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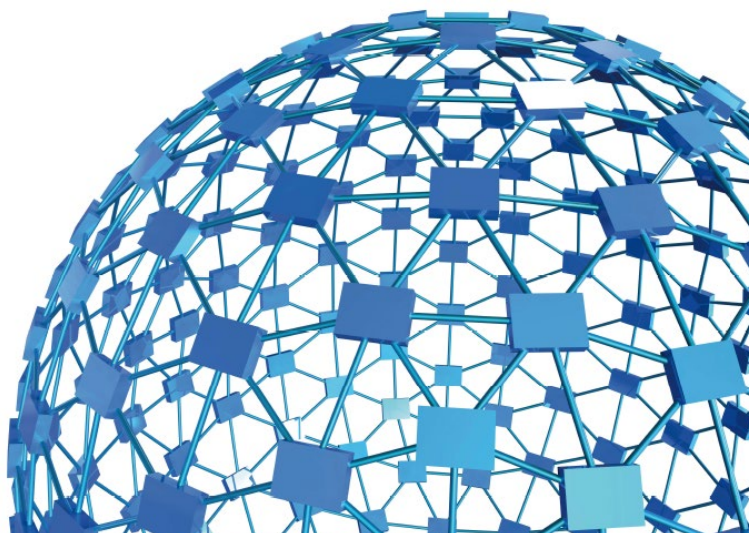
TRANSFORMING IDEAS
INTO INSTRUMENTS

assembling instruction

USB Camera

Cat. No. 47400-030

Cat. No. 47400-040



UGO BASILE S.R.L.

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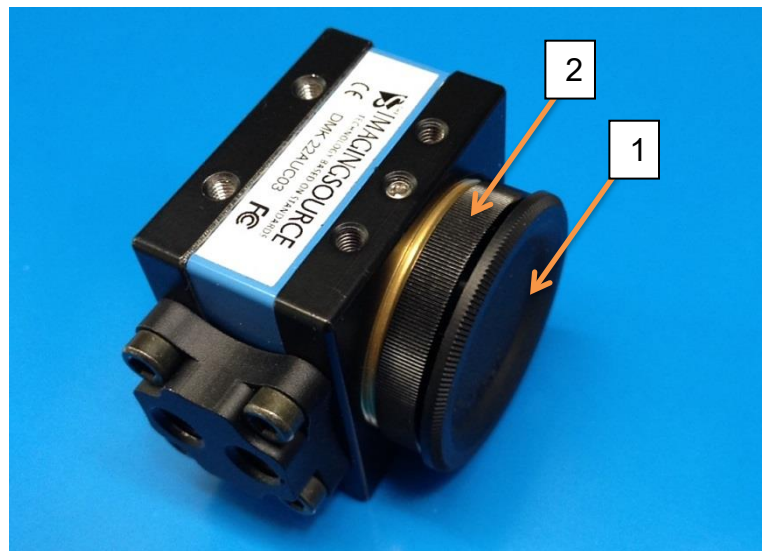
USB Cameras

Cat. No. **47400-030 / 47400-040**

1 How to assemble Camera 47400-030

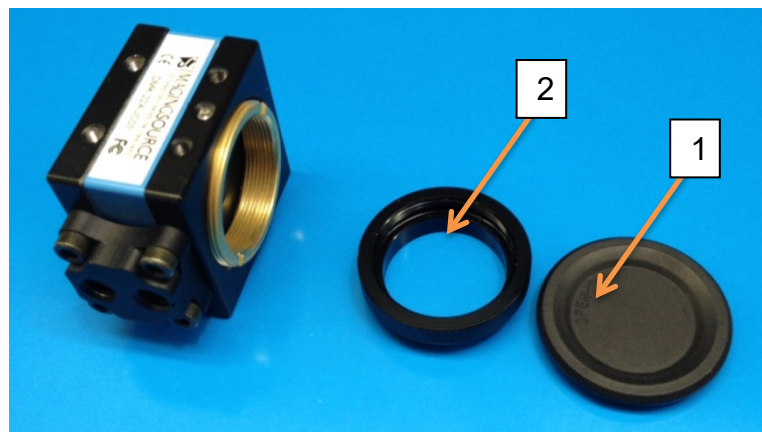
The camera is shipped disassembled; follow these steps to assemble it correctly.

