

## DFK 27AUJ003 Color Camera

The Imaging Source "27" Series USB 3.0 Camera



The Imaging Source DFK 27AUJ003 color camera has a USB 3.0 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 <sup>1</sup>/<sub>2.3</sub> " Aptina CMOS MT9J003 sensor. With up to 7 images per second, the DFK 27AUJ003 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 DFK 27AUJ003 to be integrated in to common machine vision software libraries, such as LabView and OpenCV. Furthermore, we author and support open source Linux drivers and software (Apache License 2.0) to integrate the camera into popular distributions. Download the Linux source code at GitHub.

### Features

- USB 3.0 interface.
- 1/2.3 " Aptina CMOS MT9J003.
- Rolling shutter.
- 3,856 x 2,764 (10.7 MP).
- Up to 7 images per second.
- Compatible to C and CS mount lenses.
- Only 36 x 36 x 25 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 3.0 cable in various lengths.
- 3 m USB 3.0 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 for C#, VB.NET, C++ Class Library for C++ projects, IC Imaging Control C Library, IC Imaging Control ActiveX, 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, IC Matlab Plugin for Matlab R2013b and R2014, IC NeuroCheck Driver for NeuroCheck 6.0, IC NeuroCheck Driver for NeuroCheck 6.1.

#### **End User Software for Microsoft Windows**

IC Capture, Image Acquisition, IC Measure, manual on-screen image measurement and image acquisition, IC Fullscreen Presenter, IC Line Profiler, Footswitch software for IC Capture, Scan2Docx, Scan2Docx OCR, Scan2Voice.



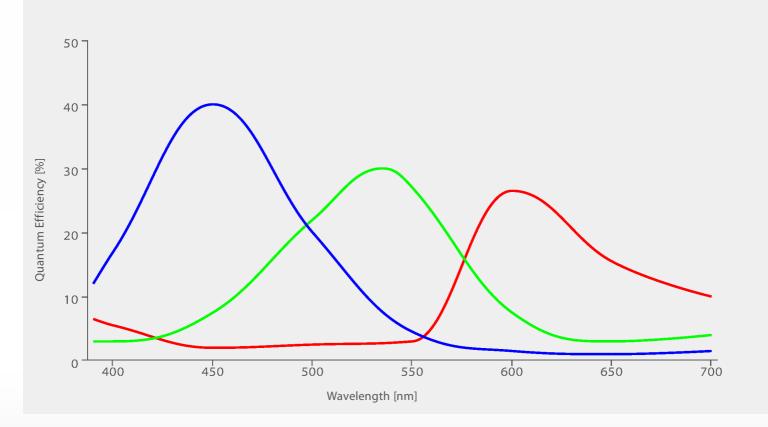
# DFK 27AUJ003 Specification

Video formats @ frame rate	2.856 2.364 (10.7 MD) V800 © 7 5 505
video formats @ frame rate	3,856 x 2,764 (10.7 MP), Y800 @ 7, 5 FPS 3,856 x 2,764 (10.7 MP), Y16 @ 4, 2 FPS 3,856 x 2,764 (10.7 MP), RGB32 @ 7, 5 FPS
Dynamic range	8 / 12 bit
INTERFACE (OPTICAL)	
IR cut filter	no
Sensor specification	Aptina MT9J003
Shutter	Rolling
Format	1/2.3 "
Resolution	H: 3,856 pixel, V: 2,764 pixel
Pixel size	H: 1.67 μm, V: 1.67 μm
Lens mount	C/CS
INTERFACE (ELECTRICAL)	
Interface	USB 3.0
Supply voltage	4.5 VDC to 5.5 VDC
Current consumption	approx 250 mA at 5 VDC
INTERFACE (MECHANICAL)	
Dimensions	H: 36 mm, W: 36 mm, L: 25 mm
Mass	70 g
ADJUSTMENTS (MANUAL)	
Shutter	<sup>1</sup> / <sub>20,000</sub> s to <sup>1</sup> / <sub>4</sub> s
Gain	0 dB to 12 dB
White balance	-2 dB to 6 dB
ADJUSTMENTS (AUTOMATIC)	
Shutter	<sup>1</sup> / <sub>20,000</sub> s to <sup>1</sup> / <sub>4</sub> s
Gain	0 dB to 12 dB
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



