



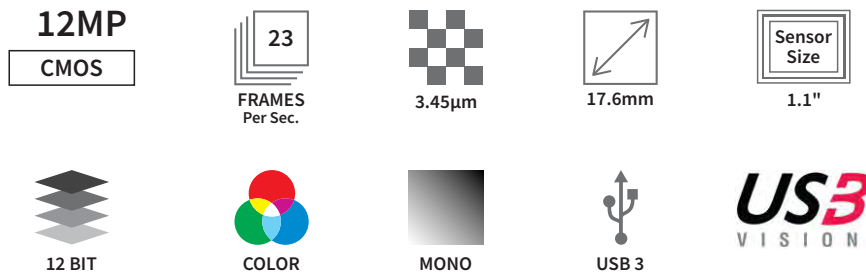
## M12B

### CMOS | SONY IMX304 | GLOBAL SHUTTER

Ideal for use in any laboratory or industrial setting, Pixelink cameras let you capture high-quality images with your existing microscope equipment. We will work with you to choose and integrate the optimal USB 3.0 camera for your microscopy project. Our microscope cameras and associated software are designed to offer consistent, superior quality image acquisition and performance.



### KEY FEATURES



### TYPICAL APPLICATIONS

Live Cell Imaging  
Microbiology  
Cell Analysis  
Vision Correction

Packaging  
Measurements  
Inspection  
Paint Analysis & Dirt Analysis

## TECHNICAL SPECIFICATIONS

### SENSOR

Sensor	Sony IMX304
Type	CMOS Global Shutter
Resolution	12.29MP (4096 x 3000)
Pixel Pitch	3.45 $\mu\text{m}$ x 3.45 $\mu\text{m}$
Active Area	17.6 mm diagonal

### PERFORMANCE SPECIFICATIONS

FPN	< 0.03% of signal
PRNU	< 0.4% of signal
Dynamic Range	70 dB
Bit Depth	12-bit
Color Data Formats	Bayer 8, Bayer 12 Packed, Bayer 16 & YUV422
Mono Data Formats	Mono 8, Mono 12 Packed & Mono 16

### FRAME RATES

Resolution	Free Running
4096 x 3000	23.4 fps
1280 x 1024	66.2 fps
640 x 480	323.6 fps
Frame rates will vary based on host system and configuration	
*Above calculations based on fixed frame rate mode	

### INTERFACES

Interface   Data rate	USB 3.0   Micro-B   5Gbps
Trigger Mode 0	Software

### MECHANICALS

Dimensions (mm)	80.88 x Ø54.01 (without lens mount)
Weight (g)	218.5 (without optics)
Mounting	C-Mount

### ENVIRONMENTAL & REGULATORY

Compliance	FCC, CE & RoHS
Shock & Vibration	300 G & 20 G (10Hz - 2KHz)
Operating Temperature	0°C to 50°C
Storage Temperature	-45°C to 85°C

### SOFTWARE

Pixelink Capture	Capture, control, measure & operate
Pixelink SDK	Software Development Kit
Pixelink $\mu$ Scope	Acquisition, analysis & reporting
3rd. Party U3V Vision Applications	

### COMPUTER & OPERATING SYSTEM

	Windows	Linux x86	Linux ArmV7	Linux ArmV8
Processor	Intel i5 or better	Intel i5 or better	Arm7 (32 bit)	Arm8 (64 bit)
Memory	4GB recommended	4GB recommended	2GB	2GB
Hard Drive Space	150 MB	150 MB	50 MB	50 MB
Operating System	Windows 7/8/10	Ubuntu 14.04/16.04 Desktop	Ubuntu 14.04/16.04	Ubuntu 14.04/16.04

### POWER REQUIREMENTS

Voltage Required	5V DC (from USB connector)
------------------	----------------------------

