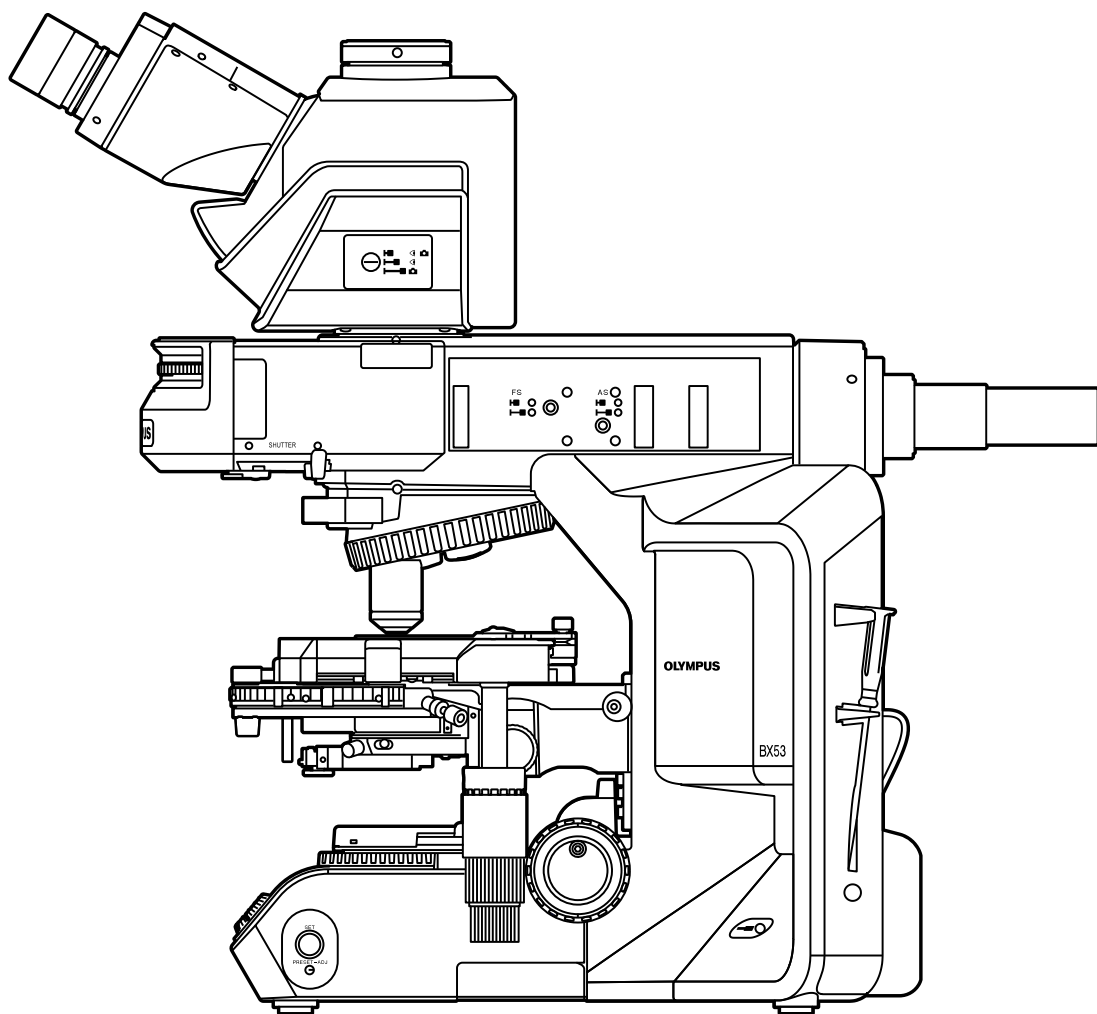


## BX3 Microscope Unit Guide



# Introduction

Our BX3 series can be configured to meet your microscope needs. The combination of leading-edge imaging capabilities with the flexibility to customize the system to your specific application makes BX3 series microscopes powerful research tools.

## Accessories

### Objective Lens

#### X Line UPLXAPO Series

Thanks to novel manufacturing technology, X Line UPLXAPO high-performance objectives offer improved optical performance in three critical areas—a larger numerical aperture (NA), better image flatness, and a wider range of chromatic correction. These advances enable high-quality, large field of view (FOV) imaging for versatility in numerous applications.

| Series | Objective Lens | NA   | W.D. (mm) | OFN  | Cover Glass Thickness (mm) | Chromatic Correction Range | Spring Loaded |
|--------|----------------|------|-----------|------|----------------------------|----------------------------|---------------|
| X Line | UPLXAPO4X      | 0.16 | 13        | 26.5 | -                          | 400-1000 nm                |               |
|        | UPLXAPO10X     | 0.40 | 3.1       | 26.5 | 0.17                       | 400-1000 nm                |               |
|        | UPLXAPO20X     | 0.80 | 0.6       | 26.5 | 0.17                       | 400-1000 nm                | ✓             |
|        | UPLXAPO40X     | 0.95 | 0.18      | 26.5 | 0.11-0.23                  | 400-1000 nm                | ✓             |
|        | UPLXAPO40XO    | 1.40 | 0.13      | 26.5 | 0.17                       | 400-1000 nm                | ✓             |
|        | UPLXAPO60XO    | 1.42 | 0.15      | 26.5 | 0.17                       | 400-1000 nm                | ✓             |
|        | UPLXAPO100XO   | 1.45 | 0.13      | 26.5 | 0.17                       | 400-1000 nm                | ✓             |
|        | UPLXAPO60XOPH  | 1.42 | 0.15      | 26.5 | 0.17                       | 400-1000 nm                | ✓             |
|        | UPLXAPO100XOPH | 1.45 | 0.13      | 26.5 | 0.17                       | 400-1000 nm                | ✓             |



#### PLN (PLN-PH) Series

Appropriate for a range of biological applications, these high-quality objectives offer flatness up to OFN 22 in transmitted brightfield (phase contrast) observation. The PLN-PH series is designed for phase contrast observation.

#### UPLFLN (UPLFLN-PH) Series

These plan objectives provide flat images with high transmission up to the near-infrared region of the spectrum. With their high signal-to-noise ratio, high resolution, and high-contrast images, the objectives are especially effective in brightfield and Nomarski DIC observations. The UPLFLN-PH series is optimized for phase contrast observation.

