

OLYMPUS[®]

System Setup Guide

CIX100

OLYMPUS Cleanliness Inspector System
Optical Microscope and Accessory

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Printed in Germany

510_UMA_SystemSetupGuide_CIX100_en_01_20102017

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1 OLYMPUS CIX100 Cleanliness Inspector System

The OLYMPUS CIX100 Cleanliness Inspector System is a complete system that performs fully automated optical cleanliness analyses on filters. Optical cleanliness analysis is a method for determining the pollution degree of components. The cleanliness analysis quantifies and analyzes the particles in a sample. The system uses standardized methods of analysis to perform classifications in accordance with international standards. The system is comprised of a microscope system, a computer, a monitor and specially developed software.

1.1 Correct use of the system

The OLYMPUS CIX100 Cleanliness Inspector System is designed exclusively for performing microscopic cleanliness analyses on circular filters.

Undesignated use can result in injury or damage to property. Olympus Soft Imaging Solutions GmbH takes no responsibility for damaged caused by undesignated use.

1.2 About this manual

This manual is aimed at people who will be setting up and bringing the OLYMPUS CIX100 Cleanliness Inspector System into operation. Read this manual carefully before setting up the system and bringing it into operation. Keep this manual in an easily accessible location near the workstation for reference.

Read all of the other instructions for the components of the system carefully. The following manuals are delivered with your system:

- Instructions for the system microscope: BX53M
- Instructions for use for the control box: BX3M-CB
- Installation manual for the SC50 camera
- Brief instructions for installing microscope stages
- Assembly instructions for the MFD-2 motorized focus drive
- Documentation for the monitor
- Documentation for the computer

2 Safety instructions

Read and note the following safety instructions before setting up and using the OLYMPUS Cleanliness Inspector System.

2.1 Symbols and safety instructions

The following symbols and safety instructions warn of dangers when operating your system and give you useful tips.

Caution



The warning sign and the word CAUTION indicate dangerous situations that can lead to light injuries if ignored.

Attention



The exclamation mark and the word ATTENTION indicate situations where irreparable damage to the product can occur if ignored.







This icon indicates that there is a pinching hazard.



This icon indicates useful notes, tips and important information about the product.

2.2 Symbols on the product

The following symbols are on the product.

Symbol	Meaning
	This icon indicates that there is a pinching hazard.
	This icon indicates that there is a general unspecified hazard.
	The main power switch is on.
	The main power switch is off.

2.3 Avoiding personal injuries

Caution



Damage to the eyes

The microscope system contains an LED as a light source. LED light can damage the eyes.

Do not look directly into the LED.

Use the light source exclusively to illuminate samples.

2.4 Notes on cables

Caution



Always use the power cord provided by Olympus.

The electrical safety and electromagnetic compatibility of the device can not be guaranteed if an unsuitable power cord is used. If no suitable power cord has been provided, you can find details of suitable power cords on page 32 of the “Proper selection of the power supply cord” chapter.

- Never use the cables for any other purpose.

2.5 Avoiding device damage

Attention



Device damage through manual operation of the stage

The stage can be damaged by manual operation.
Use the joystick to move the stage or to change its height.

Attention



Device damage through overloading the stage

Overloading the stage can hinder the movement of the stage or damage the microscope.
For the inspection, only use membrane filters that are mounted in the filter holder.

Attention



Device damage from oversize or unsuitable samples

Samples that aren't clamped on the filter holder or that exceed the maximum permitted height can damage the lenses or the stage.
For the analysis, only use membrane filters that are mounted in the filter holder.
Make sure that the height of the sample doesn't impair the movement of the objective.

2.6 Notes on placement

- The weight of the microscope system is approx. 18 kg. Consider this weight when selecting the work surface and method for lifting the microscope system.
- Place the microscope system on a sturdy level table or bench, taking care not to block the ventilation slots on the underside of the frame.
- When setting up the microscope system, ensure that there is a minimum distance of 10 cm from the wall and other devices.

Attention



Device damage through improper lifting of the microscope system.

The microscope system may be damaged if you lift it by an unsuitable component, the stage for example. Furthermore, the calibrations can become invalid.

When transporting the microscope system, hold it carefully by the grip on the arm (see figure 1).

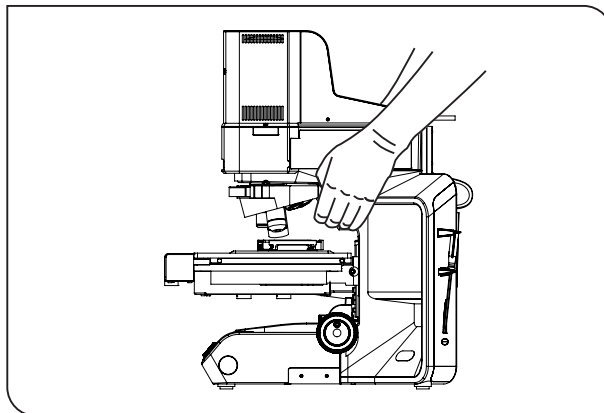


Figure 1

2.7 Notes on using the system with networks

If the computer that the software is installed on is part of a network environment, note the following points.

- Make sure that the network has appropriate virus protection.
- The installation of operating system service packs, security patches or third party software updates (including runtime libraries) can cause software malfunctions.
- If anti-virus software is run while you are acquiring images, it can lead to the loss of individual acquisitions. It can also slow down the acquisition process or even cause it to be aborted altogether.

2.8 Conditions for placing, operating and storing

- The maximum permissible range for the ambient temperature during operation of the CIX100 system is 5 °C to 35 °C.
- The maximum relative humidity: 80% at temperatures up to 31 °C, linearly decreasing to 70% at 34 °C, 60% at 37 °C, and 50% relative humidity at 40 °C.
- Only use the system indoors and in a laboratory or laboratory-like environment.
- Only use the system up to a maximum altitude of 2000 m.
- The electricity supply should not fluctuate by more than 10% of the nominal voltage.
- Pollution degree: 2 (IEC60664)
- Installation category (overvoltage): II (IEC60664)

3 Scope of supply

1	CIX100 Microscope system
1	System Setup Guide
1	Joystick
1	Box with instructions for the individual components
1	Box of cables
1	Particle standard device with holder
1	Filter holder
1	Multi-sample holder
1	DVD with the CIX ASW software
1	Microsoft Office 2016 (installed and activated)
1	Computer
1	Touchscreen monitor
1	Keyboard and mouse
1	Calibration Protocol

4 Setting up the system

Attention



Only connect the modules specified by Olympus to the ports.
Plug the individual connector plugs in the right way around and tighten the lock screws, if present.

