INSTRUCTION MANUAL
MANUEL D'INSTRUCTIONS
BETRIEBSANLEITUNG
MANUALE D'ISTRUZIONI
MANUAL DE INSTRUÇÕES
MANUAL DE FUNCIONAMIENTO

European Catalogue Numbers:

VisiCam HDMI 6: 630-2670

VisiCam HDMI 5: 630-2947

Version 2

Issued 04.12.2018

Made in PRC
QC in ITALY

Legal Address of Manufacturer

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http://www.be.vwr.com

Warning & Safety Information

Do not disassemble the camera.

Package Contents

Description	Quantity
VisiCam HDMI6 or VisiCam HDMI5 camera	1
HDMI cable (2mt)	1
USB cable	1
12V/2A Power supply	1
CD-ROM with drivers and software for Windows XP/VISTA/7/8/10	1
Built-in Mouse (1.5mt)	1
external SD-card	1

Product Specifications

	VisiCam HDMI6	VisiCam HDMI5
Sensor	1/2.8" CMOS Sony IMX236	1/2.5" CMOS Sony IMX236
Capture resolution	3264x1840 (6MP)	2592x1944 (5MP)
Preview resolution	1920x1080	1920x1080
Pixel Size	2.8µm×2.8µm	2.2µm×2.2µm
Frame Rate	60fps @1920x1080 via HDMI 30fps @1920x1080 via USB2.0	15fps @1920x1080 via HDMI 15fps @1920x1080 via USB2.0
Capture	High speed SD card (8Gbyte)	High speed SD card (4Gbyte)
Video recording	1080p 30fps @SD card 1080p 30fps @PC	1080p 15fps @SD card 1080p 15fps @PC
Exposure time	0.001 sec. – 10 sec.	0.001 sec. – 10 sec.
Exposure	Automatic, Manual	Automatic, Manual
White balance	Automatic	Automatic
Settings	Contrast, Saturation, Gain, Gamma	Contrast, Saturation, Gain, Gamma

Software embedded	Yes	Yes
Software for PC	IS Visicam Image Analyser (included)	IS Visicam Image Analyser (included)
Output	HDMI and USB 2.0	HDMI and USB 2.0
OS Compatibility	Windows XP/7/8/10 MAC OSX	Windows XP/7/8/10 MAC OSX
Optical Mount	C-Mount	C-Mount
Power supply	DC 12V/2A	DC 12V/2A

Recommended System

- IBM PC compatible: Windows 2000 / XP / VISTA / Windows7 / Windows 8 / Windows 10
- RAM: 512 MB **,** HDD: at least 10GB
- USB 2.0 interface / HDMI
- CD-ROM drive (to install drivers & softwareon PC)

Intended use

VisiCam cameras can be mounted on all Biological and Stereo Microscopes equipped with trinocular tube. It can be mounted also on monocular and binocular Microscopes thanks to the optional eyepiece adapter 630-1121. It allows an easy connection to any HDMI monitor without use of PC or to any PC with USB 2.0 port. It can acquire, store and edit images from your Microscope directly on SD-Card, or in the PC.

Installation

Installation of Camera

Remove all the parts from their package. Remove the camera protective cap (leave the black ring in position).

If you have a trinocular microscope then screw the C-Mount adapter (not included, please contact a VWR sale responsable) to the camera black ring. Put the C-Mount screwed to the camera onto your microscope trinocular tube.

If you have a binocular or monocular microscope, then screw the optional 630-1121 eyepiece adapter to the camera black ring. Put the eyepieces eyepiece adapter screwed to the camera onto your microscope binocular or monocular tube (you must remove one eyepiece).

NOTE: If the diameter of your microscope eyepiece is 30mm diameter (for example as in stereo Microscopes), then you must use the 30mm ring (included) together with the eyepiece adapter.

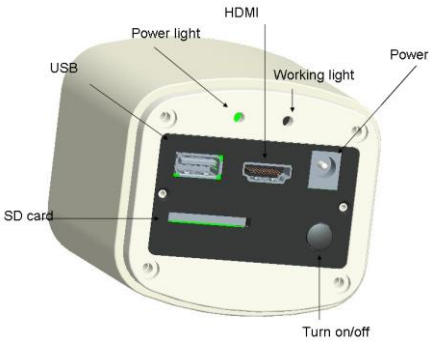
NOTE: the eyepiece adapter has a knurled ring included. It is not necessary to mount this one between the camera and the adapter if a similar knurled grid is already mounted on the camera.