#### PLAPON Series

Designed for high resolution and contrast, plan apochromat objectives reduce chromatic aberration to low levels.

| Objective Lens | NA      | W.D. (mm) | OFN  | Cover Glass Thickness (mm) | Immersion | Spring Loaded |
|----------------|---------|-----------|------|----------------------------|-----------|---------------|
| PLN2X          | 0.06    | 5.8       | 22   | -                          |           |               |
| PLN4X          | 0.10    | 18.5      | 22   | -                          |           |               |
| PLN10X         | 0.25    | 10.6      | 22   | -                          |           |               |
| PLN20X         | 0.40    | 1.2       | 22   | 0.17                       |           | ✓             |
| PLN40X         | 0.65    | 0.6       | 22   | 0.17                       |           | ✓             |
| PLN50XOI       | 0.9-0.5 | 0.2       | 22   | -                          | Oil       | ✓             |
| PLN100XO       | 1.25    | 0.15      | 22   | -                          | Oil       | ✓             |
| LPLN40X        | 0.60    | 3.4-4.1   | 22   | 0-1                        |           |               |
| PLN10XPH       | 0.25    | 10.6      | 22   | -                          |           |               |
| PLN20XPH       | 0.40    | 1.2       | 22   | 0.17                       |           | ✓             |
| PLN40XPH       | 0.65    | 0.6       | 22   | 0.17                       |           | ✓             |
| PLN100XOPH     | 1.25    | 0.15      | 22   | -                          | Oil       | ✓             |
| UPLFLN4X       | 0.13    | 17        | 26.5 | -                          |           |               |
| UPLFLN10X2     | 0.30    | 10        | 26.5 | -                          |           |               |
| UPLFLN20X      | 0.50    | 2.1       | 26.5 | 0.17                       |           |               |
| UPLFLN40X      | 0.75    | 0.51      | 26.5 | 0.17                       |           | ✓             |

| Objective Lens | NA      | W.D. (mm) | OFN  | Cover Glass Thickness (mm) | Immersion | Spring Loaded |
|----------------|---------|-----------|------|----------------------------|-----------|---------------|
| UPLFLN100XO2   | 1.30    | 0.2       | 26.5 | 0.17                       | Oil       | ✓             |
| UPLFLN100XOI2  | 1.3-0.6 | 0.2       | 26.5 | 0.17                       | Oil       | ✓             |
| UPLFLN10X2PH   | 0.30    | 10        | 26.5 | -                          |           |               |
| UPLFLN20XPH    | 0.50    | 2.1       | 26.5 | 0.17                       |           |               |
| UPLFLN40XPH    | 0.75    | 0.51      | 26.5 | 0.17                       |           | ✓             |
| UPLFLN100XO2PH | 1.30    | 0.2       | 26.5 | 0.17                       | Oil       | ✓             |
| PLAPON1.25X    | 0.04    | 5.0       | 26.5 | -                          |           |               |
| PLAPON2X       | 0.08    | 6.2       | 26.5 | -                          |           |               |
| MPLFLN10X      | 0.30    | 11        | 26.5 | -                          |           |               |
| MPLFLN20X      | 0.45    | 3.1       | 26.5 | 0                          |           |               |
| MPLFLN40X      | 0.75    | 0.63      | 26.5 | 0                          |           | ✓             |
| MPLFLN100X     | 0.90    | 1         | 26.5 | 0                          |           |               |
| MPLAPON60X     | 0.90    | 0.4       | 26.5 | 0                          |           | ✓             |
| MPLAPON100X    | 0.95    | 0.35      | 26.5 | 0                          |           | ✓             |
| MPLAPON100XO2  | 1.45    | 0.10      | 26.5 | 0                          | Oil       | ✓             |

## Accessories

### Microscope Frames

| Main   | Type               | Brightness                                                  |
|--------|--------------------|-------------------------------------------------------------|
| BX43F  | Manual             | 2 W LED Light Source<br>(30 W Halogen Equivalent)           |
| BX46F  | Manual             | 2 W LED Light Source<br>(30W Halogen Equivalent)            |
| BX53F2 | Manual / Motorized | 14 W LED Light Source<br>(100 W Halogen Equivalent)         |
| BX63F  | Motorized          | 2 W LED Light Source or<br>12 V, 100 W Halogen Light Source |



### Observation Tubes

| Observation Tube | FN   | Type       | Angle Type | Feature                        |
|------------------|------|------------|------------|--------------------------------|
| U-BI30-2         | 22   | Binocular  | Fixing     | -                              |
| U-TBI-3          | 22   | Binocular  | Tilting    | High Eye Point                 |
| U-TBI-3-CLI      | 22   | Binocular  | Tilting    | Low Eye Point                  |
| U-TTBI           | 22   | Binocular  | Tilting    | Telescopic                     |
| U-TTLBI          | 22   | Binocular  | Tilting    | Lift Adjustment, Telescopic    |
| U-ETR-4          | 22   | Trinocular | Fixing     | Erected Image                  |
| U-TR30-2         | 22   | Trinocular | Fixing     | -                              |
| U-TTR-2          | 22   | Trinocular | Tilting    | -                              |
| U-SWTR-3         | 26.5 | Trinocular | Fixing     | Super Widefield                |
| U-SWETTR-5       | 26.5 | Trinocular | Tilting    | Erected Image, Super Widefield |



### Eyepieces

| Eyepieces   | FN   | Reticle   | Helicoid |
|-------------|------|-----------|----------|
| WHN10X      | 22   | -         |          |
| WHN10X-H    | 22   | -         | ✓        |
| CROSSWHN10X | 22   | Crosshair | ✓        |
| SWH10X-H    | 26.5 | -         | ✓        |



# Accessories

## Illumination Tubes

| Illumination Tube | # of FL Cube | Turret Type | Illumination Pattern |
|-------------------|--------------|-------------|----------------------|
| BX3-URA           | 8            | Manual      | Normal               |
| BX3-RFAS          | 8            | Coded       | Fly-Eye              |
| BX3-RFAA          | 8            | Motorized   | Fly-Eye              |

## Motorized Controller

| Motorized Controller | Description                    |
|----------------------|--------------------------------|
| U-HSCBM              | Hand Switch for CBM            |
| U-HSEXP              | Hand Switch for Exposure       |
| BX3M-HSRE            | Hand Switch                    |
| U-MCZ                | Controller                     |
| BX3-CBH              | Control Box                    |
| BX3-CBM              | Control Box                    |
| U-CBS                | Control Box for Coded Function |
| U-IFRES              | Interface for Coded Nosepiece  |



BX3-RFAA



U-MCZ

## Fluorescence Light Sources

| Fluorescence Light Source | Description                    |
|---------------------------|--------------------------------|
| U-LGPS                    | LED and LDP Light Source       |
| U-LH100HG                 | 100 W Mercury Lamp Housing     |
| U-LH100HGAP0              | 100 W Mercury Apo Lamp Housing |



U-LGPS

## Brightfield Light Sources

| Brightfield Light Source | Bulb    | Brightness                      |
|--------------------------|---------|---------------------------------|
| U-LH100-3                | Halogen | 12 V, 100 W                     |
| U-LHLEDC                 | LED     | 2 W (30 W Halogen Equivalent)   |
| U-LHLEDC100              | LED     | 14 W (100 W Halogen Equivalent) |

## Intermediate Tubes

| Intermediate Tube | Description                                               |
|-------------------|-----------------------------------------------------------|
| U-EPA2            | Eyepoint Adjuster                                         |
| U-EPAL-2          | Eyepoint Adjuster                                         |
| U-CA              | Magnification Changer                                     |
| U-KPA             | Intermediate Attachment for Simple Polarizing Observation |
| U-TRU             | Trinocular Intermediate Unit                              |
| U-TRUS            | Trinocular Intermediate Unit                              |
| U-DP              | Dual Port                                                 |
| U-DP1XC           | Dual Port 1X                                              |