## AVAILABLE CONFIGURATIONS

M12BC-CYL  
M12BC-KIT-CYL  
M12BC-SE-CYL  
M12BC-PRO-CYL

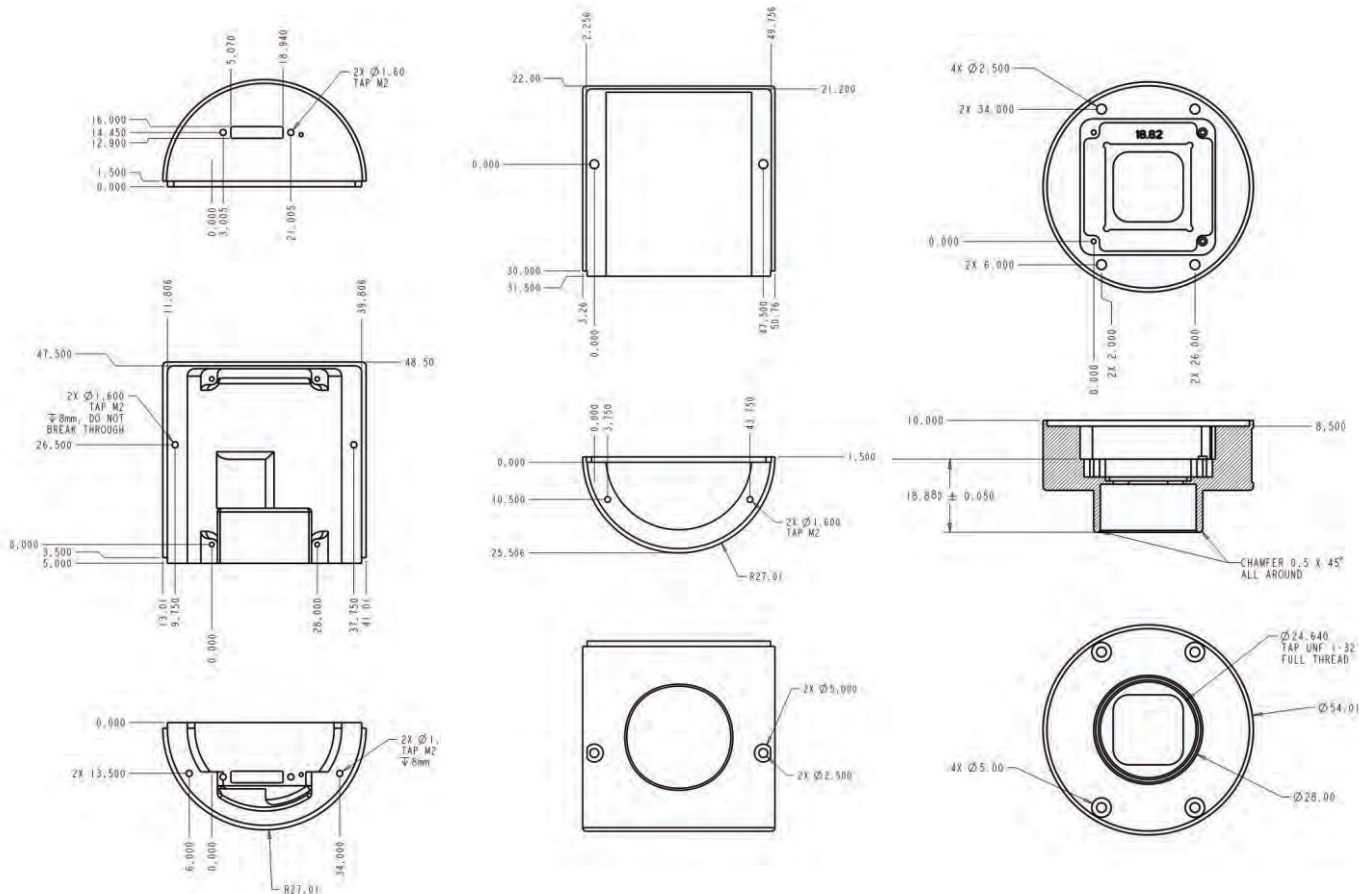
M12BM-CYL  
M12BM-KIT-CYL  
M12BM-SE-CYL  
M12BM-PRO-CYL