1 INTERFACES

1. **USB interface**：

A: Connect a mouse to the USB port. Use the mouse to control the camera directly.

B: Connect the USB port to PC to make the camera work as a **Driver-Free** camera. Use VisiCam Image Analysissoftware to control it (similar as using the other cameras).



Note: No driver installation is needed when connect VISICAM HDMI 6 / VISICAM HDMI 5 to PC via USB port.

2. **HDMI interface**：

Use the HDMI cable to connect VISICAM HDMI 6 / VISICAM HDMI 5 to the monitor. Image data is transferred and displayed on the monitor according to the HDMI protocol.

3. **Power interface**：

Please use provided 12V/2A power supply. When power is plugged in, the red light is on. When switch on the camera, blue light is on.

4.**ON/OFF key**：

Press and hold ON/OFF key until the blue light is on or off to turn on or off the VISICAM HDMI 6 / VISICAM HDMI 5.

5.**SD card**：

To get faster and more stable data transfer, recommend to use Class10 SD card.

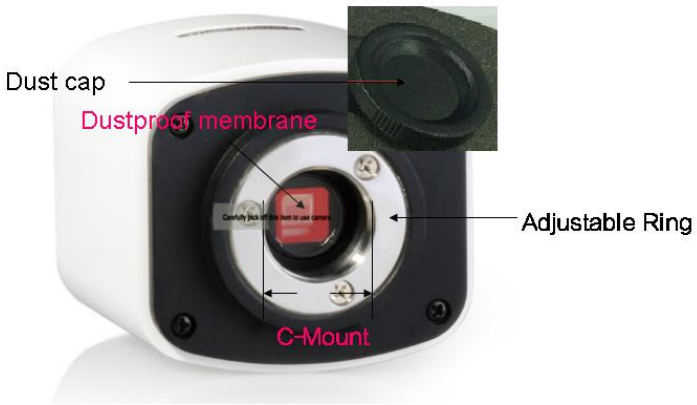
6.**C mount**：

Standard C-mount optical port.

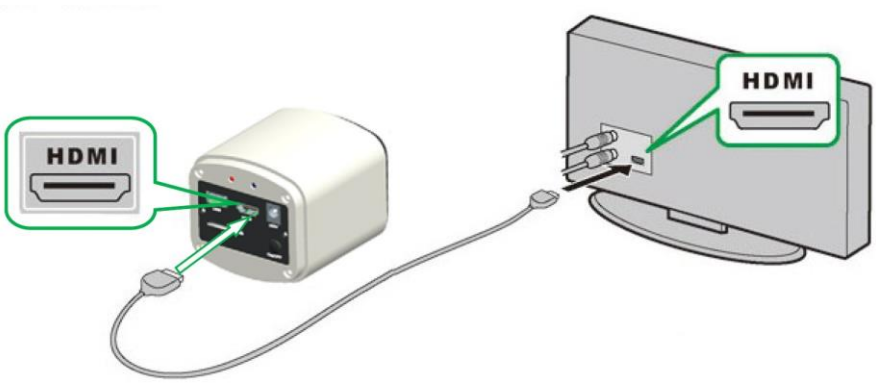
7. **Anti-dust seal:**

Please remove the seal when first time use the camera.

The seal was placed on the camera optical port when it left the factory. It is used to avoid the dust accumulating during the transport.



2. HDMI Operations



Step 1. Connect the camera.

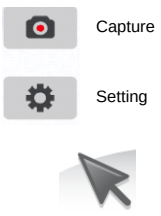
1. Plug in the 12V/2A power supply. Use HDMI cable to connect the camera to the monitor. Press and hold ON/OFF key until blue light is on.

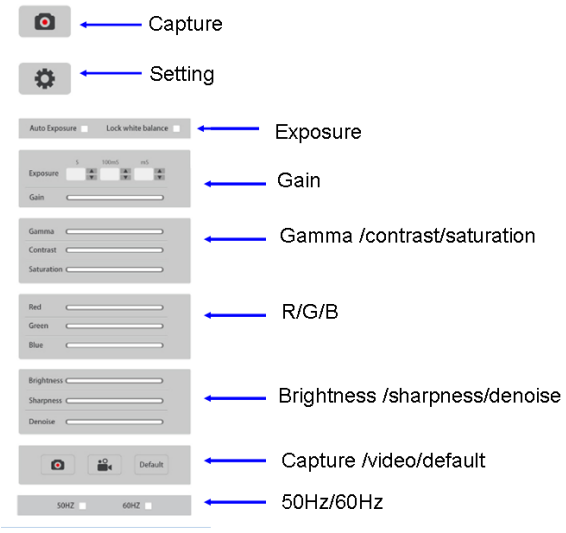
2. Connect the mouse to the USB port. Move the cursor to get the settings on the screen.