U-TRU

**Nosepieces**

| Nosepieces | Type      | # of Objectives | Working Slot |
|------------|-----------|-----------------|--------------|
| U-5RE-2    | Manual    | 5               |              |
| BX43-5RES  | Coded     | 5               |              |
| U-D6RE     | Manual    | 6               | ✓            |
| U-D6RES    | Coded     | 6               | ✓            |
| U-D7RES    | Coded     | 7               | ✓            |
| U-D7REA    | Motorized | 7               | ✓            |

**Stages**

| Stage     | Control Handle | Type   | Applicable System |
|-----------|----------------|--------|-------------------|
| U-SVLB-4  | Left           | Manual | All               |
| U-SVRB-4  | Right          | Manual | All               |
| U-SVRC    | Right          | Manual | Only BX46         |
| U-SVRC-CY | Right          | Manual | Only BX46         |
| U-SP      | No Handle      | Manual | All               |
| IX-SVL2   | Left           | Manual | Only BX63         |

**Stage Accessories**

| Stage Accessories | Description                    |
|-------------------|--------------------------------|
| BX3-SHEA          | Stage Handle Extension Adaptor |
| U-SHG             | Rubber Grip                    |
| U-SHGT            | Rubber Grip (Thick)            |

**Sample Holders**

| Sample Holder | Handle | # of Slide | Thickness |
|---------------|--------|------------|-----------|
| U-HLD-4       | Left   | Double     | Thin      |
| U-HLDT-4      | Left   | Double     | Thick     |
| U-HLS-4       | Left   | Single     | Thin      |
| U-HLST-4      | Left   | Single     | Thick     |
| U-HRD-4       | Right  | Double     | Thin      |
| U-HRDT-4      | Right  | Double     | Thick     |



## Accessories

### TV Adaptors

| TV Adaptor   | Description                        |
|--------------|------------------------------------|
| U-TV0.35XC-2 | 0.35X C-Mount Adaptor              |
| U-TV0.5XC-3  | 0.5X C-Mount Adaptor               |
| U-TV0.63XC   | 0.5X C-Mount Adaptor               |
| U-TV1XC      | 1X C-Mount Adaptor (XY adjustment) |
| U-TV1X-2     | TV Adaptor                         |
| U-CMAD3      | C-Mount Adaptor                    |
| U-BMAD       | Bayonet-Mount Adaptor              |
| U-SMAD       | Sony Mount Adaptor                 |
| U-TMAD       | T-Mount Adaptor                    |
| U-FMT        | F-Mount Adaptor                    |
| U-CMT        | C-Mount Adaptor                    |
| U-DPCAD      | Double Port Tubes with C Mounts    |



### Condensers

| Condenser | NA                                  | Type      | Contrast Method |
|-----------|-------------------------------------|-----------|-----------------|
| U-AC2     | 1.1                                 | Manual    | BF              |
| U-SC3     | 0.9                                 | Manual    | BF/PO           |
| U-LC      | 0.75                                | Manual    | BF/PO           |
| U-AAC     | 1.4                                 | Manual    | BF              |
| U-PCD2    | 1.1                                 | Manual    | BF/PH/DF        |
| U-DCD     | 0.92                                | Manual    | DF              |
| U-DCW     | 1.4                                 | Manual    | DF              |
| U-UCD8-2  | Oil Top Lens 1.4 / Dry Top Lens 0.9 | Manual    | BF/PH/DIC/DF/PO |
| BX3-UCD8A | Oil Top Lens 1.4 / Dry Top Lens 0.9 | Motorized | BF/PH/DIC/DF/PO |



**Polarizer/Analyzer/DIC Slider**

| Polarizer/Analyzer/DIC Slider | Description                             |
|-------------------------------|-----------------------------------------|
| U-POT                         | Polarizer                               |
| BX45-PO                       | Polarizer                               |
| U-ANT                         | Analyzer for Transmitted Light          |
| U-AN-2                        | Analyzer Slider                         |
| U-GAN                         | Analyzer for Urate Crystals Observation |
| U-DFA                         | Darkfield Ring                          |
| U-PH1-S                       | Phase Contrast Ring (small)             |
| U-PH2-S                       | Phase Contrast Ring (small)             |
| U-PH3-S                       | Phase Contrast Ring (small)             |
| U-DIC10                       | DIC Prism                               |
| U-DIC10S                      | DIC Prism (small)                       |
| U-DIC20                       | DIC Prism                               |
| U-DIC40                       | DIC Prism                               |
| U-DIC60                       | DIC Prism                               |
| U-DIC100                      | DIC Prism                               |
| U-DICT                        | DIC Slider for Transmitted Light        |
| U-DICTS                       | Shift DIC Slider for Transmitted Light  |
| U-FDICT                       | DIC Mirror Unit                         |



U-DICT

**Mirror Units**

| Mirror Unit | Excitation Filter | Emission Filter | Dichroic Mirror |
|-------------|-------------------|-----------------|-----------------|
| U-FF        | No Filter         | No Filter       | No Mirror       |
| U-FUW       | BP340-390         | BA420IF         | DM410           |
| U-FUN       | BP360-370         | BA420IF         | DM410           |
| U-FUNA      | BP360-370         | BA420-460       | DM410           |
| U-FBVW      | BP400-440         | BA460IF         | DM455           |
| U-FBW       | BP460-495         | BA510IF         | DM505           |
| U-FBWA      | BP460-495         | BA510-550       | DM505           |
| U-FBN       | BP470-495         | BA510IF         | DM505           |
| U-FBNA      | BP470-495         | BA510-550       | DM505           |
| U-FGW       | BP530-550         | BA575IF         | DM570           |
| U-FGWA      | BP530-550         | BA575-625       | DM570           |
| U-FGNA      | BP540-550         | BA575-625       | DM570           |
| U-FYW       | BP540-585         | BA600IF         | DM595           |
| U-FCFP      | BP425-445CFP      | BA460-510CFP    | DM455CFP        |
| U-FGFP      | BP460-480GFP      | BA495-540GFP    | DM490GFP        |
| U-FYFP      | BP490-500YFP      | BA515-560YFP    | DM515YFP        |
| U-FRFP      | BP535-555HQ       | BA570-625HQ     | DM565HQ         |
| U-FMCHE     | BP565-585         | BA600-690       | DM595           |

## Group Observation Systems

Multi-head discussion systems are invaluable for lab training and education. We offer discussion systems for as few as two or as many as 26 people. With our BX3 series multi-discussion observation (MDO) system, every participant can see the same high-quality image. The integrated LED arrow pointer helps instructors highlight key features in the teaching specimen.

| Heads      | 2             | 2            | 3      | 5      | 9      | 10      | 18      | 26      |
|------------|---------------|--------------|--------|--------|--------|---------|---------|---------|
| Shape      | Front to Back | Side by Side | Linear | Linear | Linear | H-Shape | H-Shape | H-Shape |
| U-D03      | 1             |              |        |        |        |         |         |         |
| U-SD03     |               | 1            |        |        |        |         |         |         |
| U-MD0B3    |               |              | 1      | 1      | 1      |         |         |         |
| U-MD010B3  |               |              |        |        |        | 1       | 1       | 1       |
| U-MD010R3  |               |              |        |        |        | 1       |         |         |
| U-MDOSV    |               |              | 1      | 2      | 4      | 4       | 8       | 12      |
| BX3-MD018R |               |              |        |        |        |         | 1       | 1       |
| BX3-MD0E   |               |              |        |        | 2      |         | 4       | 8       |