The camera is delivered with a protective cap (1) and a lens adaptor* (2).



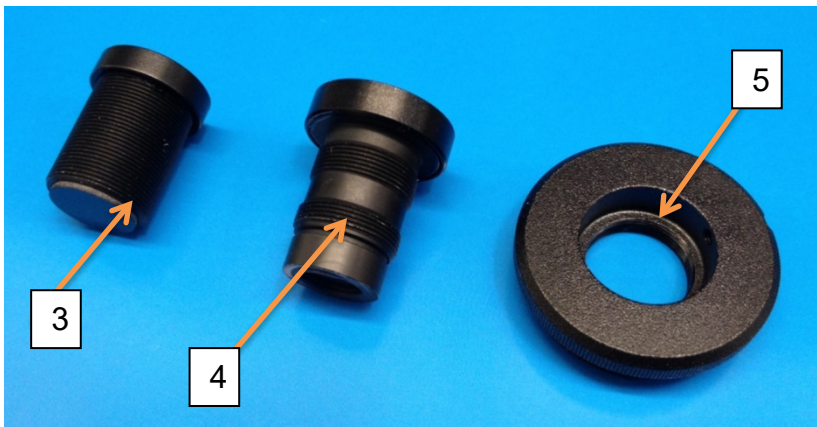
Remove both, as you will not need them for standard operation.

(* the lens adaptor is provided as standard with the videocamera, for possible other applications)



You will find in the 47400-030 kit, beside the camera, the following components (see picture):

- 3) TBL2.1: 2.1mm Optics (for Rat cage)
- 4) TBL4.0: 4.0mm Optics (for Mouse cage)
- 5) TLHCCS: M12 Adaptor



Assemble the M12 adaptor on the camera body.

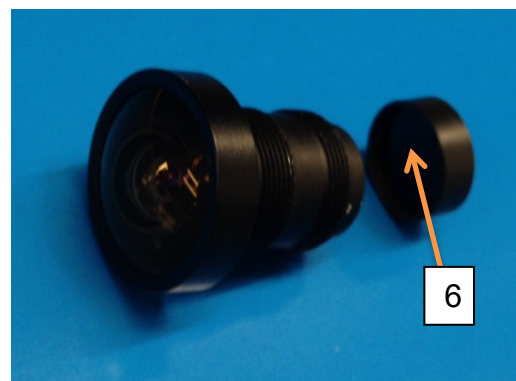


Let's consider the two optics included with the 47400-030 camera; they are both provided with a visible light block filter (6) already fitted in the correct position.

If necessary, the filter separates easily from the optics.

To reassemble it, just exert a light pressure.

The filter to be assembled on the 2.1mm lens is provided with a support ring, while on the 4.0mm lens, the filter fits without any support.



Insert and tighten the correct optics (2.1 for rat cage, or 4.0 for mouse cage) inside the support.



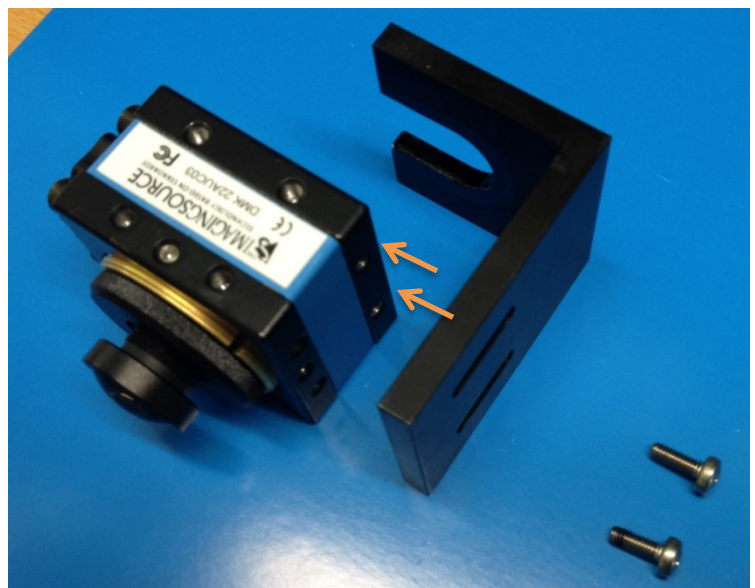
Here's how the assembled camera looks like.