3. Insert the SD card. Capture images or videos to the SD card.

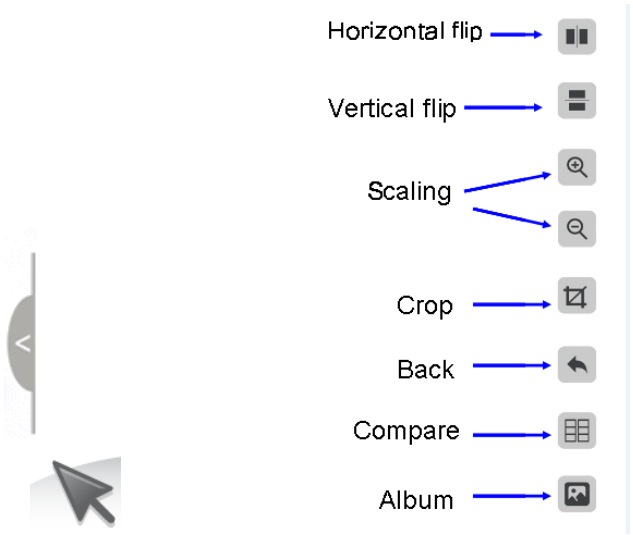
Step 2. Move the cursor to the left of the screen.

When move the cursor to the left of the screen, ‘Capture’ and ‘Setting’ icons will appear (See image on the left hand side). Click ‘Setting’ to get parameter setting menu (See image on the right).



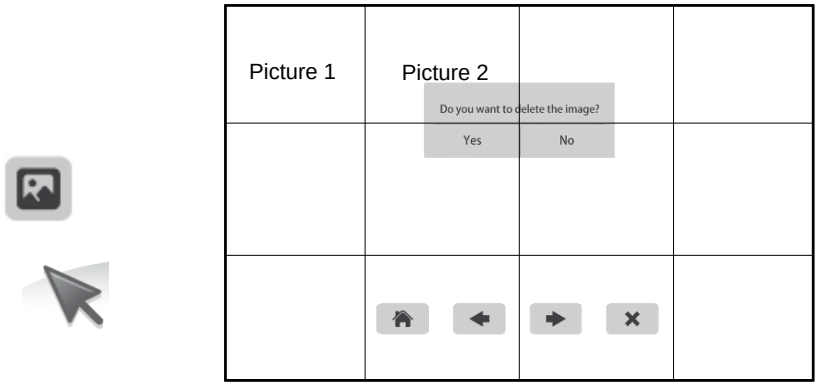


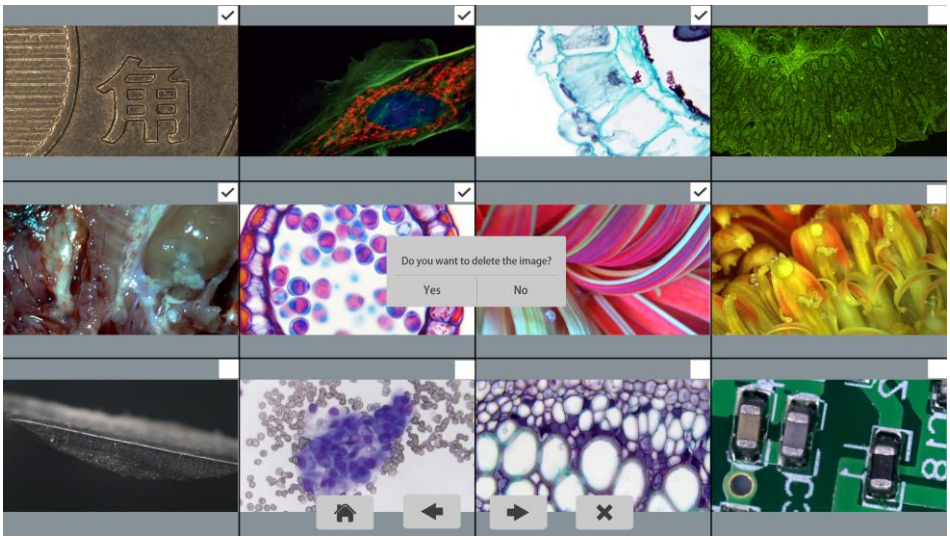
Step 3. Move the cursor to the right of the screen.