Side-by-Side Observation

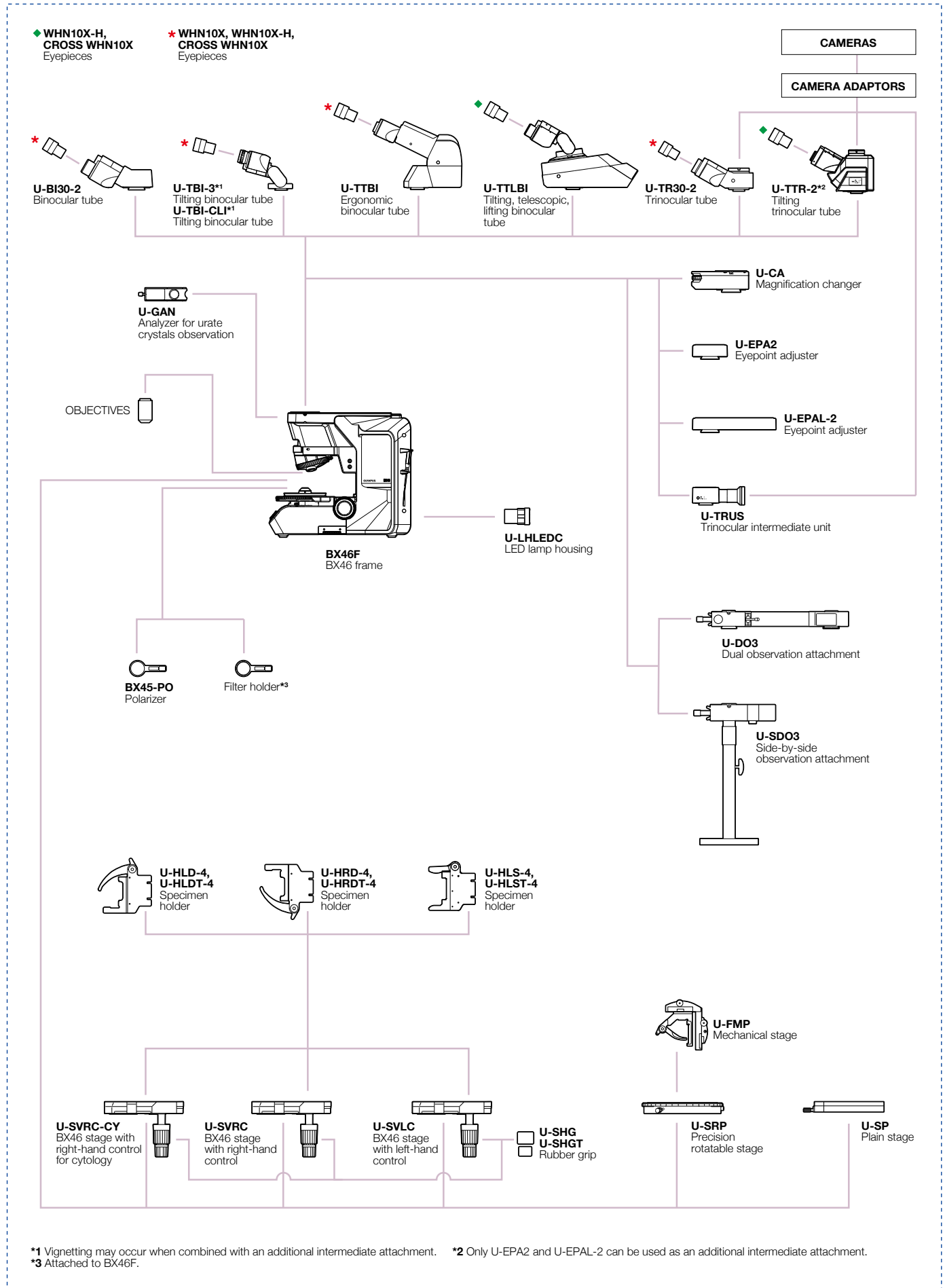
Front-to-Back Observation

Multi-Observation for 9 people

Multi-Observation for 26 people

# System Diagram

## BX46 SYSTEM DIAGRAM



# System Diagram

## BX63 SYSTEM DIAGRAM

◆ WHN10X-H,  
CROSS WHN10X  
Eyepieces  
U-CT30-2  
Centering telescope

\* WHN10X,  
WHN10X-H,  
CROSS WHN10X  
Eyepieces  
U-CT30-2  
Centering telescope

U-GAN  
Analyzer for  
urate crystals  
observation

U-ANT  
Analyzer for  
transmitted light

U-DICT  
DIC slider for  
transmitted light

### TR-Adaptor

U-FMT  
F-mount adaptor

U-TMAD  
T-mount adaptor

U-SMAD  
Sony-mount  
adaptor

U-BMAD  
Bayonet-mount  
adaptor

U-CMAD3  
C-mount adaptor

U-TV1X-2  
TV adaptor

U-DPCAD  
Dual port tube  
with C-mounts

U-TV0.63XB  
0.63X  
B4-mount  
adaptor

U-TV0.35XC-2  
0.35X  
C-mount  
adaptor

U-TV0.5XC-3  
0.5X  
C-mount  
adaptor

U-ETR-4\*<sup>1</sup>  
Erect image  
trinocular tube

U-TR30-2  
Trinocular tube

U-TTR-2  
Tilting trinocular  
tube

U-BI30-2  
Binocular tube

U-TBI-3\*<sup>1</sup>  
Tilting binocular tube

U-D7REA  
Motorized 7-position nosepiece

U-IFCBL50  
Interface cable, 50 cm

U-D7RES  
Coded 7-position  
nosepiece

U-D6RES  
Coded 6-position  
nosepiece

OBJECTIVES

BX3-ARM  
Standard arm

U-IFCBL200  
Interface cable,  
200 cm

U-POT  
Polarizer

U-FC  
Filter cassette

U-MCZ  
Controller

BX63F  
BX63 frame

Touch panel controller  
(attached to BX63F)