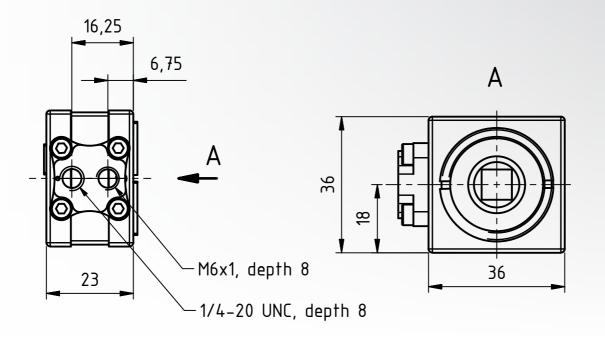
# Aptina MT9J003 Spectral Response Curve

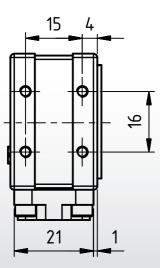
CMOS Sensor in DFK 27AUJ003

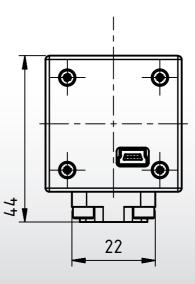




## DFK 27AUJ003 Dimensional Diagram







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 Software and Customer Care**



What really separates The Imaging Source from its competitors is the comprehensive Windows and Linux software available free of charge with all its products, and the unsurpassed level of customer service.

The Imaging Source authors and supports device drivers, software development kits (SDKs), programming samples, extensions, end-user software and software tools for Microsoft Windows. All Windows software can be download directly from our web site:

### http://www.theimagingsource.com

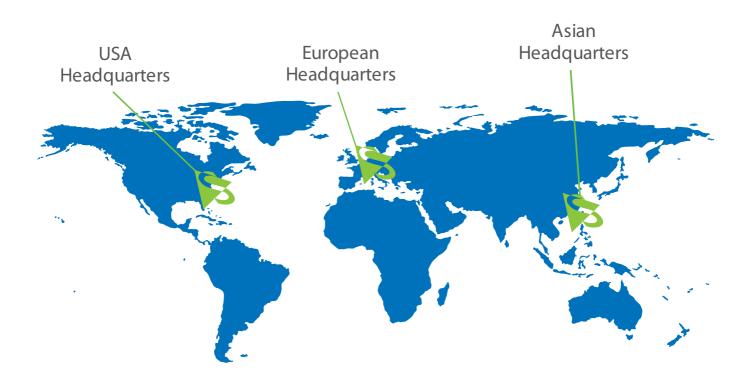
Additionally, The Imaging Source authors and supports open source drivers and end-user software for Linux. The Linux source code, which is released under the Apache License 2.0, enables you to integrate all machine vision cameras into popular Linux distributions. The Open Source code is available to download from GitHub:

### http://www.github.com

The Imaging Source guarantees fast and efficient customer service for all hardware and software issues via our skilled customer service representatives. Not only will we provide support regarding technical issues, but we will also work with you to implement our components into your project. Contact customer service at:

### http://www.theimagingsource.com





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#### THE IMAGING SOURCE, THE IMAGING SOURCE THE IMAGING SOURCE **EUROPE GMBH** ASIA CO., LTD. LLC 6926 Shannon Willow Rd, Sommerstrasse 36, 2F., No.8, Xinhu 1st Road, Suite 400, 28215 Bremen, Neihu District, Charlotte, NC 28226, Germany. Taipei City 114, United States. Taiwan. Tel: +1 704-370-0110 Tel: +49 (0)421 335 91 0 Tel: +886 2-2792-3153 Fax: +1 704-542-0936 Fax: +49 (0)421 335 91 80 Fax: +886 2-2792-6583

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All weights and dimensions are approximate. Unless otherwise specified the lenses shown in the context of cameras are not shipped with these cameras.

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