4.1 Unpacking and positioning the components

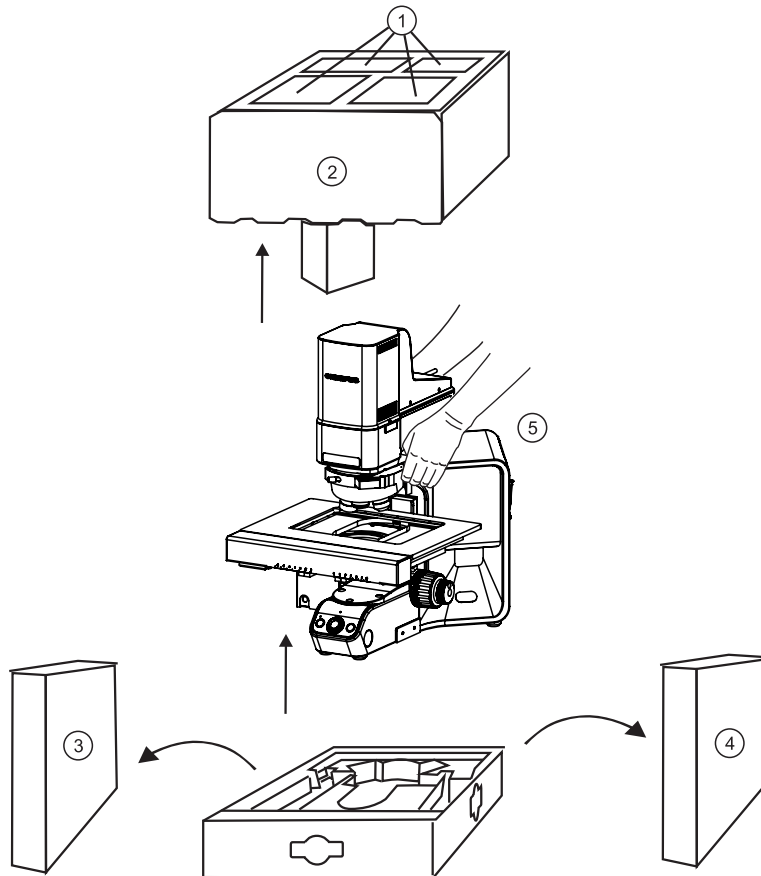


Figure 2: Unpacking the components

1. Remove the components from the upper polystyrene insert (1).
2. Remove the upper polystyrene insert (2).

3. Remove the box with the instructions and the box of cables (3 + 4).
4. Open the protective foil and put it over the edge of the box.

Attention**Device damage through improper lifting of the microscope system.**

The microscope system may be damaged if you lift it by an unsuitable component, the stage for example. Furthermore, the calibrations can become invalid.

When transporting the microscope system, hold it carefully by the grip on the arm.

5. Make sure that you can securely hold and lift the microscope system (weight approx. 18 kg) on the handle part of the microscope arm (5).
6. Carefully place the microscope system on a stable, level surface.
7. Open the computer's packaging and the monitor's packaging and remove the components and the accessories.
8. Remove the bag with the desiccant and dispose of it appropriately.

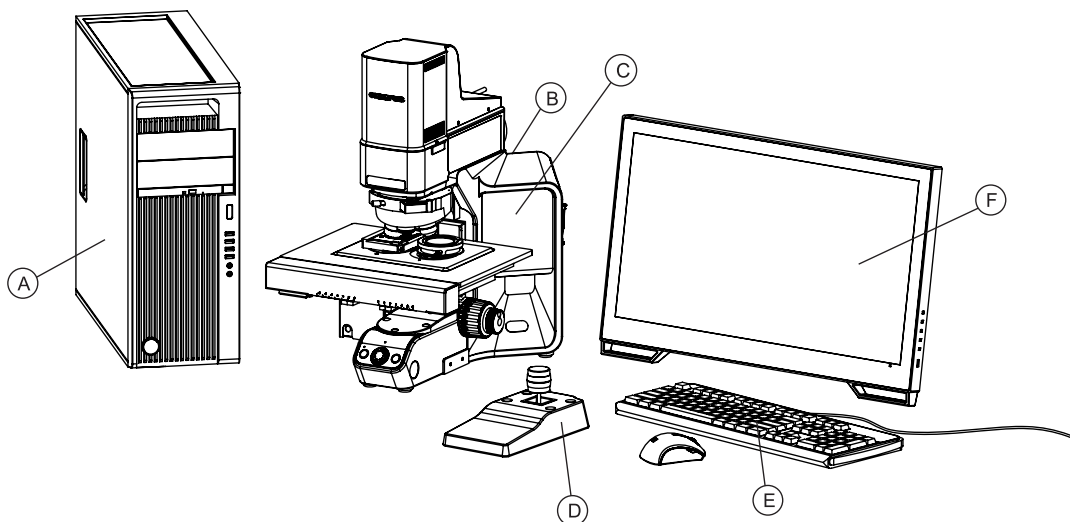


Figure 3: System components

A	Computer	D	Joystick
B	Control box (located at the back of the microscope)	E	Keyboard and mouse
C	CIX100 Microscope system	F	Touchscreen Monitor