U-LH100ADP  
LH100 adaptor

U-AW  
Motorized  
attenuator wheel

U-IFCBL15  
Interface cable, 15 cm

U-IFCBL200  
Interface cable, 200 cm

U-LHLED  
LED lamp  
housing

U-LH100-3  
100 W halogen  
lamp housing

U-RMT  
Extension cord

U-SHG  
Rubber grip  
U-SHGT  
Rubber grip

U-CST  
Centering target

U-HLD-4,  
U-HLDT-4  
Specimen  
holder

U-HRD-4,  
U-HRDT-4  
Specimen  
holder

U-HLS-4,  
U-HLST-4  
Specimen  
holder

IX2-GCP  
Glass stage  
insert plate

IX-CP50  
Insert plate

IX-SCL  
Slide clip

BX3-SHEA  
Stage handle  
extension  
adaptor

U-SVLB-4  
Mechanical  
stage with  
left-hand  
control

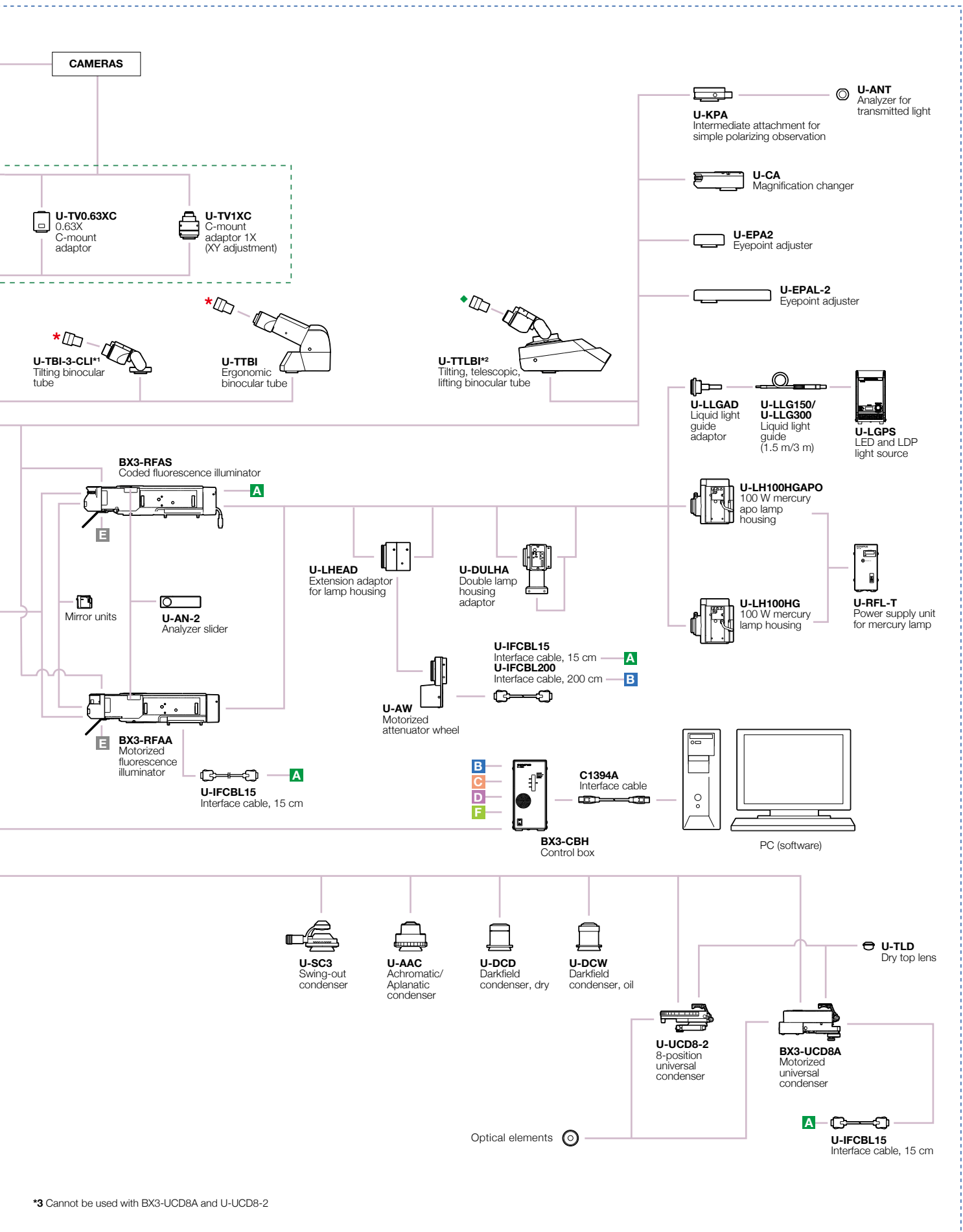
U-SVRB-4  
Mechanical  
stage with  
right-hand  
control

U-SP  
Plain stage

IX-SVL2\*<sup>2</sup>  
Cross stage with short  
left handle

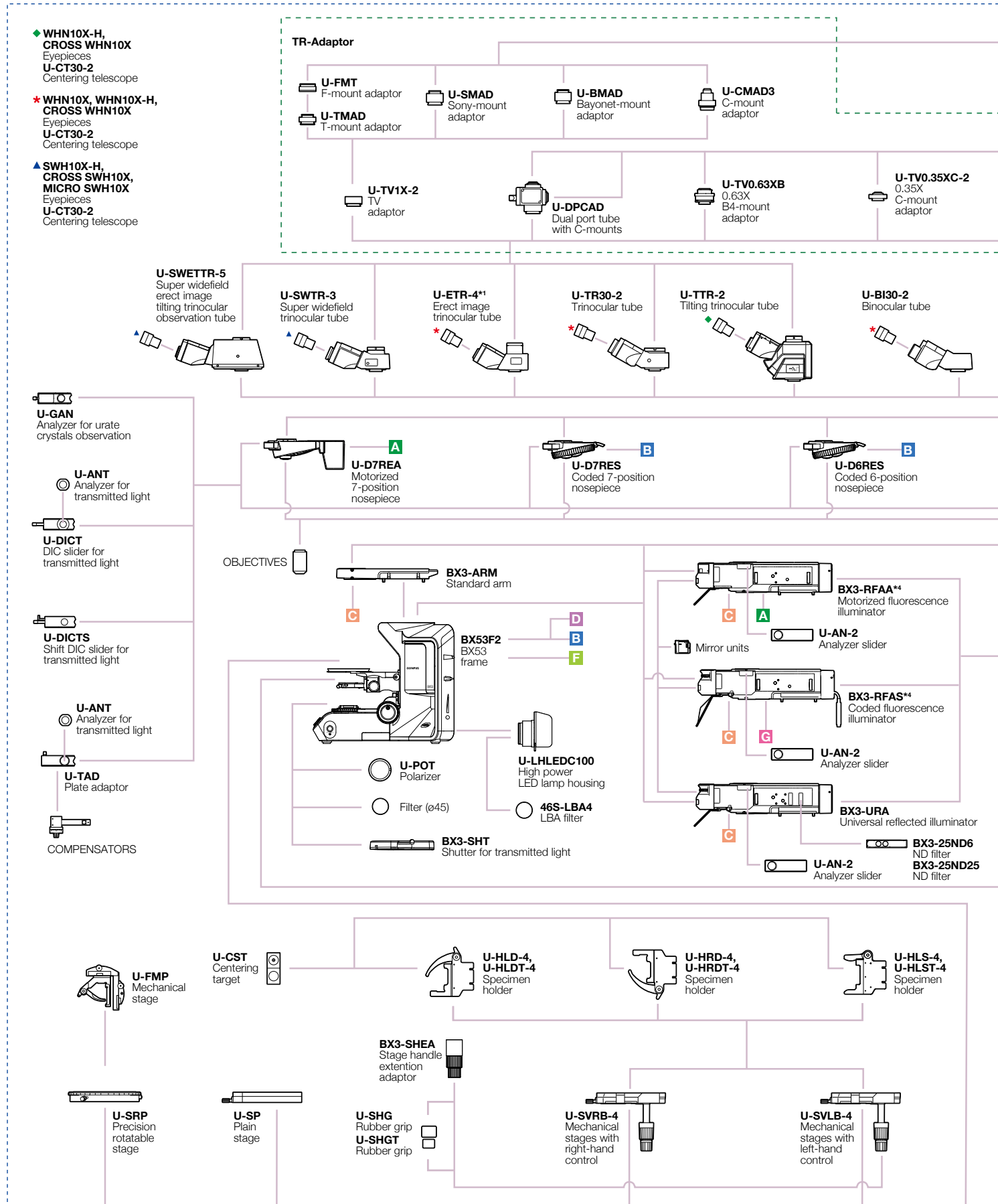
BX3-STAD  
Stage adaptor

\*<sup>1</sup> Slight vignetting may occur when combined with an additional intermediate attachment or fluorescence illuminator. \*<sup>2</sup> Requires an additional intermediate attachment or fluorescence illuminator.

