DMK 21BU04 Monochrome Camera

The Imaging Source "21" Series USB 2.0 Camera

Only 50.6 x 50.6 x 56 mm

Lens not included

The Imaging Source DMK 21BU04 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 $1/4$ " Sony CCD ICX098BL sensor. With up to 60 images per second, the DMK 21BU04 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.
- $1/4$ " Sony CCD ICX098BL.
- Global shutter.
- 640 x 480 (0.3 MP).
- Up to 60 images per second.
- Trigger input.
- 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.
- Trigger cable.

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
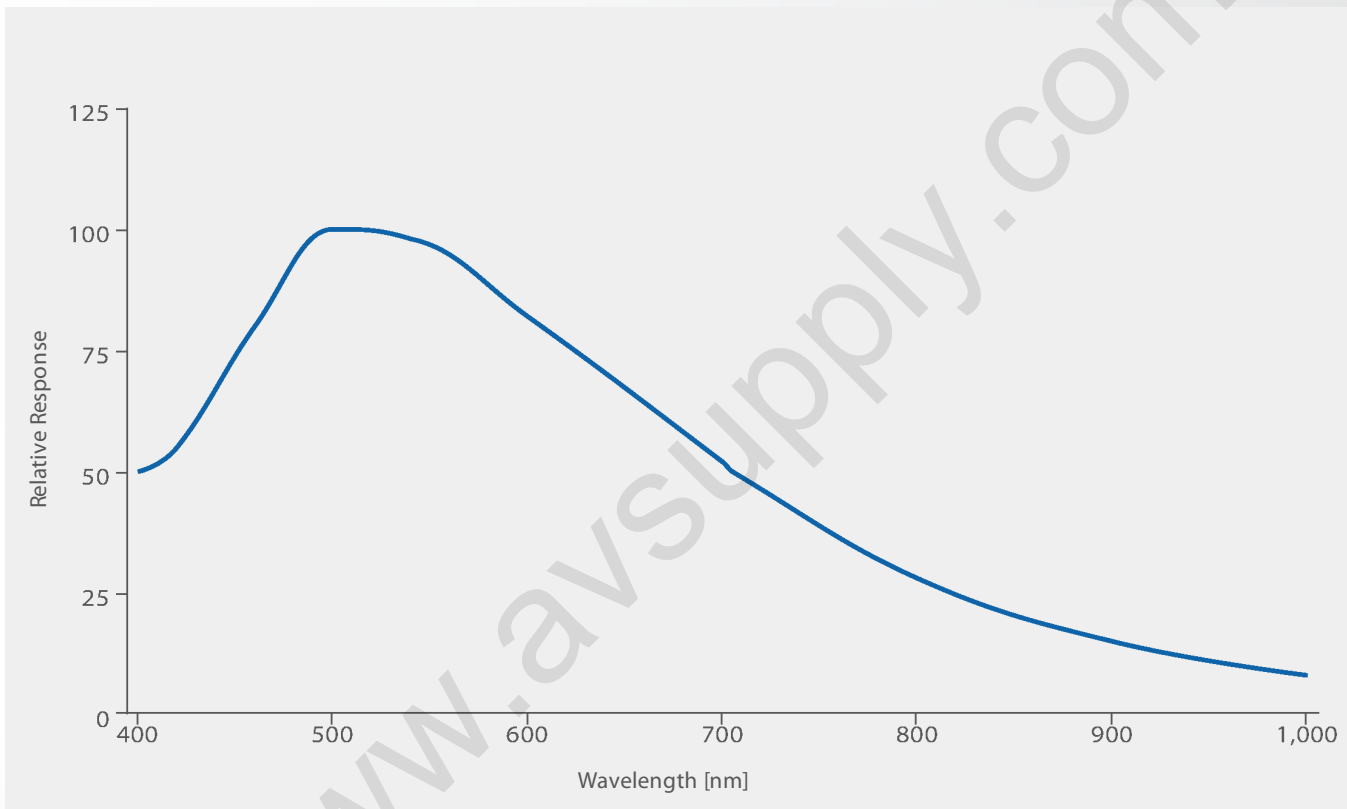
IC Capture, Image Acquisition.

Software Tools

Processor Idle State Manager.