4.2 Connecting the cables

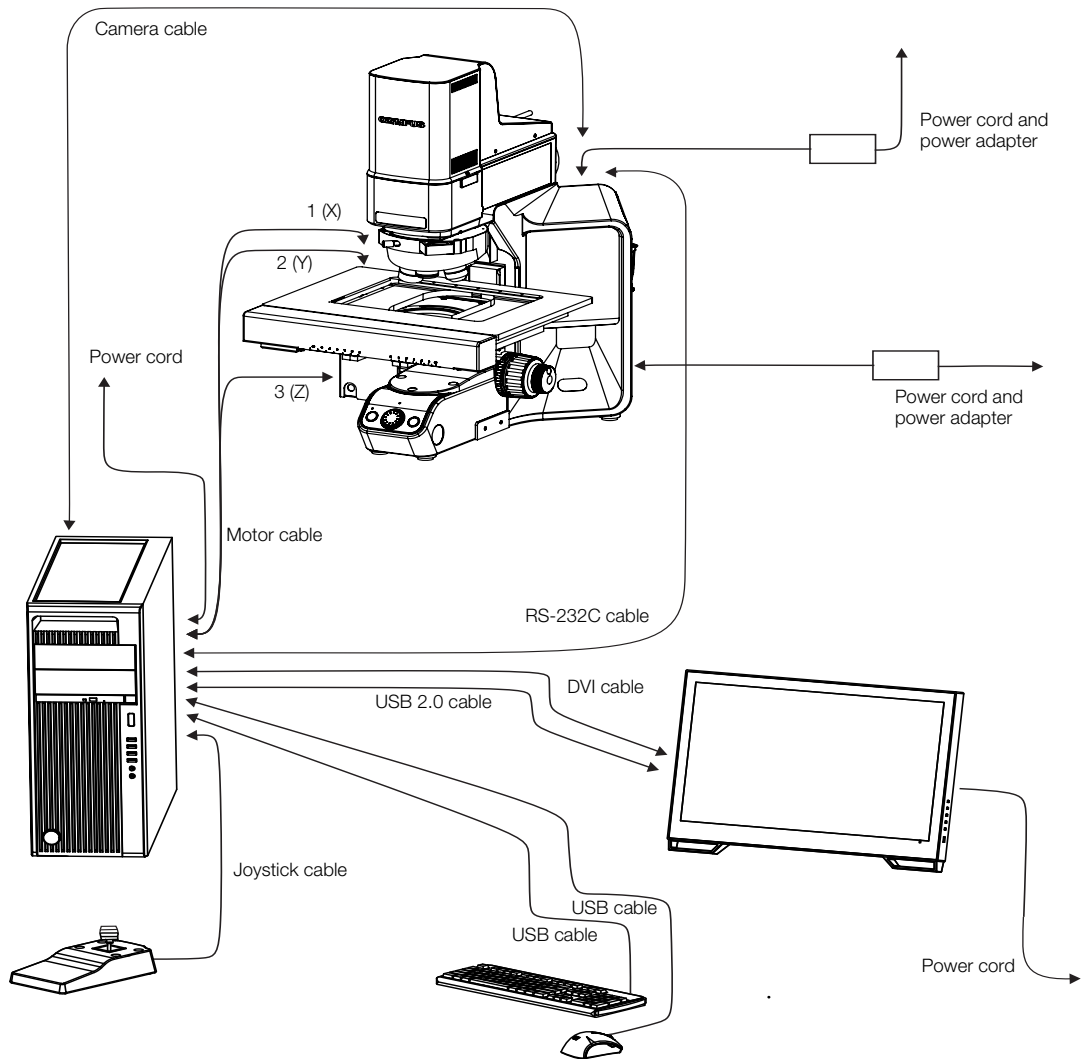


Figure 4: The system's cable connections

Caution**Always use the power cord provided by Olympus.**

The electrical safety and electromagnetic compatibility of the device can not be guaranteed if an unsuitable power cord is used. If no suitable power cord has been provided, you can find details of suitable power cords on page 32 of the “Proper selection of the power supply cord” chapter.

Caution**Always make sure that the device is properly grounded.**

The safety and electromagnetic compatibility of the devices can not be guaranteed if they are not grounded.

Caution**Tripping hazard!**

Cables laid across a room can be a dangerous tripping hazard. Lay the cables so that they don't present a tripping hazard and will not get damaged.

Connecting the monitor to the computer

1. Plug one end of the DVI cable into the port on the monitor (1) and the other end of the cable into the port on the computer.
2. Plug the USB 2.0 cable into the USB 2.0 port on the monitor (2) and plug the other end of the cable into a USB 2.0 port on the computer.

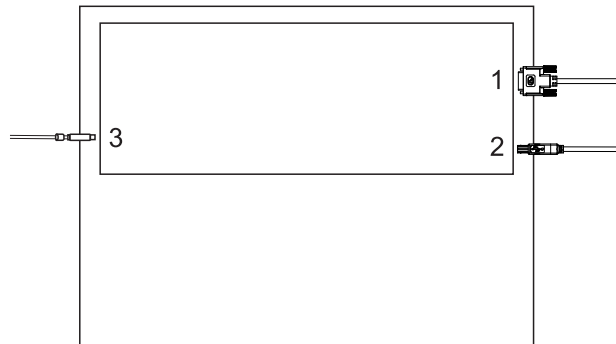


Figure 5: The back of the monitor

- | | |
|---|-------------------------|
| 1 | DVI port |
| 2 | USB 2.0 port |
| 3 | Port for the power cord |