**Housing**  
CYL = Cylindrical Case

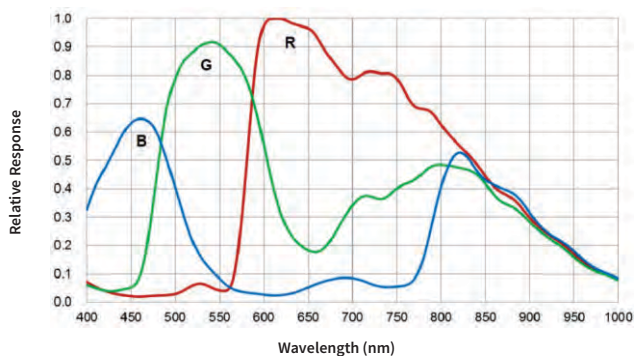
**Software Included**  
KIT =  $\mu$ Scope Essentials  
SE =  $\mu$ Scope Standard  
PRO =  $\mu$ Scope Professional

# MECHANICAL DRAWINGS & RESPONSIVITY CURVES

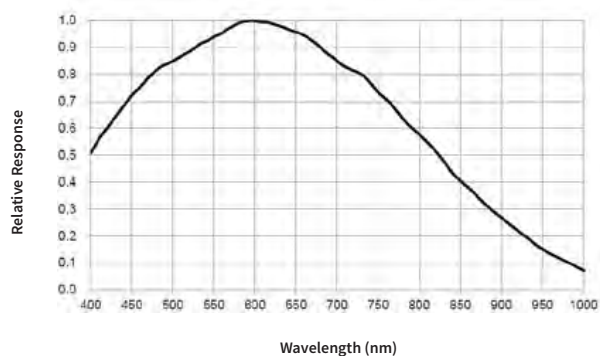
## MECHANICAL DRAWINGS



## RESPONSIVITY CURVE - COLOR



## RESPONSIVITY CURVE - MONO



## PIXELINK'S INDUSTRY LEADING SOFTWARE

### PIXELINK $\mu$ SCOPE

**Pixelink  $\mu$ Scope** is a software tool developed for the Microscopy marketplace. It gives users the ability to quickly and easily capture, measure and enhance images. In addition to this it can also correlate image data effectively and output the data in a format that can be further analysed by other software packages.

**Pixelink  $\mu$ Scope Essentials (ES)** Software is an easy-to-use robust image capture tool optimized for productivity. **Pixelink  $\mu$ Scope Standard (SE)** Software has added features, making it a highly productive image capture tool for microscopy. **Pixelink  $\mu$ Scope Pro (PRO)** Software is for users needing more advanced tools for their microscopy requirements. This feature-rich application includes tools such as z-axis, extended focus imaging, shading correction, and reflected light subtraction.

### PIXELINK SDK

Providing full control of all camera functions, the **Pixelink Software Developers Kit (SDK)** is the software package of choice for developers and system integrators who are integrating Pixelink cameras into their applications. The Pixelink SDK provides access to the full Pixelink Application Programming Interface (API) and provides sample applications, wrappers for many 3rd party controls, such as LabVIEW, along with full documentation.

The Pixelink SDK is compatible with Microsoft Windows and popular Linux platforms. When using the Pixelink SDK, developers can integrate Pixelink cameras into their custom applications with ease.

### PIXELINK CAPTURE

**Pixelink Capture** is powerful multi-camera software application designed to configure "n" numbers of cameras and stream "n" number of cameras simultaneously in real-time high-quality video viewed in a multi-window environment. Pixelink Capture offers options for complex image enhancements such as; exposure control, filtering, frame-by-frame property changes in addition to multi-camera application testing and configuration.

Pixelink Capture also provides features to measure supporting; point, line, circle, rectangle, polyline and polygon measurements while determining pixel location. After creating spatial calibration, the user can then review and adjust before exporting the findings to an Excel spreadsheet for further analysis. Pixelink Capture also has integrated lens control (zoom & focus) for Navitar motorized lenses and accurate autofocus options for Navitar motorized fine focus mechanisms.

For more information on Pixelink  $\mu$ Scope, the Pixelink SDK and/or Pixelink Capture visit [www.pixelink.com](http://www.pixelink.com).