Step 4. Check the photo album and videos

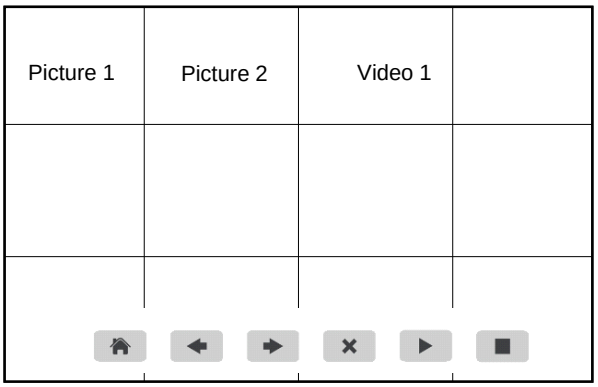
1. Check the album and delete the pictures.



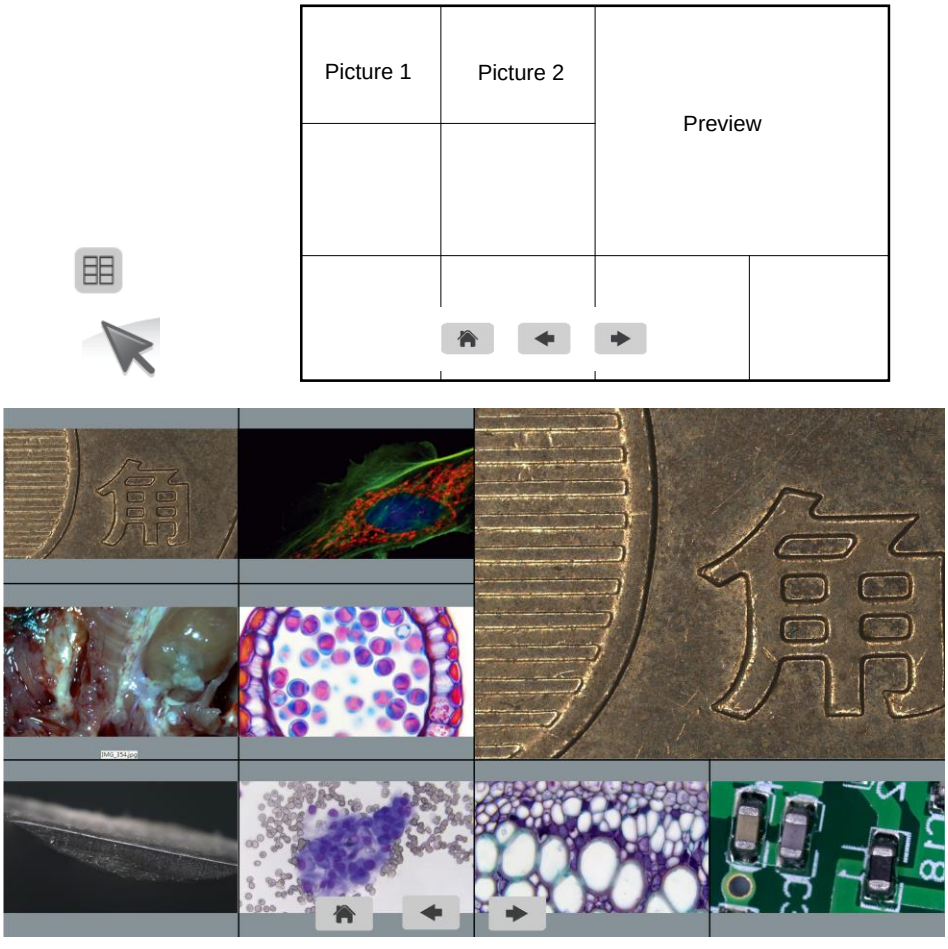


2. Check the video and delete the video. To delete the video successfully, be

sure this video is not in use.



Step 5. Compare preview with the captured images.

