DMK 51AU02 Monochrome 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 DMK 51AU02 monochrome camera has a USB 2.0 interface and is the perfect solution for many industrial automation, quality assurance, security, surveillance and medical applications. The monochrome camera ships with the very sensitive $1/1.8$ " Sony CCD ICX274AL sensor. With up to 12 images per second, the DMK 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.

The Imaging Source authors and supports drivers, SDKs, extensions and end-user software for Microsoft Windows, which can be freely downloaded from our web site. Extensions for Microsoft Windows enable the DMK 51AU02 to be integrated in to common machine vision software libraries, such as LabView and OpenCV.

Features

- USB 2.0 interface.
- $1/1.8$ " Sony CCD ICX274AL.
- 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 for Microsoft Windows

Device Driver for The Imaging Source USB Cameras.

Software Development Kits (SDKs) for Microsoft Windows

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

Extensions for Microsoft Windows

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, IC Matlab Plugin for Matlab 10.0 R2010 and IC Matlab Plugin for Matlab R2013b.

End User Software for Microsoft Windows

IC Capture, Image Acquisition, IC Fullscreen Presenter and Footswitch software for IC Capture.

Software Tools for Microsoft Windows

Processor Idle State Manager and Hot Pixel Correction.

DMK 51AU02 Specification

GENERAL BEHAVIOR	
Video formats @ frame rate	1,600 x 1,200 (1.9 MP), Y800 @ 12, 7.5, 3.75 FPS
Sensitivity	0.05 lx
Dynamic range	8 bit

INTERFACE (OPTICAL)	
IR cut filter	no
Sensor specification	Sony ICX274AL
Shutter	Global
Format	$^1/_{1.8}$ "
Resolution	H: 1,620 pixel, V: 1,220 pixel
Pixel size	H: 4.40 µm, V: 4.40 µm
Lens mount	C/CS

INTERFACE (ELECTRICAL)	
Interface	USB
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

