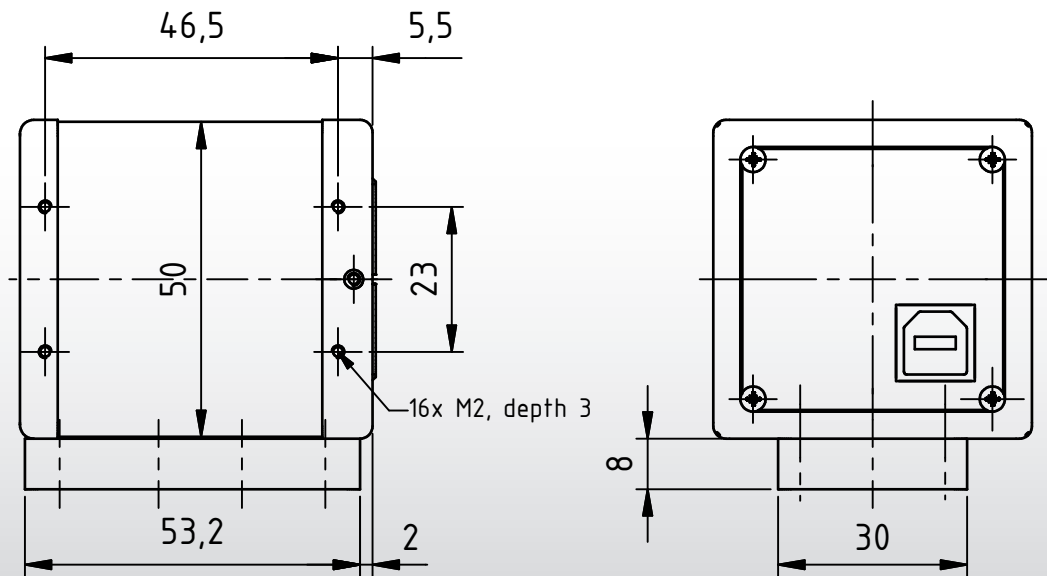
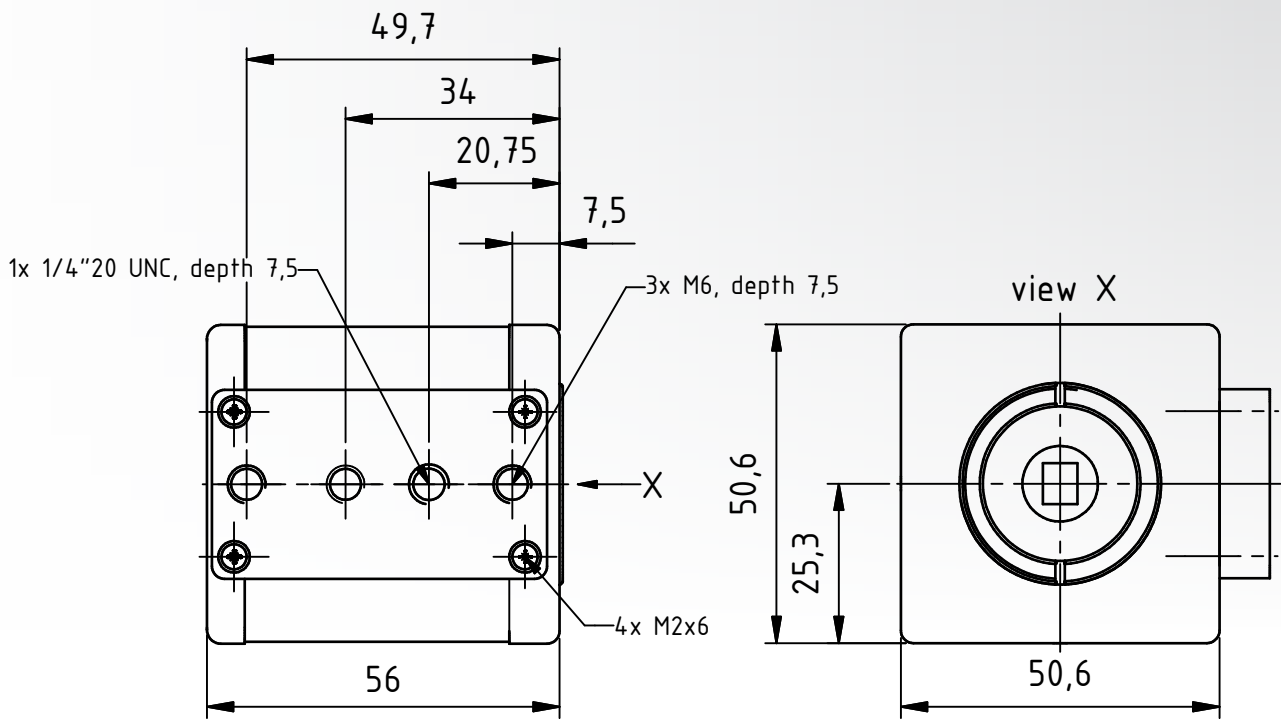
Subject to change

Sony ICX274AQ Spectral Response Curve

CCD Sensor in DFK 51AU02



DFK 51AU02 Dimensional Diagram



Dimensions: mm
 Tolerances: DIN ISO 2768m