3. Connect the monitor's power cord with the power adapter.
4. Plug the power adapter into the port on the monitor (3).

Connecting the mouse and keyboard with the computer

1. Plug the mouse's USB cable and the keyboard's USB cable into two of the computer's USB ports.

Connecting the joystick to the computer

1. Plug the joystick cable into the port on the computer.

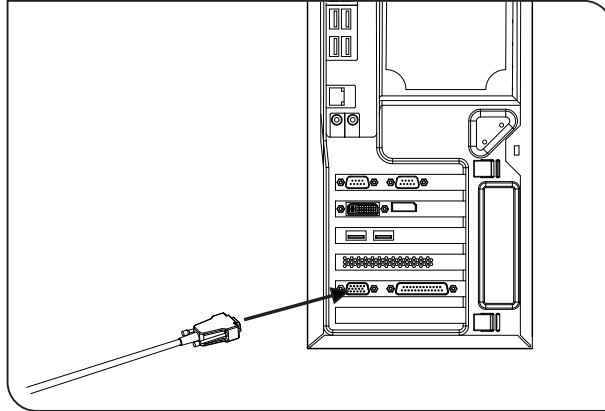


Figure 6: Joystick cable and computer port

Connecting the computer to the power cord

1. Plug the power cord into the port on the computer.

Connecting the control box on the microscope to the computer

1. Plug the RS-232C cable into the control box.

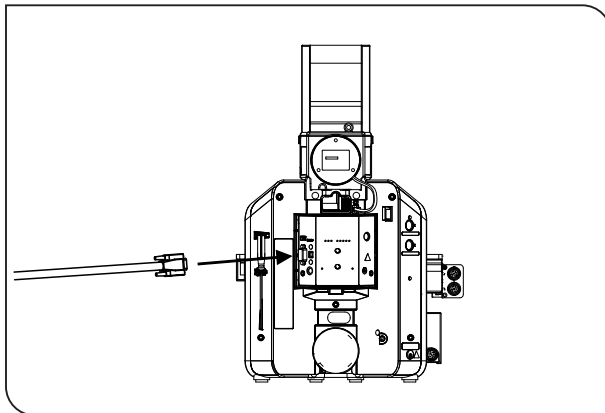


Figure 7: RS-232-C cable and control box port

2. Plug the other end of the RS-232C cable into the computer.

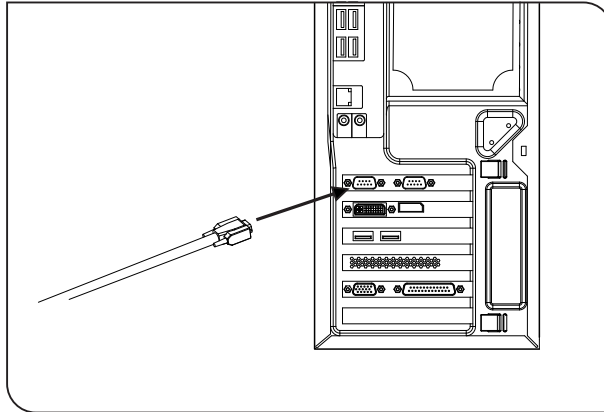


Figure 8: RS-232-C cable and computer port

3. Connect the control box's power cord with the power adapter.
4. Plug the power adapter's plug into the control box.

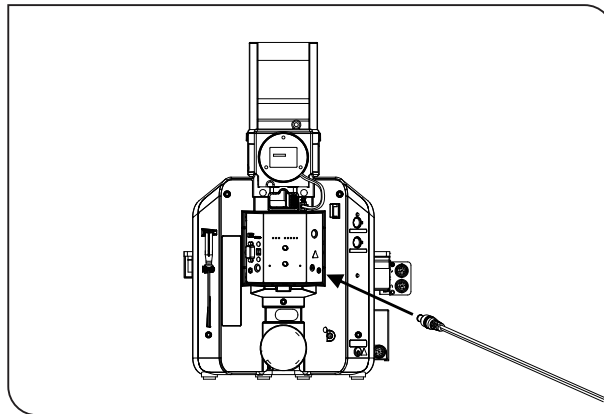


Figure 9: Power adapter cable and control box port

Connecting the camera to the computer

1. Plug the camera's USB-3.0 cable into the computer's USB-3.0 PCI express card port. The camera's cable is located above the vertical illuminator.

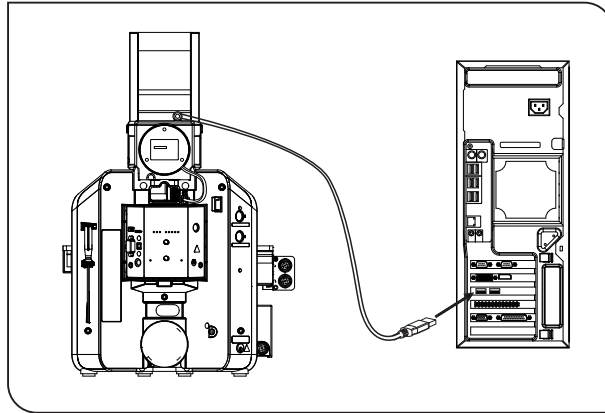


Figure 10: Camera cable and computer port

Connecting the stage to the microscope and the computer

1. Plug the motor cable 2 (Y) into the y port on the microscope.
2. Plug the motor cable 1 (X) into the x port on the microscope.
3. Plug the motor cable 3 (Z) into the motorized focus drive's port on the microscope.

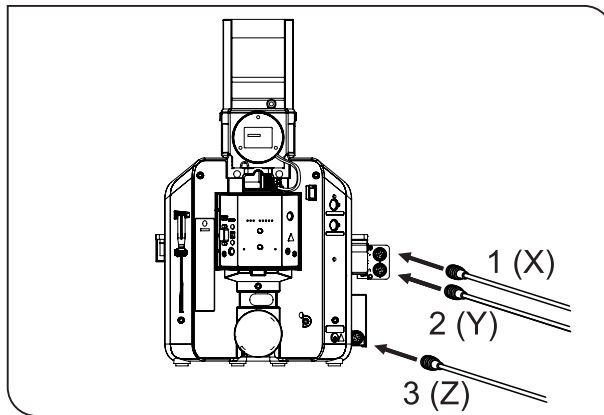


Figure 11: Motor cables and microscope ports

4. Connect the stage to the computer. To do this, plug the other end of the motor cable into the port on the computer.

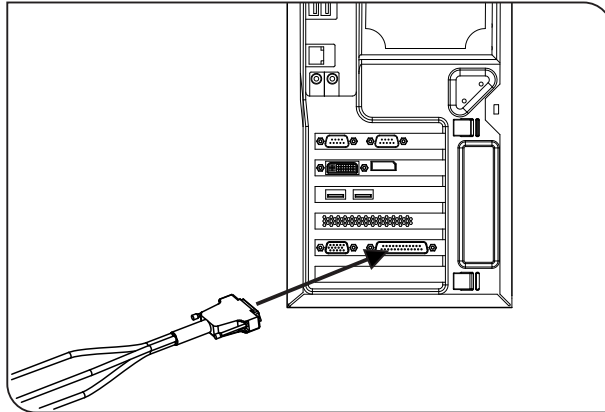


Figure 12: Motor cable and computer port

5. Plug the power cord into the power adapter.
6. Connect the power cord with the port on the microscope.

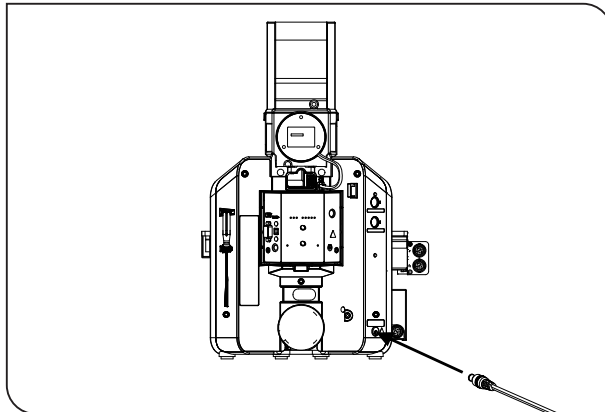


Figure 13: Power cord and port on the microscope

4.3 Connecting the power cord

Attention

Make sure that the mains power supply where you are corresponds with the power supply required by each of the components.