Replace the optics if you plan to change from mouse to rat cage or viceversa.

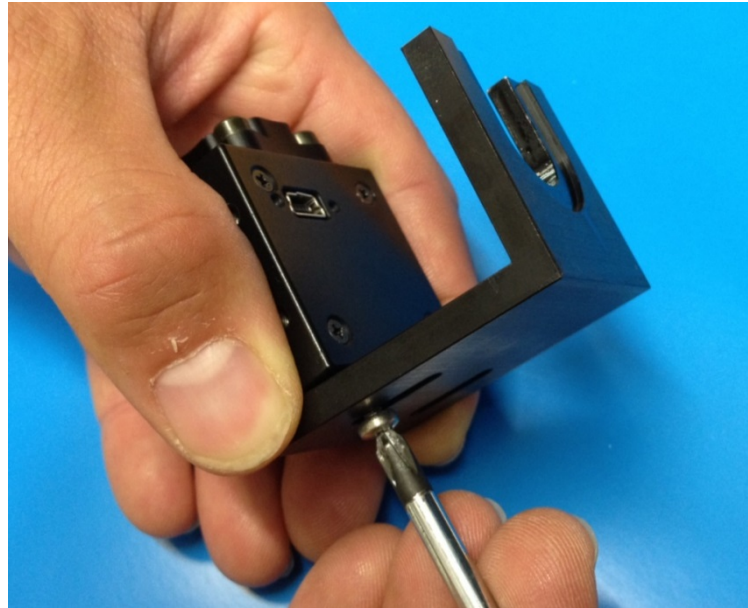


Now assemble the ceiling mount bracket to the camera.

Prepare all the necessary components in the correct order (pay attention to the orientation of the camera).



Attach the bracket to the camera, by the two screws provided (the arrows indicate where the screws must be positioned)

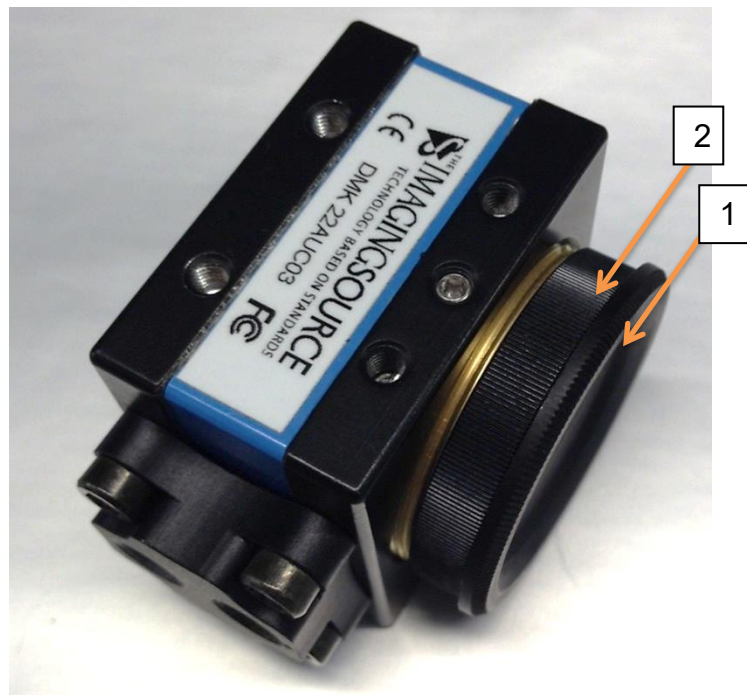


Once the camera is attached to the cubicle ceiling, act on the optics, by turning it, until the correct focus is reached.