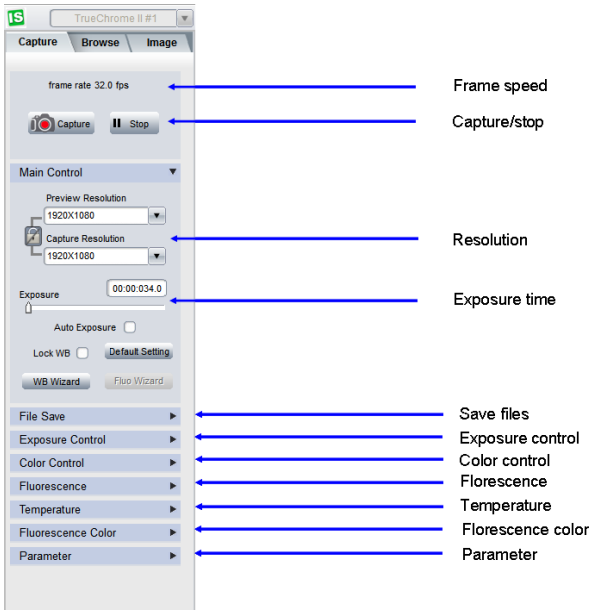


3. Connect VISICAM HDMI 6 / VISICAM HDMI 5 to PC

（1） Use USB cable to connect the VISICAM HDMI 6 / VISICAM HDMI 5 to the PC.

（2） Plug in the 12V/2A power supply. Press and hold the ON/OFF key until blue light is on to turn on the camera.

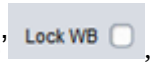
（3） No driver installation is needed when connected to PC. Install VisiCam Image Analysissoftware to adjust parameters and acquire images.



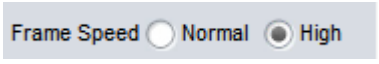
（4）

Fig.4-1. The left side of VisiCam Image Analysis software

（1） Start VisiCam Image Analysis software. The parameter settings are shown on the left side of the software. See Fig.4-1.

Note: When use ‘Lock WB’ 

, it takes 3 seconds to make sure the camera finish the initialization.

（2） Switch the 

in ‘Exposure Control’ tab to get different frame rate. In Normal mode, the image quality is better than High mode. To get faster frame rate, please select High mode.

（3） Functions ‘Fluorescence’, ‘Temperature Control’ and ‘Fluorescence Color’ are not available for VISICAM HDMI 6 / VISICAM HDMI 5. These functions are gray out when VISICAM HDMI 6 / VISICAM HDMI 5 camera is attached.

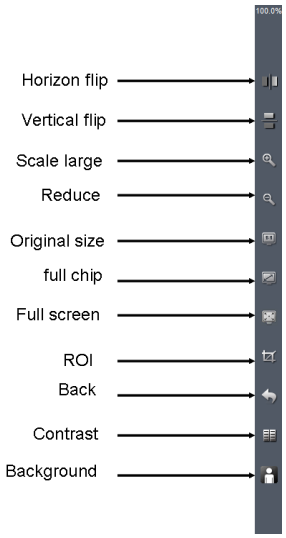


Fig.4-2. Function shortcuts on the right side of VisiCam Image Analysis software

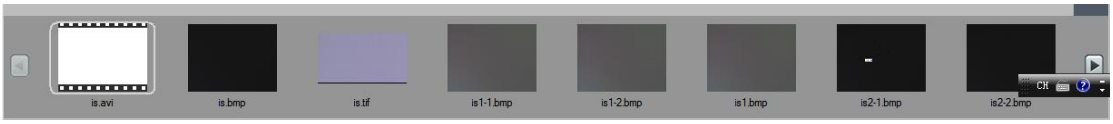
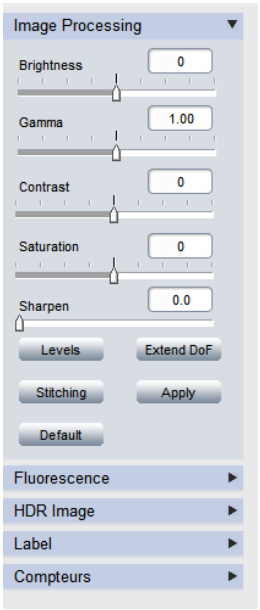


Fig.4-3. Captured image thumbnails

（1） Users can double click on one image thumbnail to display it. Click on the little trangle button to get more captured image thumbnails.

（1） Further more, you also can select one or more images and delete them.