Caution**Always use the power cord provided by Olympus.**

The electrical safety and electromagnetic compatibility of the device can not be guaranteed if an unsuitable power cord or any other unsuitable cables are used. If no suitable power cord has been provided, you can find details of suitable power cords on page 32 of the “Proper selection of the power supply cord” chapter.

1. **Microscope:** Before connecting the power cord make sure that the microscope's main switch is off, (O).
2. Connect the microscope to the power socket using the power cord.
3. **Control box:** Connect the control box to the power socket using the power cord.
4. **Monitor:** Connect the monitor to the power socket using the power cord.
5. **Computer:** Connect the computer to the power socket using the power cord.
 - You have now connected all of the components and can switch on the system in the next step.

5 Switching on the system

1. Switch on the microscope.
2. First switch on the monitor, then the computer.

5.1 Inserting hardware components

Caution**Pinching hazard**

When the stage moves, gaps appear. This creates a pinching hazard. Make sure that you are not within the stage's range of movement when it is moving.

Try never to put your hands or fingers into any gaps.

1. Move the stage right to the front, so that you can easily access the multi-sample holder's insertion area.
 2. Make sure not to scratch the objectives when you insert the multi-sample holder.
 3. There is a spring in the bottom left of the multi-sample holder's insertion area. First place the multi-sample holder at the bottom left corner and then insert it.
 - The multi-sample holder should not wobble when it is correctly inserted.
 4. Place the particle standard device in position 2 of the multi-sample holder.
 5. Place the filter holder with the sample in position 1 of the multi-sample holder.
 6. Use the joystick to move the stage back again.
-

Attention**Damage to the objective**

Make sure that the objectives don't hit the sample.

7. Use the coarse adjustment knob on the microscope system to move the stage to its return position. The return position corresponds to the coarse adjustment knob's top end position.
8. Set the brightness of the LED illumination to maximum. To do this, rotate the brightness control knob at the front of the microscope frame clockwise.

5.2 Starting CIX ASW



1. Double click the CIX button on the desktop.
 - The software starts.
2. Selected a language for the user interface.
3. To do this, click the [System Information] > [Languages] button on the software's start page and select the required language from the list.

5.3 Check System

Perform the [Check System] workflow before working with the system. This workflow checks the system and the accuracy of the calibrations. A particle standard device, rather than a sample, is scanned and the objects on it are detected. The system compares the results of this inspection with the known dimensions of the particle standard device. If discrepancies are found, a message suggesting optimization measures appears.

Prerequisite

- ▶ The system has been calibrated.
For more information on the calibration processes, see the software's help document.
- ▶ The particle standard device is clean and free of dust.
- ▶ The particle standard device is in position 2 of the multi-sample holder.



1. Click the [Check System] button on the software's start page.
 - You are taken through the [Check System] workflow step-by-step.



You can find more information about this workflow and using the software in the software's help document.

Click the [Help] button in the software to open the help document for the current page.

6 Changing the language of the operating system

An English version of the Microsoft Windows 10 operating system is installed on the system's computer. Language packs for German, French, Spanish, Japanese, Chinese and Korean are also available on the system. If you want to use the operating system in a different language, you can change it in the control panel.

1. Open the [Control Panel](#) dialog box. You can use the search function to do this.

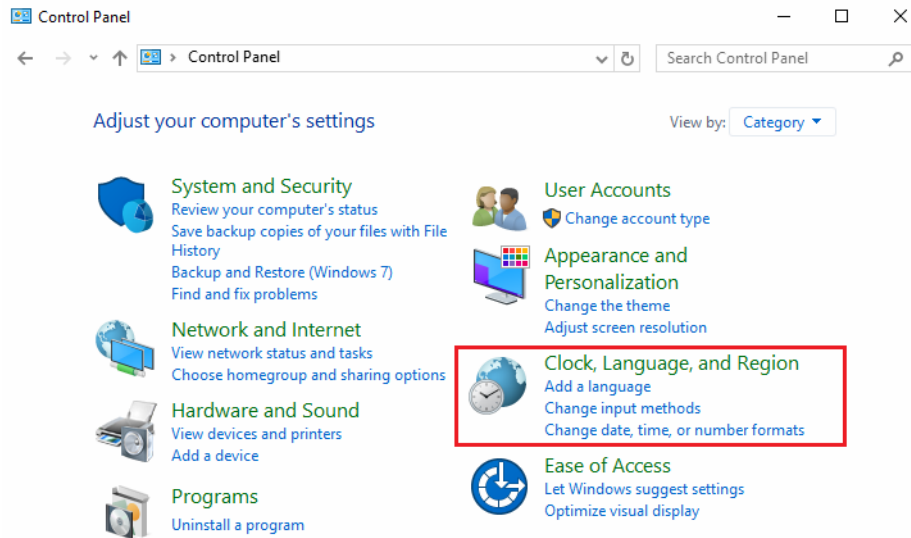


Figure 14: The [Control Panel](#) dialog box in the Microsoft Windows 10 operating system.

2. Click the [Clock, Language, and Region](#) entry.
3. Click the [Language](#) entry.
 - The [Language](#) dialog box opens.
4. Select the language you want.
5. Double click the language you want.
6. The [Language options](#) dialog box opens.
7. Click the [Make this the primary language](#) entry.
 - The language you selected now appears at the top position in the [Language](#) dialog box.
8. The language changes the next time you log in to the operating system.

6.1 Changing the input language

All of the languages that appear in the [Language](#) dialog box can also be used as an input language for the keyboard and as a keyboard layout.