2 How to assemble Camera 47400-040

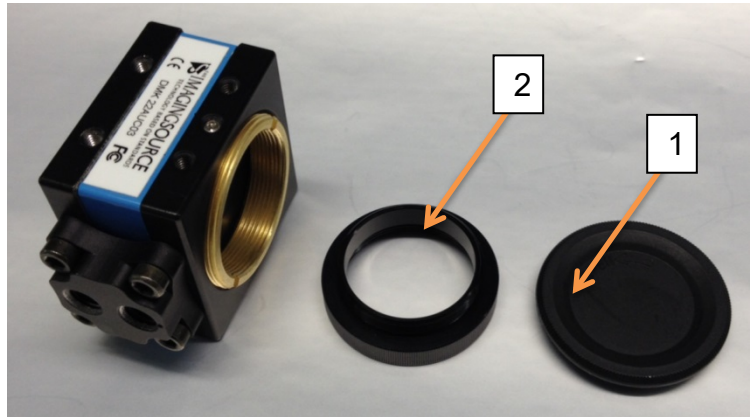
The camera is shipped disassembled; follow these steps to assemble it correctly.

The camera is delivered with a protective cap (1) and a lens adaptor* (2).



Remove both, as you will not need them for standard operation.

(* the lens adaptor is provided as standard with the videocamera, for possible other applications)



The 47400-040 kit, beside the camera, includes the Day&Night 2.8-12mm Varifocal Lens, model YV4.3x2.8SA-2.

Remove the protective cap (3) before fitting the optics to the camera.

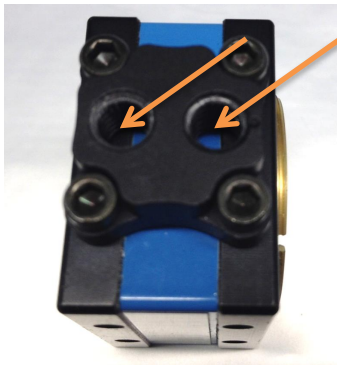


Assemble the Varifocal Lens on the camera body.



Here's how the assembled camera looks like.

Once the videocamera has been installed, the commands on the lens body will enable you to obtain the best view (WIDE < > TELE) and reach the correct focus (NEAR < > FAR).



A mounting bracket is provided with the standard package, to fix the camera on a wall or on the ceiling over the test area.

Attach the videocamera to bracket the via one of the two threaded holes.



3 Customer Support

For any further information you may need concerning the installation and/or use of the cameras, please do not hesitate to contact our **service department** (or our local distributor) either directly or via our support page <http://www.ugobasile.com/support.html> :



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4 Ordering Information

47400-030 B/W USB Camera (Fear Conditioning), including:

DMK22AUC03	Videocamera
TBL2.1	2.1mm M12 optics (for rat cage)
TBL4.0	4.0mm M12 optics (for mouse cage)
TLH CCS	M12 adaptor
M-CM 566-F	Visible light block filter
M-LM 889-F	Ceiling support (for Isolation Cubicle)
E-WP 043	5m USB cable CAA-90LMB5-5M

47400-040 B/W USB Camera (general purpose), including

DMK22AUC03	Videocamera
YV4.3x2.8SA-2	Day&Night 2.8-12mm Varifocal Lens
GPMSTP160	Ceiling support
E-WP 043	5m USB cable CAA-90LMB5-5M

DMK 22AUC03 Monochrome Camera

The Imaging Source "22" Series USB 2.0 Camera

UGO BASILE

Cat. 47400-030

47400-040



Only 36 x 36 x 25 mm

Lens not included

The Imaging Source DMK 22AUC03 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 $\frac{1}{3}$ " Micron CMOS MT9V024 sensor. With up to 150 images per second, the DMK 22AUC03 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.
- Windowing and high-speed readout.
- $\frac{1}{3}$ " Micron CMOS MT9V024.
- Global shutter.
- Up to 744 x 480 (0.4 MP).
- Up to 150 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 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