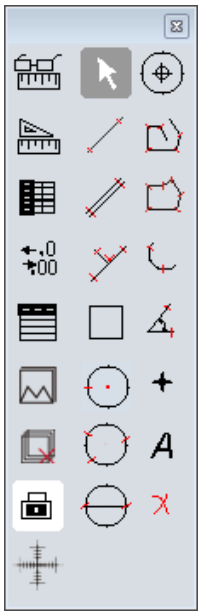


Fig.4-4. Imaging processing

Fig.4-5. Measurement (not for VisiCam HDMI 5)

（1） Click on Image tab, get the image processing functions (Fig.4-4).

（2） Provide Focus stacking, HDR, Fluorescence Combination functions etc.

Note: When camera is disconnected, all the image processing functions will be gray out.

Click on Measure tab to get measurement functions (Fig.4-5). (not available for VisiCam HDMI 5)

（3） It is allowed to apply measurements to the live and still images. To get more details about measurement, please read the VisiCam Image Analysis software manual.

4. Troubleshooting

Camera is connected to the PC but no image is displayed in the capture interface

(1) Check the VisiCam proper installation (see previous question) and proper PC connection. Check the microscope is turned on.

(2) If the problem is still present connect the camera to a different USB port if you have more than one. It is important camera is connected to the MAIN USB port and to a secondary one (secondary USB ports are usually in front of computers)

(3) Install again drivers if system requires it

(4) If the problem does not resolve restart your computer and try again to launch software

When the capture interface starts with “no video capture device” message

(1) The camera is not properly connected; check the USB connection and proper driver installation. Check if there is no other camera installed in the computer (if you have a laptop with camera embedded, you must disable it)

Black Preview

(1) Click in “Exposure” button on software interface and adjust Exposure value or the Brightness and/or contrast settings to see if the image brightens

(2) Check that your USB port is USB2.0 and not 1.1; if you have a 1.1 try to reduce Preview resolution of camera on Resolution menu of preview window

Colours in Preview window are not properly displayed.

Perform white balance with microscope lamp switched on and without any specimen under microscope objective

The image in the Preview window appears overexposed even if the camera exposure is set at minimum

(1) Insert grey filters on the microscope illuminator to reduce the amount of light reaching the camera. If you reduce illumination level of microscope, consider that colour regulation could be altered and you will have to perform again a white balance.

5. Maintenance

When not in use, please store the camera in a dry place and far from hot sources.
Avoid touching the sensor/filter surface with fingers, and other objects. This may damage the sensor or let dust go over it.
To clean the filter over the sensor it is enough to use a swab stick with 100% alcohol
Do not try to open the camera by yourself, this will void the warranty

6. User replaceable accessories and spare parts

Description	Qty	Cat. No.
C-mount Adapter for Visiscope TL324	1	630-1688
C-mount Adapter for Visiscope TL524	1	630-1749
C-mount Adapter for Visiscope SZT350	1	630-1793
C-mount Adapter for Visiscope SZTL350	1	630-1793
CS-C Mount adapter	1	630-1122
Calibration Slide	1	630-1123
TV/USB converter kit	1	630-1125
C-MOUNT ADAPTER 0,5x FOR OLYMPUS *MICROSCOPES	1	630-1853
C-MOUNT ADAPTER 0,5x FOR ZEISS* MICROSCOPES	1	630-1854
C-MOUNT ADAPTER 0,5x FOR LEICA* MICROSCOPES	1	630-1855
C-MOUNT ADAPTER 0,5x FOR NIKON* MICROSCOPES	1	630-1856

*not for all models

7. Technical service

Web Resources
Visit the VWR's website at vwr.com for:
• Complete technical service contact information
• Access to VWR's Online Catalogue, and information about accessories and related products
• Additional product information and special offers
Contact us For information or technical assistance contact your local VWR representative or visit.**vwr.com**.

8. Warranty

VWR warrants that this product will be free from defects in material and workmanship for a period of two (2) years from date of delivery. If a defect is present, VWR will, at its option and cost, repair, replace, or refund the purchase price of this product to the customer, provided it is returned during the warranty period. This warranty does not apply if the product has been damaged by accident, abuse, misuse, or misapplication, or from ordinary wear and tear. If the required maintenance and inspection services are not performed according to the manuals and any local regulations, such warranty turns invalid, except to the extent, the defect of the product is not due to such non performance.

Items being returned must be insured by the customer against possible damage or loss. This warranty shall be limited to the aforementioned remedies. IT IS EXPRESSLY AGREED THAT THIS WARRANTY WILL BE IN LIEU OF ALL WARRANTIES OF FITNESS AND IN LIEU OF THE WARRANTY OF MERCHANTABILITY.

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