For design help, accessories or pricing, please contact:
sales@avsupply or call: 1-858-565-1101

AUDiO ViDEO SUPPLY
1-800-284-2288 sales@avsupply.com
www.avsupply.com

DMK 21BU04 Specification

GENERAL BEHAVIOR	
Video formats @ frame rate	640 x 480 (0.3 MP), Y800 @ 60, 30, 15, 7.5, 3.75 FPS
Sensitivity	0.03 lx
Dynamic range	8 bit

INTERFACE (OPTICAL)	
IR cut filter	no
Sensor specification	Sony ICX098BL
Shutter	Global
Format	$\frac{1}{4}$ "
Resolution	H: 640 pixel, V: 480 pixel
Pixel size	H: 5.6 µm, V: 5.6 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	$\frac{1}{10,000}$ s to 30 s
Gain	0 dB to 36 dB
Offset	0 to 511

ADJUSTMENTS (AUTOMATIC)	
Shutter	$\frac{1}{10,000}$ s to 30 s
Gain	0 dB to 36 dB
Offset	0 to 511

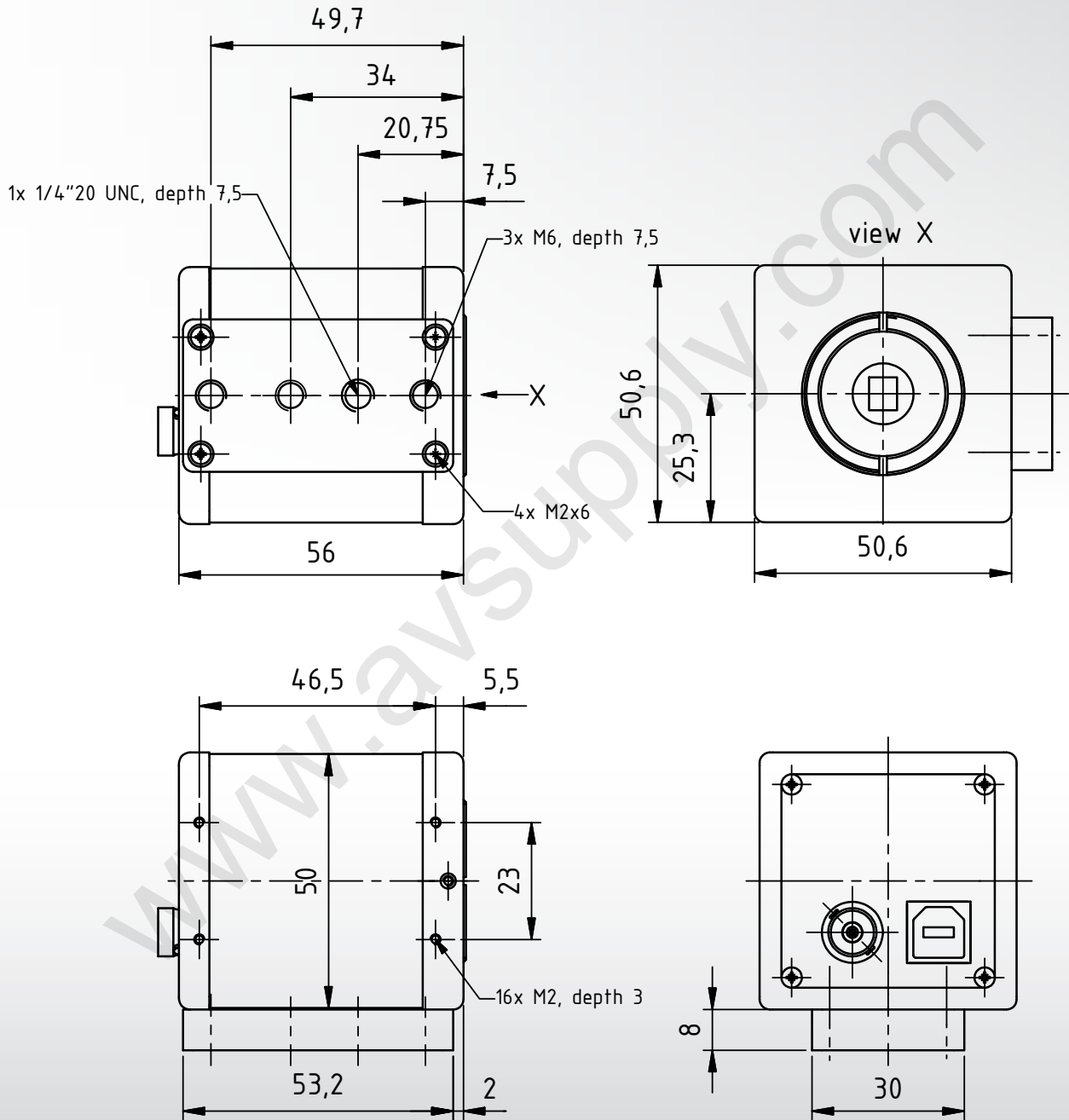| ENVIRONMENTAL	
Temperature (operation)	-5 °C to 45 °C
Temperature (storage)	-20 °C to 60 °C
Humidity (operation)	20 % to 80 % non-condensing
Humidity (storage)	20 % to 95 % non-condensing

Subject to change

Sony ICX098BL Spectral Response Curve

CCD Sensor in DMK 21BU04

DMK 21BU04 Dimensional Diagram

49,7

34

20,75

7,5

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

3x M6, depth 7,5

X

4x M2x6

56

view X

50,6

25,3

50,6

46,5

5,5

50

23

16x M2, depth 3

53,2

2

8

30

Dimensions: mm
Tolerances: DIN ISO 2768m

Machine Vision - Designed in Germany

Ever since The Imaging Source was founded in 1990, it has been one of the leading manufacturers of industrial cameras, frame grabbers and video converters for automation, quality assurance, logistics, medicine, science and security.