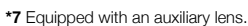


# System Diagram

## BX53 SYSTEM DIAGRAM



\*1 Slight vignetting may occur in combination with an additional intermediate attachment or observation method. \*2 Require an additional intermediate attachment or fluorescence illuminator.  
\*3 Cannot be used with U-TTLBI. \*4 Compatible with FN 22. \*5 Cannot be used with BX3-URA. \*6 Stand is a standard equipment of the U-MDOSV, BX3-MDO18R, and U-MDO10R3.



# System Diagram

## BX43 SYSTEM DIAGRAM

◆ WHN10X-H,  
CROSS WHN10X  
Eyepieces  
U-CT30-2  
Centering telescope

\* WHN10X, WHN10X-H,  
CROSS WHN10X  
Eyepieces  
U-CT30-2  
Centering telescope

▲ SWH10X-H,  
CROSS SWH10X,  
MICRO SWH10X  
Eyepieces  
U-CT30-2  
Centering telescope

### TR-Adaptor

U-FMT  
F-mount  
adaptor  
U-TMAD  
T-mount  
adaptor

U-SMAD  
Sony-mount  
adaptor

U-BMAD  
Bayonet-mount  
adaptor

U-CMAD3  
C-mount  
adaptor

U-TV1X-2  
TV adaptor

U-DPCAD  
Dual port tube  
with C-mounts

U-TV0.63XB  
0.63X  
B4-mount  
adaptor

U-TV0.35XC-2  
0.35X  
C-mount  
adaptor

U-SWETTR-5  
Super widefield  
erect image  
tilting trinocular  
observation tube

U-SWTR-3  
Super widefield  
trinocular tube

U-ETR-4\*1  
Erect image  
trinocular tube

U-TR30-2  
Trinocular tube

U-TTR-2  
Tilting trinocular tube

U-BI30-2  
Binocular tube

U-TBI-3\*1  
Tilting binocular tube

U-GAN  
Analyzer for urate  
crystals observation

U-ANT  
Analyzer for  
transmitted light

U-DICT  
DIC slider for  
transmitted light

U-DICTS  
Shift DIC slider for  
transmitted light

U-ANT  
Analyzer for  
transmitted light

U-TAD  
Plate adaptor

### COMPENSATORS

U-FMP  
Mechanical  
stage

U-SRP  
Precision rotatable  
stage

U-SP  
Plain  
stage

U-CST  
Centering target

BX3-SHEA  
Stage handle extension adaptor

U-SHG  
Rubber grip  
U-SHGT  
Rubber grip

U-SVRB-4  
Mechanical stages with  
right-hand control

U-SVLB-4  
Mechanical stages with  
left-hand control

U-HLD-4,  
U-HLDT-4  
Specimen holder

U-HRD-4,  
U-HRDT-4  
Specimen holder

U-HLS-4,  
U-HLST-4  
Specimen holder

BX43F  
BX43 frame

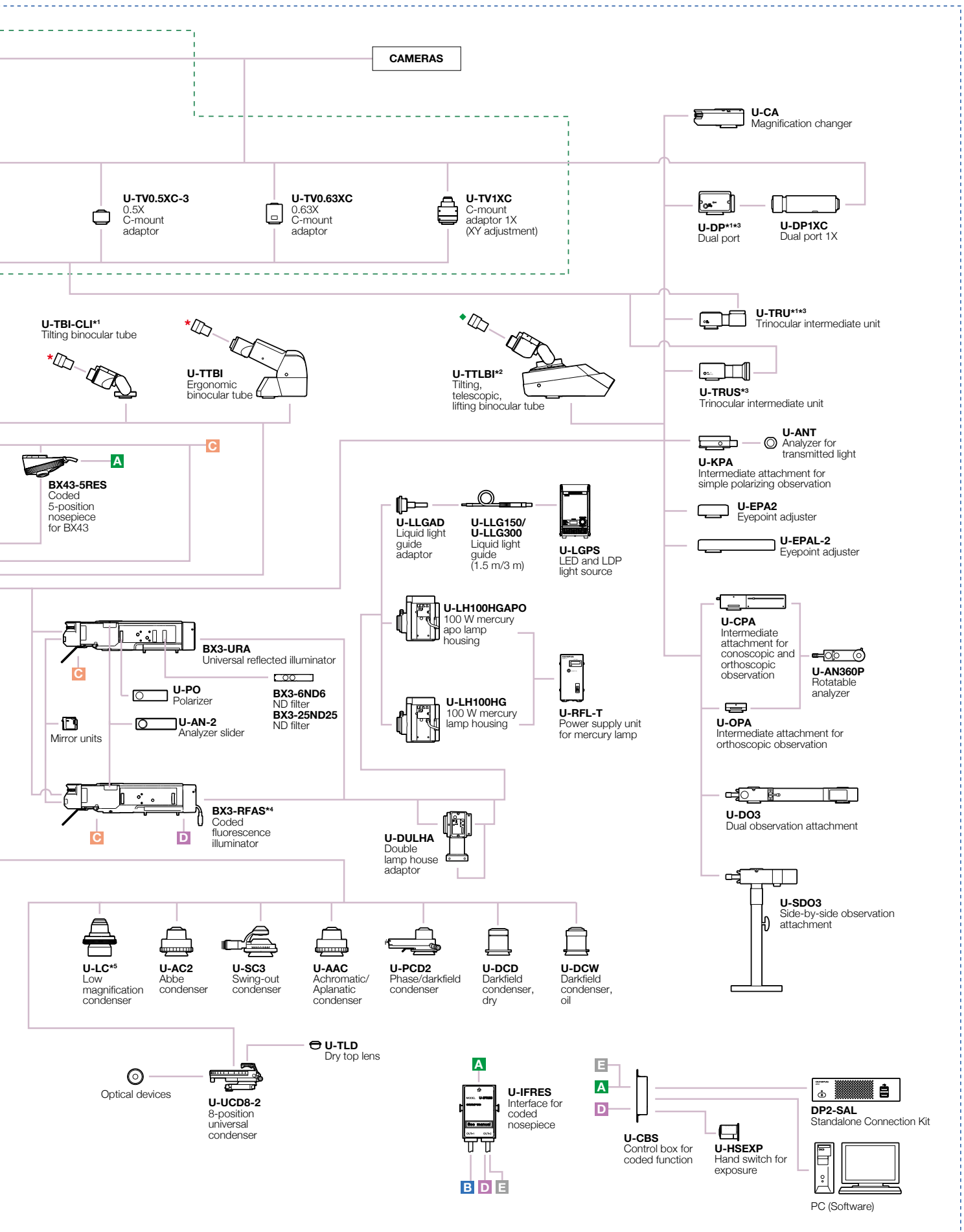
U-LHLED  
LED lamp housing

U-POT  
Polarizer

BX3-SHT  
Shutter for transmitted light

\*1 Slight vignetting may occur when combined with an additional intermediate attachment or observation method.