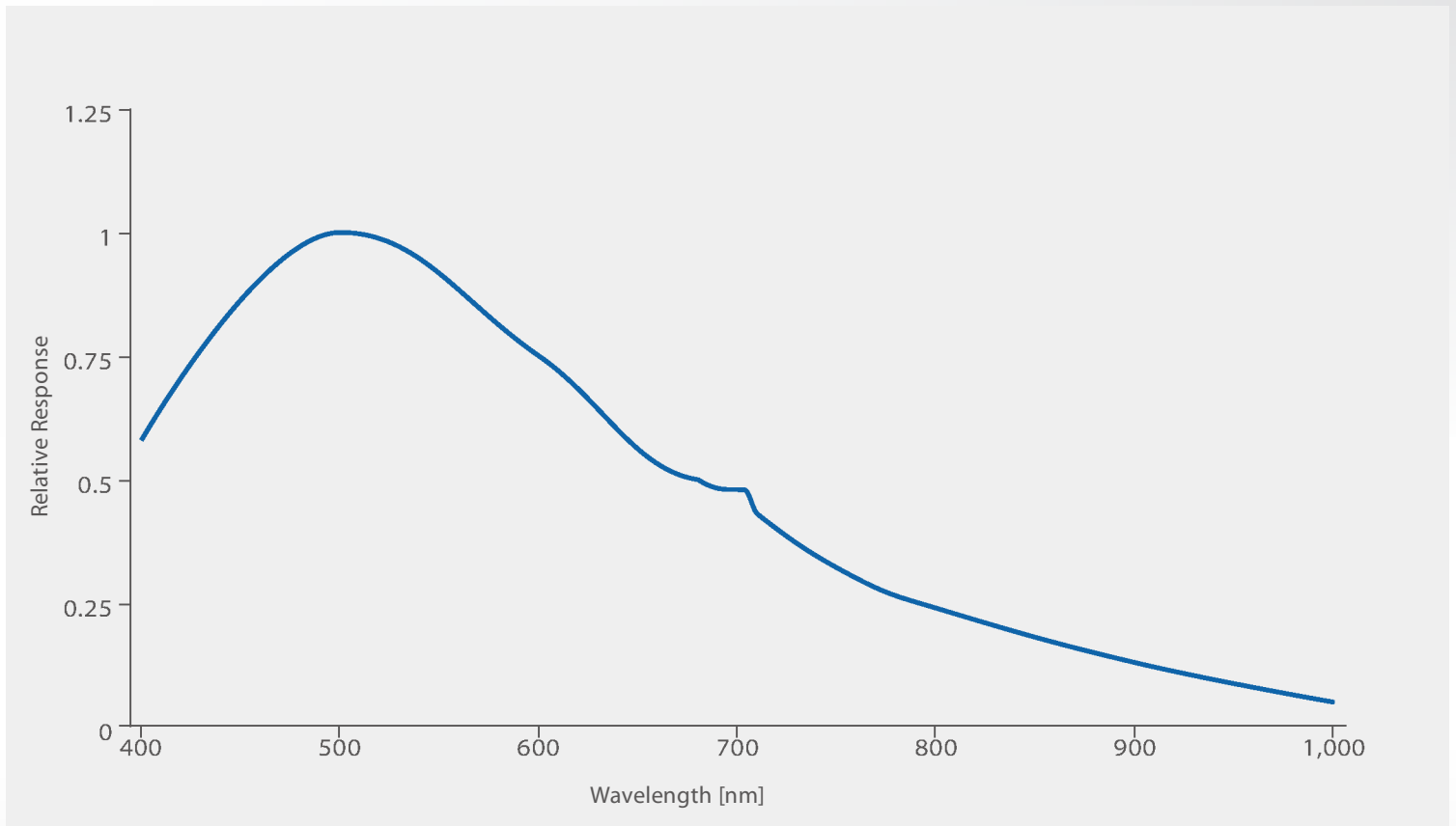| ADJUSTMENTS (AUTOMATIC)	
Shutter	$^1/_{10,000}$ s to 30 s
Gain	0 dB to 36 dB
Offset	0 to 511
White balance	-2 dB to +6 dB