Our extensive range of industrial cameras ships with USB 3.0, USB 2.0, GigE, FireWire 800 and FireWire 400 interfaces. Thanks to their multi-purpose features and extremely high quality standards, the cameras are commonly used in demanding applications.

The software support offered by the cameras fulfill the requirements of demanding end-users and programmers. The cameras can be put into operation within a few minutes, or integrated into new or existing applications with only a few lines of code. All camera drivers are Microsoft certified. The easy of which the cameras can be integrated, the corresponding low integration costs, and the high quality of the software set the industry standard.

All cameras, frame grabbers and video converters, manufactured by The Imaging Source, are the result of decades of experience, uncompromisingly high quality standards, and continual development. Developers and system engineers prefer The Imaging Source cameras due to their ease of system integration.
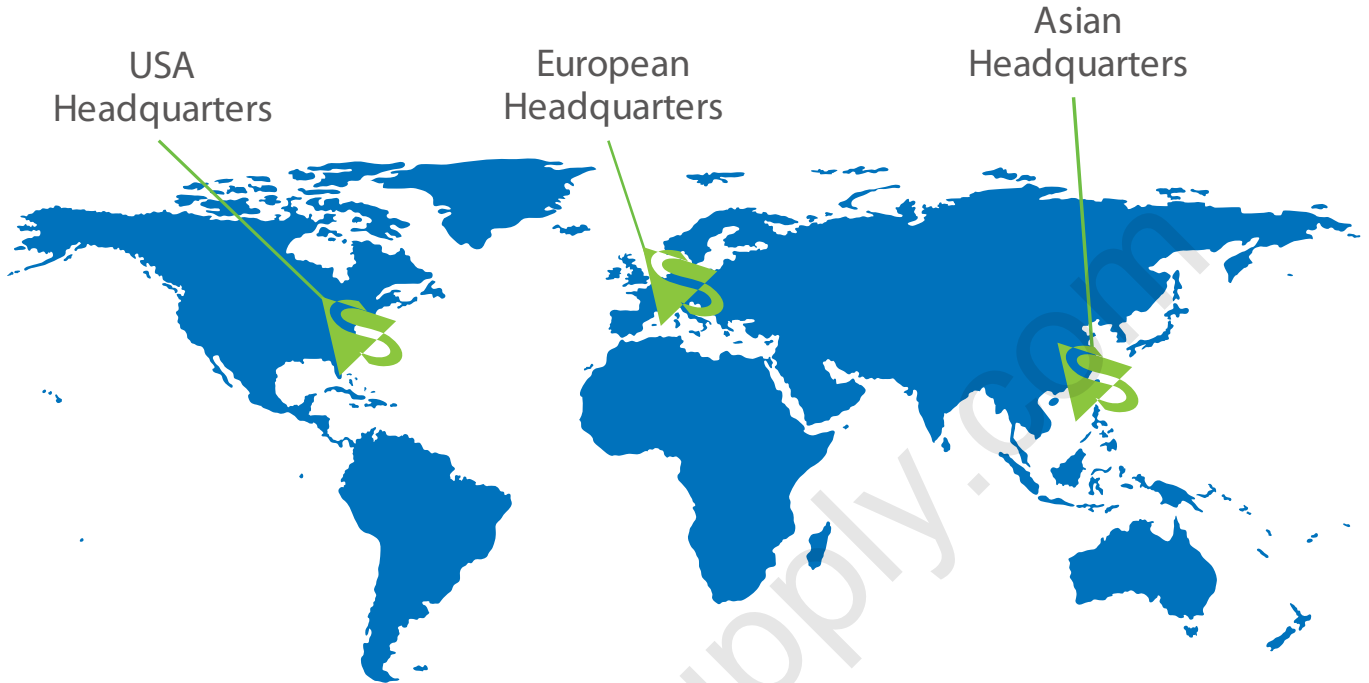
World Class Support

What really separates The Imaging Source from its competitors is the unsurpassed customer service and technical support we provide for our products.

Industrial cameras consist of two basic components: Hardware and software. We guarantee fast and efficient support for both components through our highly skilled support representatives and expert product developers. Not only will we provide support regarding technical issues, but we will also work to provide assistance with software implementation issues.

All cameras, frame grabbers and video converters, manufactured by The Imaging Source, are compatible with IC Imaging Control. Using this SDK, programmers can quickly integrate our machine vision devices into their own applications.

Download IC Imaging Control, drivers, extensions and programming samples from our web site:

www.theimagingsource.com

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TECHNOLOGY BASED ON STANDARDS

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