1. To change the input language for the keyboard, press the Windows key and the space bar at the same time. A list of all available languages will appear.
2. Select the language you want from the list.

Changing the keyboard layout

You can change the keyboard layout as follows.

1. Open the [Control Panel](#) dialog box. You can use the search function to do this.
2. Click the [Clock, Language, and Region](#) entry.
3. Click the [Language > Change input methods](#) entry.
 - The [Language](#) dialog box opens.
4. Click the [Options](#) entry for the language you want.
 - The [Language options](#) dialog box opens.
5. Click the [Add an input method](#) entry.
 - The [Input method](#) dialog box opens.
6. Select the input method you want from the list.
7. Click the [Add](#) button.
8. The [Language options](#) dialog box opens.
9. Click the [Save](#) button.
10. You can now change the input language for the keyboard by pressing the Windows key and the space bar at the same time.

6.2 Changing the display language for additional areas

You can also change the language for other areas of the operating system, the welcome screen for example.

1. Open the [Control Panel](#) dialog box. You can use the search function to do this.
2. Click the [Clock, Language, and Region](#) entry.
3. Click the [Language](#) entry.
 - The [Language](#) dialog box opens.
4. Click the [Advanced settings](#) entry.
 - The [Advanced settings](#) dialog box opens.
5. Click the [Apply language settings to the welcome screen, system accounts, and new user accounts](#) entry.
 - The [Region](#) dialog box opens.

6. Select the [Administrative](#) tab.
7. Click the [Copy settings...](#) button.
 - The [Welcome screen and new user accounts settings](#) dialog box opens.
8. Select the [Welcome screen and system accounts](#) check box.
9. If you want to use the display language for all new windows user accounts, select the [New user accounts](#) check box.
10. Confirm the following dialog boxes with **OK**.
11. You may need to restart the computer to apply the changes.

If you want to use the Microsoft Windows 10 operating system in a language that is not supplied with the system, you can find information about installing language packs on the Microsoft Support website.

7 Changing the language of Microsoft Office

An English version of Microsoft Office has already been installed and activated on the system. Language packs for German, French, Spanish, Japanese, and Korean are also available on the system.

If you want to use Microsoft Office in a different language, you can activate a different language pack using the Options in Microsoft Office.

1. To do this open any Office program, such as Microsoft Word.
2. Click the [File > Options > Language](#) entry.
3. In the [Choose Display and Help Languages](#) area, select the language you want to use as the default display and help language for all Office programs.
4. Confirm the selection with **OK**.
5. Restart the Office programs to apply the changes.

If you want to use Microsoft Office in a language that is not supplied with the system, you can find information about installing language packs on the Microsoft Office Support website.

8 Software updates

Please contact the local distributor from whom you acquired the product to inquire about software updates for the OLYMPUS Cleanliness Inspector Software (CIX ASW).

9 Care and maintenance

Your OLYMPUS CIX100 Cleanliness Inspector System doesn't require any maintenance. If you have any questions or problems, please contact our customer service:

- E-mail: support@olympus-sis.com
- Phone: (+ 49) 251-79800-6444, fax: (+ 49) 251-79800-6445

9.1 Cleaning the particle standard device

Make sure to keep the particle standard device clean and free of dust. Don't touch the particle standard device with your fingers, to avoid getting grease on it. If necessary, clean the particle standard device with a rubber dust blower. For more persistent marks, we recommend cleaning the particle standard device with a lint free precision wipe and some acetone or alcohol. Follow the manufacturer's safety instructions for the substance that you are using.

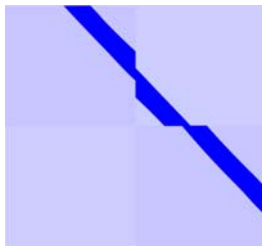
10 Troubleshooting

If questions or problems come up that you can't solve with the help of these instructions, Olympus Soft Imaging Solutions Customer Service will be happy to help you:

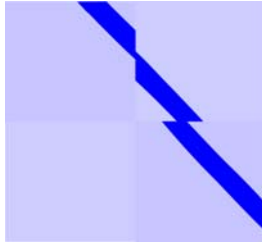
- E-mail: support@olympus-sis.com
- Phone: (+ 49) 251-79800-6444, fax: (+ 49) 251-79800-6445

Problem The recorded images are not correctly aligned with each other.

If you notice when checking the system or during the inspection of the sample that the recorded images are not assembled correctly, it may be that the calibrations are no longer valid.



When the images have been assembled this way, it indicates that the [[Manual Magnification Calibration](#)] calibration is no longer valid.



When the images have been assembled this way, it indicates that the [Camera-to-Stage Rotation] calibration is no longer valid.

Solution

1. Perform the calibration processes [Manual Magnification Calibration] and [Camera-to-Stage Rotation]. Clicking the [Calibration] button on the home page of the software opens the dialog box that contains the calibration processes.
2. [Camera-To-Stage Rotation] calibration process: If the rotation angle is more than 1°, contact Customer Service:
 - support@olympus-sis.com
Phone: (+ 49) 251-79800-6444, fax: (+ 49) 251-79800-6445
3. When both calibration processes are completed successfully, perform the [Check System] workflow because the calibration processes invalidate the existing system check. Then perform the [Inspect Sample] workflow and check if the recorded images are assembled correctly.
4. If there are still problems with the assembly of the images, please contact Customer Service:
 - support@olympus-sis.com
Phone: (+ 49) 251-79800-6444, fax: (+ 49) 251-79800-6445