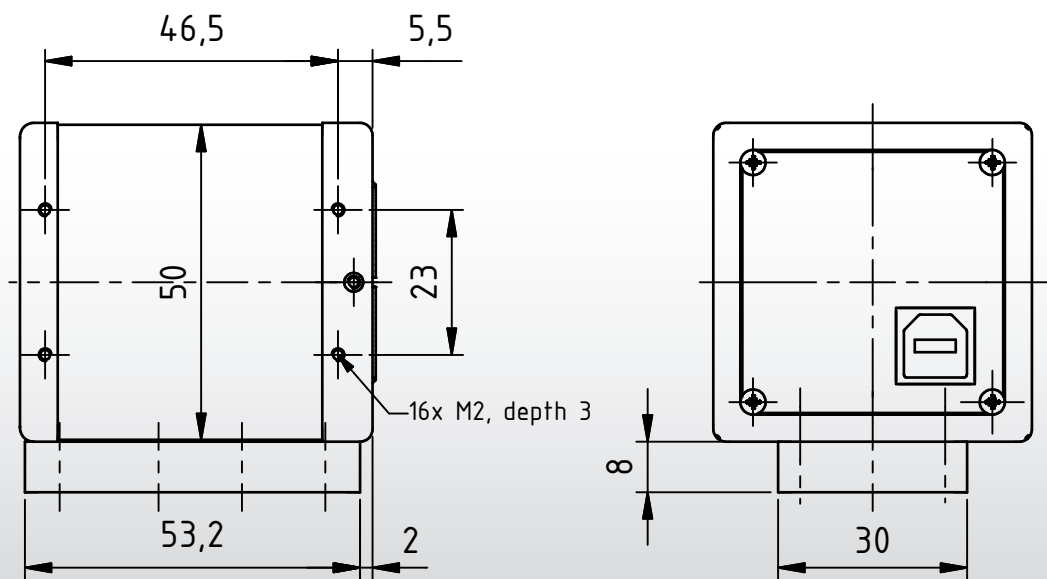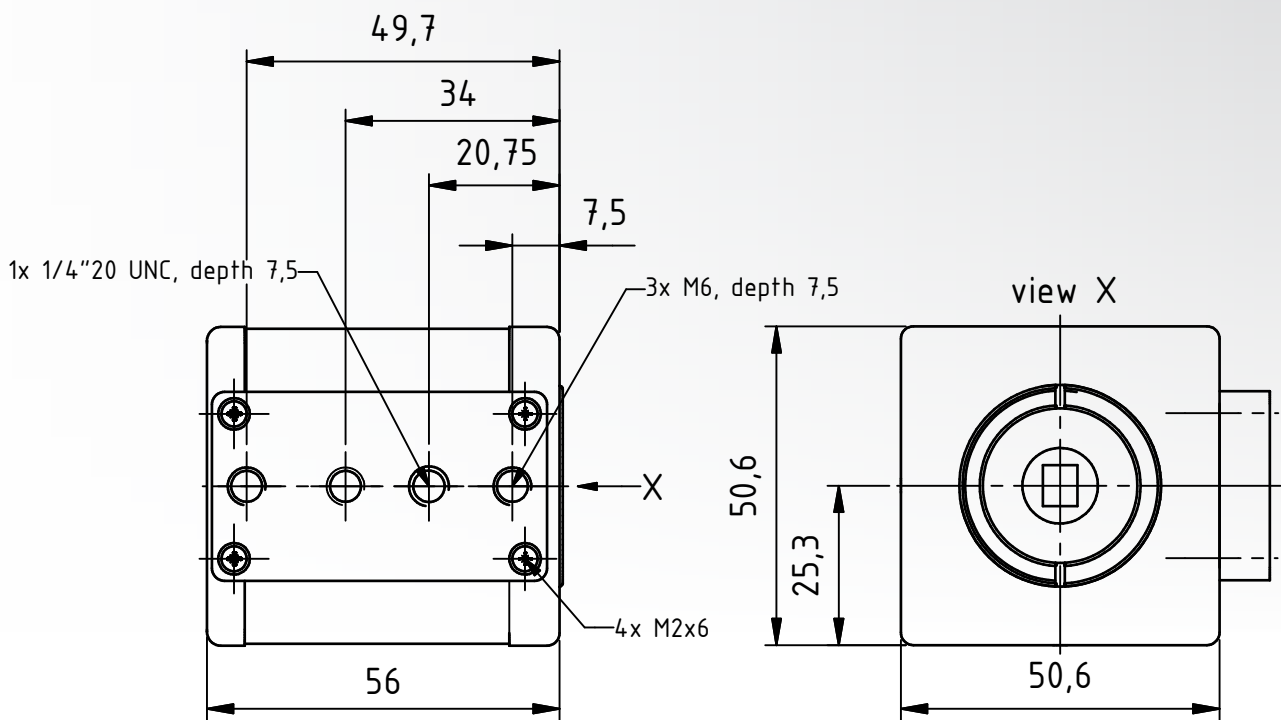| ENVIRONMENTAL	
Temperature (operation)	-5 °C to 45 °C
Temperature (storage)	-20 °C to 60 °C
Humidity (operation)	20 % to 80 % non-condensing
Humidity (storage)	20 % to 95 % non-condensing

Subject to change

Sony ICX274AL Spectral Response Curve

CCD Sensor in DMK 51AU02

DMK 51AU02 Dimensional Diagram

49,7

34

20,75

7,5

1x 1/4"20 UNC, depth 7,5

3x M6, depth 7,5

view X

X

50,6

25,3

50,6

4x M2x6

56

46,5

5,5

50

23

16x M2, depth 3

53,2

2

8

30

Dimensions: mm
Tolerances: DIN ISO 2768m