\*2 Requires an additional intermediate attachment or fluorescence illuminator. \*3 Cannot be used with U-TTLBI. \*4 Compatible with FN 22. \*5 Equipped with an auxiliary lens.



# Specifications

## BX63 SPECIFICATIONS

|                           |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Microscope Frame          | Optical System    | UIS2 optical system                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                           | Focus             | Built-in motorized nosepiece focus<br>Stroke: 20 mm; minimum increment: 0.01 $\mu\text{m}$ ; maximum nosepiece movement speed: 5 mm/s                                                                                                                                                                                                                                                                                                                                                                                                             |
|                           | Illuminator       | Built-in Köhler illumination for transmitted light, light intensity LED indicator, built-in motorized field stop<br>• High color reproductivity LED light source<br>• 12 V 100 W halogen bulb (pre-centered)                                                                                                                                                                                                                                                                                                                                      |
| Revolving Nosepiece       |                   | • Motorized septuple revolving nosepiece<br>• Interchangeable reversed coded sextuple/coded septuple nosepiece                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Observation Tube          | Widefield (FN 22) | • Widefield tilting trinocular<br>• Widefield trinocular<br>• Widefield erect image trinocular<br>• Widefield tilting binocular<br>• Widefield tilting, telescopic, lifting binocular<br>• Widefield ergo binocular<br>• Widefield binocular                                                                                                                                                                                                                                                                                                      |
| Stage                     |                   | • Ceramic-coated coaxial stage with left or right hand low drive control: with rotating mechanism and torque adjustment mechanism, optional rubber grips, and available stage handle extension adaptor<br>• Cross stage with short left handle                                                                                                                                                                                                                                                                                                    |
| Condenser                 |                   | • Motorized universal condenser (NA 0.9, motorized 8-position turret, aperture stop, polarizing filter in/out mechanism, and top lens swing out mechanism), for 1.25X–100X [swing-out: 1.25X–4X, with oil top lens: (NA 1.4)]<br>• Swing out Achromatic (NA 0.9), for 1.25X–100X (swing-out: 1.25X–4X)<br>• Achromatic Aplanatic (NA 1.4), for 10X–100X<br>• Universal (NA 0.9), for 1.25X–100X [swing-out: 1.25X–4X, with oil top lens: (NA 1.4)]<br>• Darkfield dry (NA 0.8–0.92), for 10X–100X<br>• Darkfield oil (NA 1.20–1.40), for 20X–100X |
| ND Filter Wheel           |                   | • Motorized 6-position ND filter wheel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Fluorescence Illuminator  |                   | • Motorized multi-purpose coded type (FN 22, motorized 8-position mirror unit turret, 4-position ND slider)<br>• Multi-purpose coded type (FN 22, 8-position mirror unit turret, 4-position ND slider)                                                                                                                                                                                                                                                                                                                                            |
| Fluorescence Light Source |                   | • LED and LDP light source<br>• 100 W mercury apo lamp housing and power supply unit<br>• 100 W mercury lamp housing and power supply unit                                                                                                                                                                                                                                                                                                                                                                                                        |
| Controller                |                   | • High-performance control box ( I/F: FireWire)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## BX53 SPECIFICATIONS

|                           |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Microscope Frame          | Optical System            | UIS2 optical system                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                           | Focus                     | Vertical stage movement: 25 mm stage stroke with coarse adjustment limit stopper, torque adjustment for coarse adjustment knobs, stage mounting position variable, high sensitivity fine focusing knob (minimum adjustment gradations: 1 $\mu\text{m}$ )                                                                                                                                                                                                                                               |
|                           | Illuminator               | Built-in Köhler illumination for transmitted light, light preset switch, light intensity manager switch, high color reproductivity 14 W LED light source (Brightness: equivalent to or brighter than a 100 W halogen lamp, LED light emission method: 405 nm excited RGB fluorescence substance)                                                                                                                                                                                                       |
| Revolving Nosepiece       |                           | Interchangeable reversed quintuple/sextuple/septuple/coded sextuple/coded septuple nosepiece                                                                                                                                                                                                                                                                                                                                                                                                           |
| Observation Tube          | Widefield (FN 22)         | • Widefield tilting trinocular<br>• Widefield trinocular<br>• Widefield tilting binocular<br>• Widefield tilting, telescoping and lifting binocular<br>• Widefield ergo binocular<br>• Widefield binocular                                                                                                                                                                                                                                                                                             |
|                           | Super Widefield (FN 26.5) | • Super widefield trinocular<br>• Super widefield erect image tilting trinocular                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Stage                     |                           | Ceramic-coated coaxial stage with left or right hand low drive control: with rotating mechanism and torque adjustment mechanism, optional rubber grips and stage handle extension adaptor available (non-stick grooved coaxial, plain, rotatable stages are also available)                                                                                                                                                                                                                            |
| Condenser                 |                           | • Abbe (NA 1.1), for 4X–100X<br>• Swing out Achromatic (NA 0.9), for 1.25X–100X (swing-out: 1.25X–4X)<br>• Achromatic Aplanatic (NA 1.4), for 10X–100X<br>• Phase contrast, darkfield (NA 1.1), [phase contrast: for 10X–100X, darkfield: for 10X–100X (up to NA 0.80)]<br>• Universal (NA 0.9), for 1.25X–100X [swing-out: 1.25X–4X, with oil top lens:(NA 1.4)]<br>• Low (NA 0.75), for 2X–100X (Dry)<br>• Darkfield dry (NA 0.8–0.92), for 10X–100X<br>• Darkfield oil (NA 1.20–1.40), for 20X–100X |
| Fluorescence Illuminator  |                           | • Multi-purpose coded type (FN 22, 8-position mirror unit turret, 4-position ND slider)<br>• Economical type (FN 26.5, 8-position mirror unit turret)                                                                                                                                                                                                                                                                                                                                                  |
| Fluorescence Light Source |                           | 100 W mercury apo lamp housing and power supply unit, 100 W mercury lamp housing and power supply unit, or LED and LDP light source                                                                                                                                                                                                                                                                                                                                                                    |