11 System diagram

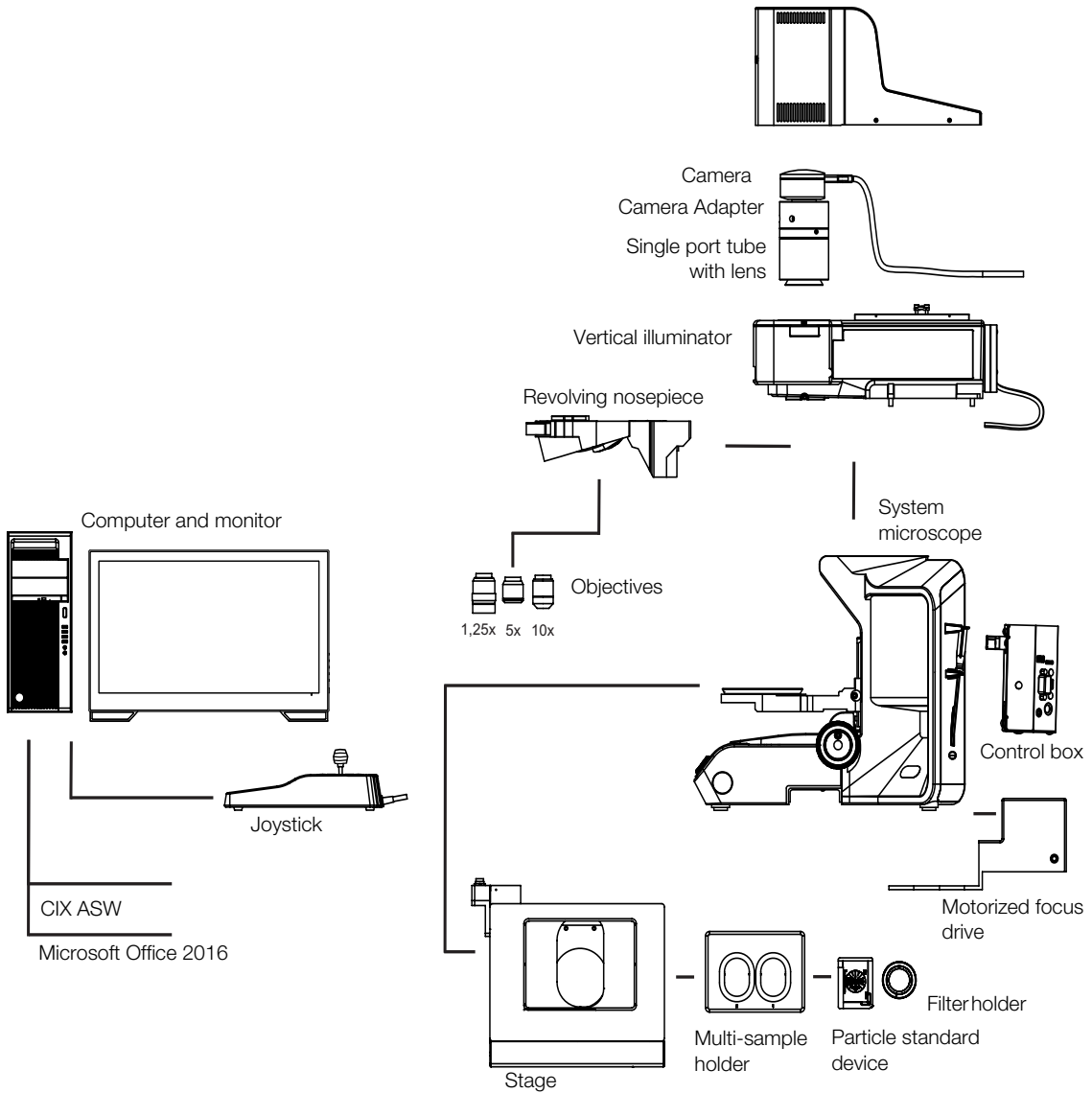


Figure 15: System diagram

12 System components

The OLYMPUS CIX100 Cleanliness Inspector System is composed of the following components.

CIX100 Microscope system

1	System microscope
1	Power cord
1	Motorized focus drive
1	Vertical illuminator
1	Revolving nosepiece
3	Objectives
1	Camera
1	Camera Adapter
1	Single port tube with lens
1	Stage
1	Motor cable (stage)
1	Filter holder
1	Multi-sample holder
1	Particle standard device with holder
1	Joystick
1	Control box
1	Power cord and power adapter for the control box
1	Connector cable (Control box - HP Z440 Workstation)
1	Microsoft Office 2016
1	OLYMPUS Cleanliness Inspector Software (CIX ASW) including Help document (PDF)
1	Calibration Protocol
	Instructions for use:
	• Instructions for the system microscope: BX53M
	• Instructions for use for the control box: BX3M-CB
	• Installation manual for the SC50 camera
	• Brief instructions for installing microscope stages
	• Assembly instructions for the MFD-2 motorized focus drive
	• Documentation for the monitor
	• Documentation for the computer

Computer

1	HP Workstation
1	Power cord
1	Mouse
1	Keyboard
1	How to...

Monitor

1	Touchscreen monitor
1	Power cord (Touchscreen Monitor)
1	DVI connector cable (Touchscreen Monitor - HP Workstation)
1	USB connector cable (Touchscreen Monitor - HP Workstation)
1	How to...

13 Specifications

Move parameters	Specifications			
Camera	SC50	Chip type	CMOS	
		Chip size	1/2.5 Inch	
		Effective area (width x height)	5.6 mm x 4.2 mm	
		Pixel size	2.2 μm x 2.2 μm	
		Maximum resolution	2560 x 1920 pixels	
		Bit depth	24 bit, 48 bit	
		Read-out speed	5 – 104 MHz	
		Interface	USB 3.0	
		Camera mount	Standard C-Mount	
Objectives	Optical UIS2	PLAPON1.25X	NA	0.04
			W.D.	5
			FN	26.5
		MPLFLN5X	NA	0.15
			W.D.	20.0
			FN	26.5
		MPLFLN10X	NA	0.30
			W.D.	11.0
			FN	26.5
Revolving nosepiece	U-D6REMC DIC slider insertion type			
Reflected light illumination	Product name: BX3M-KMA-S			
	For brightfield/DIC/Polarization microscopy, built-in LED illumination			
Microscope Frame Reflected light illumination only	Product name: BX53MRF-S			
	Rating: AC Adapter: input: 100-240 V AC 50/60 Hz 0.4 A output: 5 V DC 2.5 A Microscope frame: input: 5 V DC 2.5 A Maximum power consumption: BX53MRF-S: 5.8 W, 18.8 VA			

Focusing system	Focusing unit: Fine focus knob: Distance moved per rotation 0.1 mm Coarse focus knob: Distance moved per rotation 17.8 mm Equipped with tension adjustment mechanism and upper limit stopper mechanism		
Motorized focus drive	MFD-2	Resolution	typical 0.002 μm, depends on the speed reduction gear ratio of the microscope's focus drive
		Motor	2-phase stepper motor
		Max. revolutions	60 rev. / s
		Material	aluminium
		Surface	anodic coating, black lacquered
Stage	Scan 130 x 85	Travel range	max. 130 mm × 85 mm
		Travel speed	max. 120 mm/s (with 2 mm ball screw pitch) max. 240 mm/s (with 4 mm ball screw pitch)
		Repeatability	< 1 μm (bi-directional)
		Accuracy	±3 μm
		Resolution	0.01 μm (smallest step size)
		Orthogonality	< 10 arcsec
		Motor	2-phase stepper motor
		Limit switches	continuously adjustable optical light beams
		Material / surface	aluminium / anodic coating, black lacquered

14 Proper selection of the power supply cord

If no suitable power supply cord is provided, please select the proper power supply cord for the equipment by referring to "Specifications" and "Certification marks for power cords" below.