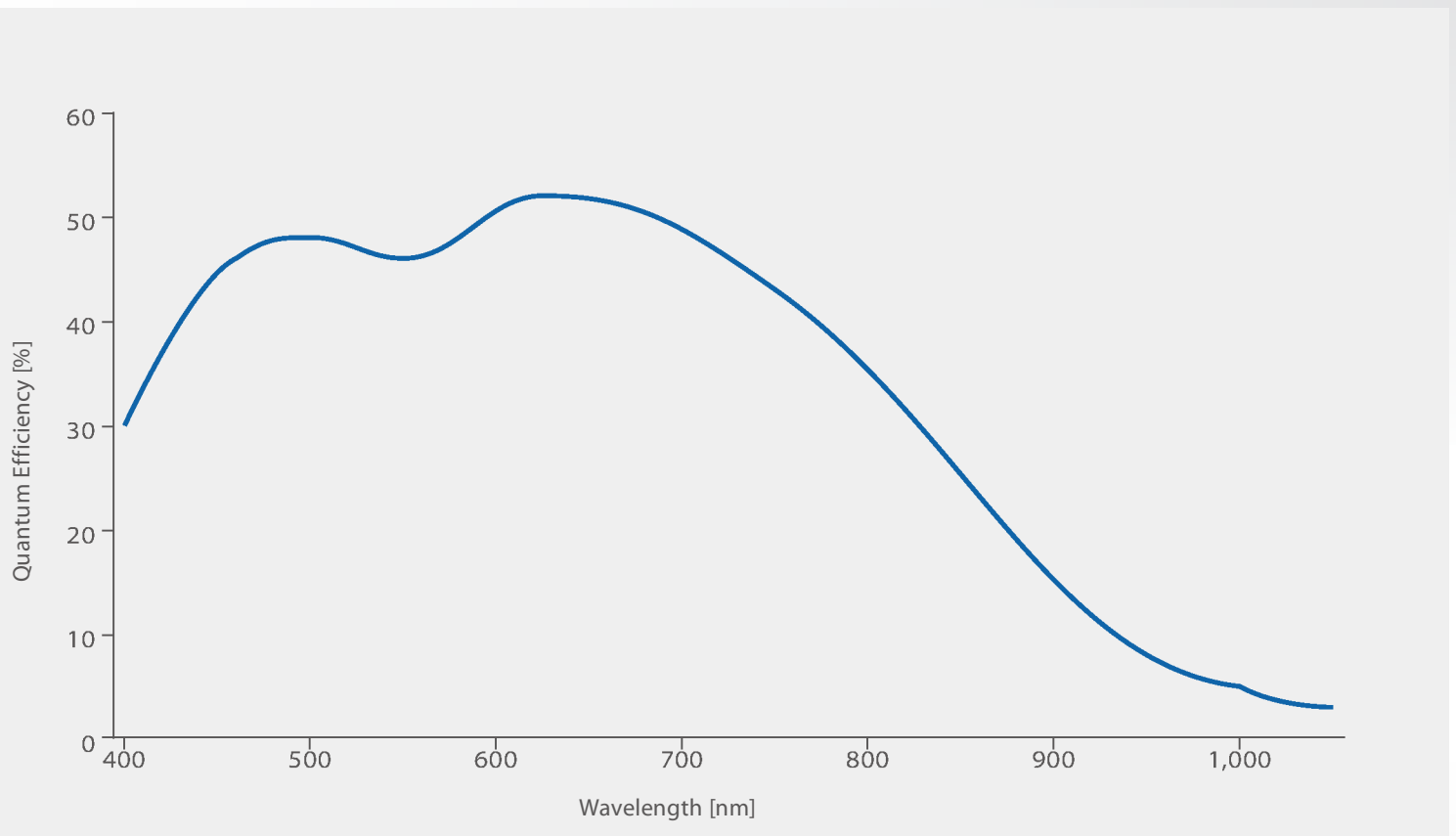
Processor Idle State Manager.

