DEEP ULTRAVIOLET OBSERVATION SYSTEM FOR MICROSCOPES

U-UVF248

HIGH-MAGNIFICATION AND HIGH-CONTRAST DUV REALTIME OBSERVATION
High-magnification DUV real-time observation just by adding a new module to a new or existing Olympus Microscope.

Olympus has developed a new modular DUV (deep ultraviolet) imaging system. The NEW U-UVF248 provides fast, easy and efficient imaging in either white light or high magnification DUV. Imaging is performed by using the standard 15 frames per second image converter or with the Olympus series of image analysis solutions.

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**Advanced Flexibility**

**Easily add DUV to MX series inspection microscopes**
The U-UVF248 is a standard mechanical system that can be fitted directly to existing or new microscopes. For optimum performance all DUV imaging system should be used on a vibration isolation platform.

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**Modular design for improved performance and safety**
The U-UVF248 uses a flexible modular design that provides improved safety to your sensitive specimen. The imaging module uses a remote light source with unique intensity control to minimize heat transition to your specimen. The illumination is carried out with a special fiber optic that provides convenient location of the light source and its control.

**Digital camera control from computer**
The recommended high-resolution UV digital camera is compatible with the IEEE1394 interface for fast image display. Using the image analysis software analySIS FIVE, the camera can be controlled by computer. Images transferred to the computer can be seamlessly processed, analyzed and quantified for easy databasing and report preparation.

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**High Resolution**

**Bright high contrast DUV images**
The DUV imaging band 248 ± 4 nm is completely corrected to prevent and residual chromatic aberration. The use of specialized optical materials and efficient design allow for the brightest images available at this performance enhancing wavelength with some customer reporting result of 0.08 micron image details.

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**Exposure resistant design**
The new "non-cemented" technology provides for a long-term solution that is not impacted by the normal deterioration found in other DUV lenses. This exciting technology allows you to use your DUV module trouble free for years with no impact in performance.
Compact and low-cost

The DUV intermediate tube is simple and does not have any operating parts. Largely thanks to separation of the lamp housing, the U-UVF248 microscope system is about half the size and weight of conventional DUV microscope systems — and also half the cost.

Safety for visible light optics and operator

The module utilizes an ingenuous box shutter to direct illumination to either the DUV lens or the white light optics. This protect you valuable white light objectives as well as your operators.

Long-lasting mercury xenon lamp

DUV irradiation is provided by a long-life mercury xenon lamp (1000 hours average lifetime), reducing running costs and minimizing lamp exchange.

SYSTEM DIAGRAM

- **WHN10x** Eyepiece
- **MX-SWETR** Super widefield upright image tilting trinocular observation tube
- **U-UVF248IM** UV248 compatible intermediate tube
- **U-ETR-4** Upright image trinocular observation tube
- **U-TLU** Single port tube with lens
- **U-UVF2FB/5FB** UV quartz light guide
- **U-LH100L-3** 100W halogen lamp housing
- **U-LH100-3** 100W halogen lamp housing
- **U-LH80HGXE** Mercury Xenon lamp housing
- **U-UVF248LB** UV248 compatible light source box
- **U-LH100-3** 100W halogen lamp housing
- **MX61-F** MX61 microscope stand for reflected/transmitted light use
- **MX51-F** MX51 microscope stand for reflected/transmitted light
- **MX31L-F** MX31L microscope stand for reflected/transmitted light use
- **UX100** Power supply unit
- **BX-RLA2** Reflected light illuminator for BF/DF
- **BX-URA2** Universal reflected light illuminator
- **U-RCV** DF converter
- **U-TLU** Single port tube with lens
- **UIS objectives for visible light
- **U-RCV** DF converter
- **Exquisite DUV100x objective
- ** Revolving nosepieces

*U-ETR-4 is only used with MX51. MX61 and MX61L are used with a motorized revolving nosepiece.


### U-UVF248 deep ultraviolet microscope unit specifications

| UV248 compatible intermediate tube U-UVF248IM | DUV optics | Wavelength | 248±4 nm

- Light source: 80 W mercury xenon lamp
- Objective: Special DUV100× objective/ NA 0.9 WD 0.2mm
- Intermediate magnification
- Field number: 2.5x
- Usage environment: 12.5 (actual view field 50µm)
- Temperature: 23±5°C

| Visible optics | Objective: UIS objective

- Intermediate magnification: 1x
- Field number: 22 (camera observation 20)

| UV248 compatible light source box U-UVF248LB | Brightness adjustment | Manual adjustment from 0 to 100%

- Shutter: Up-down lever switch

| UV quartz light guide U-UVF2FB/5FB | Length of 2 or 5 m

| Mercury xenon lamp housing | 80 W mercury xenon lamp

| Power supply | Ushio product (100-120 V)

### DUV image capture

| DUV camera | XCD-SX910UV (Sony) High-resolution DUV digital camera SXGA 1280(H) x 960(V), ultraviolet region: 190-380 nm (also corresponds to visible-light region)

| DUV camera control | PCI bus IEEE1394 image input board Computer for camera control (Windows XP, drive: CD-ROM or DVD-ROM)

| System requirements for image analysis software | Memory: 256 MB or more (512 MB recommended)

| | CPU: Pentium III 500 MHz or higher

| | Display: 1280 x 1024 SXGA or higher

| | Browser: Internet Explorer 3.02 or later (8.0 or later recommended)

### Microscope

| Recommended microscope system | Semiconductor inspection microscope/MX61

| | 300mm semiconductor/FPD inspection microscope/MX61L

| | Industrial inspection microscope/MX51

| Power consumption | 3 kW (maximum)

| Weight | Approx. 46 kg (with MX61) and approx. 28 kg (with MX51)

### Dimensions

| MX61 configuration | UV248 compatible light source box + lamp housing

- MX61 configuration: 338 Tilt angle of 20°
- UV248 compatible light source box + lamp housing: 20.3

- Weight: approx. 6.4 kg

(∗): When mounting U-ETR4 (upright image trinocular tube) to MX51

### Specifications

- All brands are trademarks or registered trademarks of their respective owners.

- OLYMPUS CORPORATION obtains the ISO9001/ISO14001.

- Specifications are subject to change without any obligation on the part of the manufacturer.