OLYMPUS is not responsible for damage caused by the use of uncertified power cords with OLYMPUS devices.

Specifications

Voltage Rating	125V AC (for 100-120V AC area) or 250V AC (for 220-240V AC area)
Current Rating	9.5A minimum
Temperature Rating	60 °C minimum
Length	3.05 m maximum
Fittings configuration	Grounding type attachment plug cap. Opposite terminates in molded-on IEC configuration appliance coupling.

Table 1 Certification marks for power cords

The power cord has to have a certification mark from one of the bodies listed in Table 1 or it must use cable that has been tested by a body that is listed in table 1 or table 2. The plug has to have at least one certification mark shown in table 1. If you are unable to acquire a cord tested by one of the bodies listed in table 1 in your country, please use a cord that has been tested by a comparable body in your country.




















Country	Agency	Certification Mark	Country	Agency	Certification Mark
Argentina	IRAM		Japan	JET, JQA	
Australia	SAA		Canada	CSA	
Belgium	CEBEC		Netherlands	KEMA	
Denmark	DEMKO		Norway	NEMKO	
Germany	VDE		Austria	ÖVE	
Finland	FEI		Sweden	SEMKO	
France	UTE		Switzerland	SEV	
United Kingdom	ASTA BSI		Spain	AEE	
Ireland	NSAI		U.S.A.	UL	
Italy	IMQ				

Table 2 HAR Flexible cables

Certification bodies and type of certification for the harmonization mark

Certification body	Printed or embossed harmonization mark (on the plug or cable insulation)	
Comité Électrotechnique Belge (CEBEC)	CEBEC	<HAR>
VDE Verband der Elektrotechnik Elektronik Informationstechnik e.V.	<VDE>	<HAR>
Union Technique de l'Électricité (UTE)	USE	<HAR>
Istituto Italiano del Marchio di Qualità (IMQ)	IEMMEQU	<HAR>
British Approvals Service for Cables (BASEC)	BASEC	<HAR>
N.V. KEMA	KEMA-KEUR	<HAR>
SEMKO AB Svenska Elektriska Materielkontroll-anstalten	SEMKO	<HAR>
Österreichischer Verband für Elektrotechnik (ÖVE)	<ÖVE>	<HAR>
Danmarks Elektriske Materielkontrol (DEMKO)	<DEMKO>	<HAR>
National Standards Authority of Ireland (NSAI)	<NSAI>	<HAR>
Norges Elektriske Materielkontroll (NEMKO)	NEMKO	<HAR>
Asociación Electrotécnica Española (AEE)	<UNED>	<HAR>
Hellenic Organization for Standardization (ELOT)	ELOT	<HAR>
Instituto Português da Qualidade (IPQ)	np	<HAR>
Schweizerischer Elektrotechnischer Verein (SEV)	SEV	<HAR>
Elektriska Inspektoratet	SETI	<HAR>

Underwriters Laboratories Inc. (UL)

SV, SVT, SJ oder SJT, 3 X 18AWG

Canadian Standards Association (CSA)

SV, SVT, SJ oder SJT, 3 X 18AWG

15 Notes on conformity and disposal

15.1 CE Conformity (Europe)

The OLYMPUS CIX100 Cleanliness Inspector System conforms to the requirements of the following European directives:

- Machinery Directive 2006/42/EC
- EMC Directive 2014/30/EU
- Low Voltage Directive 2014/35/EU

This device complies with the requirements of the IEC/EN61326-1 standard with regards to electromagnetic compatibility.

- Emission: Class A, applied to industrial environment requirements.
- Immunity: Complies with the requirements for industrial environments. Use of the device in residential areas may cause interference.

15.2 WEEE declaration (Europe)



In accordance with the European directive on Waste of Electrical and Electronic Equipment, this symbol indicates that the product must not be disposed of as unsorted municipal waste but should be collected separately. Refer to your local authority in the EU for return and/or collection systems available in your country.

15.3 RoHS Conformity (Europe)

This product conforms with the European Union directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment 2011/65/EU.

15.4 FCC conformity (USA)

This device complies with Part 15 of the FCC regulations. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

FCC warning

Changes or modifications not expressly approved by the party responsible for compliance could void user's authority to operate the equipment.

15.5 For Korea only

A급 기기 (업무용 방송통신기자재)

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15.6 China RoHS conformity (China)

for China only



电器电子产品有害物质限制使用标志

本标志是根据“电器电子产品有害物质限制使用管理办法”以及“电子电气产品有害物质限制使用标识要求”的规定，适用于在中国销售的电器电子产品上的电器电子产品有害物质使用限制标志。
(注意) 电器电子产品有害物质限制使用标志内的数字为在正常的使用条件下有害物质等不泄漏的期限，不是保证产品功能性能的期间。

产品中有害物质的名称及含量

部件名称		有害物质					
		铅及其化合物 (Pb)	汞及其化合物 (Hg)	镉及其化合物 (Cd)	六价铬及其化合物 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
主体	机构部件	x	o	o	o	o	o
	光学部件	x	o	o	o	o	o
	电气部件	x	o	o	o	o	o
附件		x	o	o	o	o	o

本表格依据SJ/T 11364的规定编制。

o：表示该有害物质在该部件所有均质材料中的含量均在GB/T26572规定的限量要求以下。

x：表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T26572规定的限量要求。

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