DMK 22AUC03 Specification

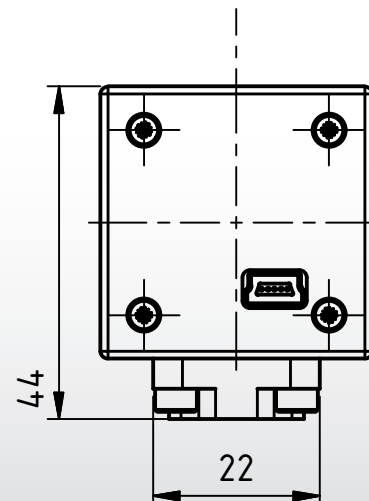
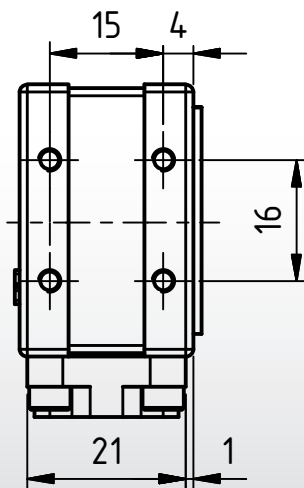
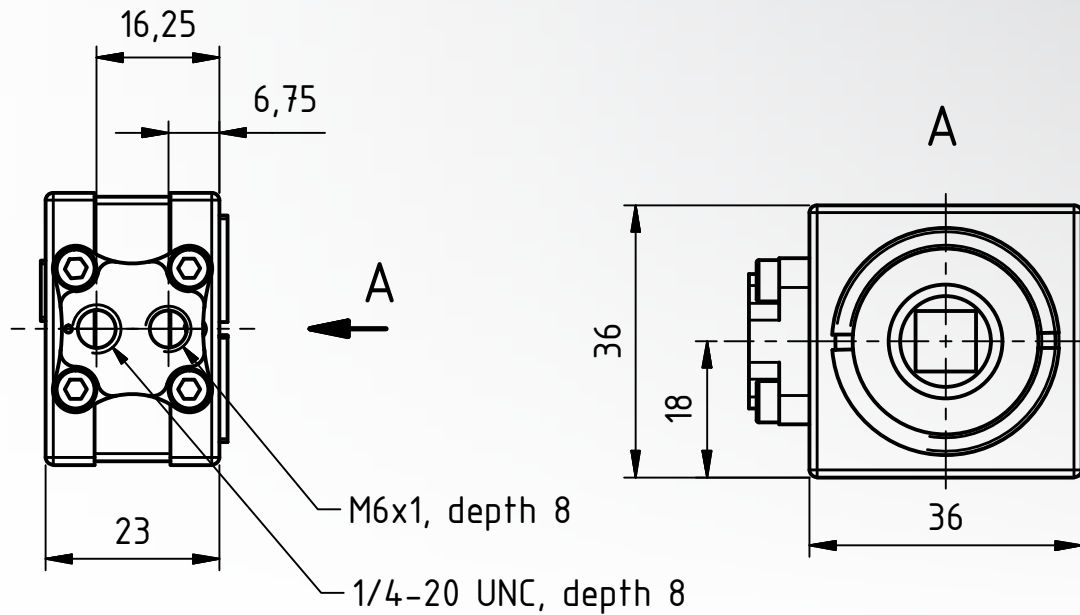
GENERAL BEHAVIOR	
Example Configurations	
Resolution	Format
744 x 480 (0.4 MP)	1/3 "
640 x 480 (0.3 MP)	1/3.5 "
320 x 240 (0.1 MP)	1/7 "
Set resolution, format, FPS and sensitivity with shipped software.	
Color format	Y800
Dynamic range	8 bit
INTERFACE (OPTICAL)	
IR cut filter	no
Sensor specification	Micron MT9V024
Shutter	Global
Format	1/3 "
Resolution	H: 744 pixel, V: 480 pixel
Pixel size	H: 6 µm, V: 6 µm
Lens mount	C/CS
INTERFACE (ELECTRICAL)	
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	1/10,000 s to 1/4 s
Gain	0 dB to 18 dB
ADJUSTMENTS (AUTOMATIC)	
Shutter	1/10,000 s to 1/4 s
Gain	0 dB to 18 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	

Micron MT9V024 Spectral Response Curve

CMOS Sensor in DMK 22AUC03



DMK 22AUC03 Dimensional Diagram



Dimensions: mm
 Tolerances: DIN ISO 2768m



HD Vari-Focal (2.8 - 12mm)

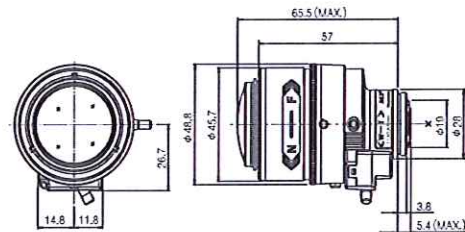
YV4.3x2.8SA-2

4.3x Applicable camera (model) 1 2/3 1/2 1/3 1/4 For Security



Vari-Focal Wide Angle Telephoto Long Focal Manual Iris CS Mount Metal Mount Aspherical Lens Large Aperture Ratio RoHS Compliant

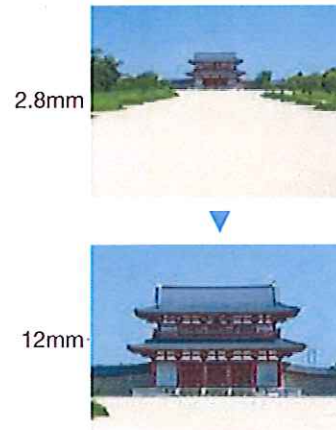
VARI WIDE TELE MANUAL CS-mt METAL AT F1.4 RoHS



Unit : mm

YV4.3x2.8SA-2			
Focal Length (mm)		2.8 - 12 (4.3x)	
Iris Range		F1.4 - Close	
Operation	Zoom	Manual	
	Focus	Manual	
	Iris	Manual	
Angle Of View (HxV)	1/3°	WIDE	100°02' x 74°03'
		TELE	23°26' x 17°36'
	1/4°	WIDE	74°03' x 55°06'
		TELE	17°36' x 13°13'
Angle Of View (HxV)	1/3°	WIDE	109°33' x 60°80'
		TELE	25°31' x 14°23'
Aspect Ratio 16 : 9	1/4°	WIDE	80°56' x 44°51'
		TELE	19°10' x 10°48'
Focusing Range (From Front Of The Lens) (m)		∞ - 0.3	
Object Dimensions at M.O.D. (HxV) (mm)	1/3°	WIDE	753 x 476
		TELE	131 x 98
	1/4°	WIDE	476 x 329
		TELE	98 x 73
Object Dimensions at M.O.D. (HxV) (mm) Aspect Ratio 16:9	1/3°	WIDE	895 x 365
		TELE	143 x 80
	1/4°	WIDE	538 x 260
		TELE	106 x 60
Back Focal Distance (in air) (mm)		7.83	
Exit Pupil Position (From Image Plane) (mm)		455	
Filter Thread (mm)		-	
Mount		CS	
Mass (g)		80	
Remarks		•With Metal Mount	

[Lens Image]



CAMERA 47400-040 ALSO MOUNTS THE YV4.3x2.8SA-2 OPTICS



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TRANSFORMING IDEAS
INTO INSTRUMENTS

CE CONFORMITY STATEMENT

Manufacturer **UGO BASILE srl**
Address Via G. Di Vittorio, 2 – 21036 Gemonio, VA, ITALY
Phone n. +39 0332 744574
Fax n. +39 0332 745488

We hereby declare that

Instrument. **Videocamera**
Catalog number **47400-030, 47400-035, 47400-040**

*is manufactured in compliance with the following European Union Directives
and relevant harmonized standards*

- *2014/30/UE relating to electromagnetic compatibility*

Account Manager

Mauro Uboldi

Nome / Name

October 2018

Date

Firma / Signature