**BX43 SPECIFICATIONS**

|                     |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Microscope Frame    | Optical System            | UIS2 optical system                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                     | Focus                     | Vertical stage movement: 25 mm stage stroke with coarse adjustment limit stopper, torque adjustment for coarse adjustment knobs, stage mounting position variable, high sensitivity fine focusing knob (minimum adjustment gradations: 1 µm)                                                                                                                                                                                                                                                                                                                                                       |
|                     | Illuminator               | Built-in Köhler illumination for transmitted light, light intensity manager switch<br>high color reproductivity 2 W LED light source                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Revolving Nosepiece |                           | Interchangeable reversed quintuple/coded quintuple/sextuple/septuple/coded sextuple/coded septuple nosepiece                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Observation Tube    | Widefield (FN 22)         | <ul style="list-style-type: none"> <li>• Widefield tilting, telescopic and lifting binocular</li> <li>• Widefield tilting trinocular</li> <li>• Widefield trinocular</li> <li>• Widefield erect image trinocular</li> <li>• Widefield tilting binocular</li> <li>• Widefield ergo binocular</li> <li>• Widefield binocular</li> </ul>                                                                                                                                                                                                                                                              |
|                     | Super Widefield (FN 26.5) | <ul style="list-style-type: none"> <li>• Super widefield trinocular</li> <li>• Super widefield erect image tilting trinocular</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Stage               |                           | Ceramic-coated coaxial stage with left or right hand low drive control: with rotating mechanism and torque adjustment mechanism, optional rubber grips and stage handle extension adaptor available (non-stick grooved coaxial, plain, rotatable stages are also available)                                                                                                                                                                                                                                                                                                                        |
| Condenser           |                           | <ul style="list-style-type: none"> <li>• Abbe (NA 1.1), for 4X–100X</li> <li>• Swing out Achromatic (NA 0.9), for 1.25X–100X (swing-out: 1.25X–4X)</li> <li>• Achromatic Aplanatic (NA 1.4), for 10X–100X</li> <li>• Phase contrast, darkfield (NA 1.1), [phase contrast: for 10X–100X, darkfield: for 10X–100X (up to NA 0.80)]</li> <li>• Universal (NA 0.9), for 1.25X–100X [swing-out: 1.25X–4X, with oil top lens:(NA 1.4)]</li> <li>• Low (NA 0.75), for 2X–100X (Dry)</li> <li>• Darkfield dry (NA 0.8–0.92), for 10X–100X</li> <li>• Darkfield oil (NA 1.20–1.40), for 20X–100X</li> </ul> |

**BX46 SPECIFICATIONS**

|                     |                   |                                                                                                                                                                                                                                                                                        |
|---------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Microscope Frame    | Optical System    | UIS2 optical system                                                                                                                                                                                                                                                                    |
|                     | Focus             | Fixed low stage nosepiece focus<br>15 mm focus stroke with coarse adjustment limit stop<br>Torque adjustment for coarse adjustment knobs<br>High sensitivity fine focusing knob (adjustment gradations: 1 µm)                                                                          |
|                     | Illuminator       | Built-in Köhler illumination for transmitted light, light intensity manager switch<br>High color reproductivity 2 W LED light source                                                                                                                                                   |
| Revolving Nosepiece |                   | Fixed reversed coded quintuple nosepiece                                                                                                                                                                                                                                               |
| Observation Tube    | Widefield (FN 22) | <ul style="list-style-type: none"> <li>• Widefield tilting trinocular</li> <li>• Widefield trinocular</li> <li>• Widefield tilting binocular</li> <li>• Widefield tilting, telescopic, lifting binocular</li> <li>• Widefield ergo binocular</li> <li>• Widefield binocular</li> </ul> |
|                     |                   |                                                                                                                                                                                                                                                                                        |
| Stage               |                   | Ceramic-coated coaxial stage with left or right hand low drive control, rotating mechanism and torque adjustment mechanism (low torque, plain, rotating stages are also available)                                                                                                     |
| Condenser           |                   | Built-in condenser (NA 0.9) 1.25X–100X (swing out: 1.25X–2X)                                                                                                                                                                                                                           |

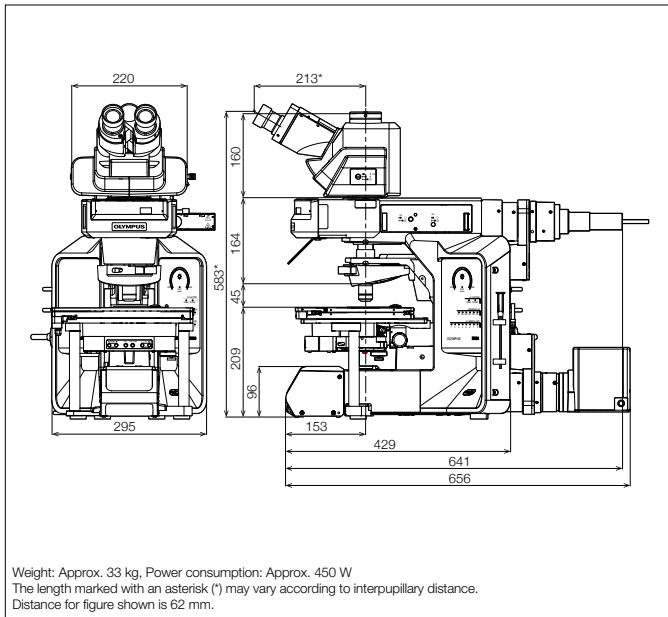
**BX53/BX43/BX46 SPECIFICATIONS**

|                       |                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating Environment | <ul style="list-style-type: none"> <li>• Indoor use</li> </ul>                                                                                                                                                                                                                                                                                                                                  |
|                       | <ul style="list-style-type: none"> <li>• Ambient temperature : 5 °C to 40 °C (41 °F to 104 °F)</li> <li>• Maximum relative humidity : 80% for temperatures up to 31 °C (88 °F), decreasing linearly through 70% at 34 °C (93 °F), 60% at 37 °C (99 °F), to 50% relative humidity at 40 °C (104 °F)</li> <li>• Supply voltage fluctuations : not to exceed ±10% of the normal voltage</li> </ul> |

# Dimensions

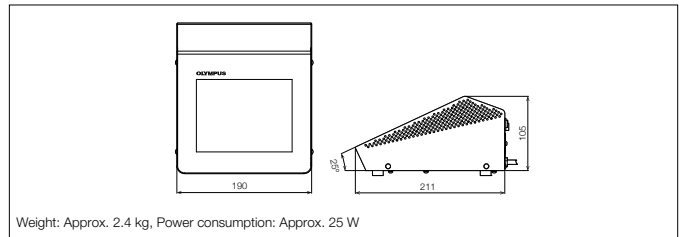
## BX63 FL DIMENSIONS

(unit: mm)



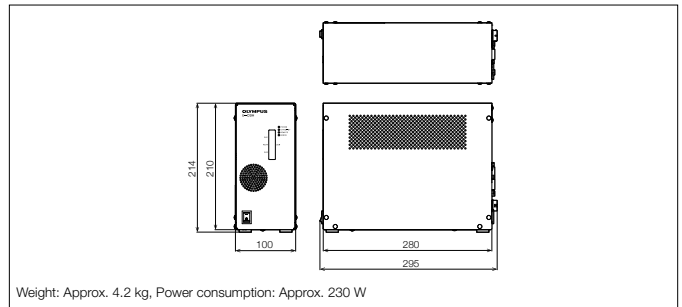
## TOUCH PANEL CONTROLLER DIMENSIONS

(unit: mm)



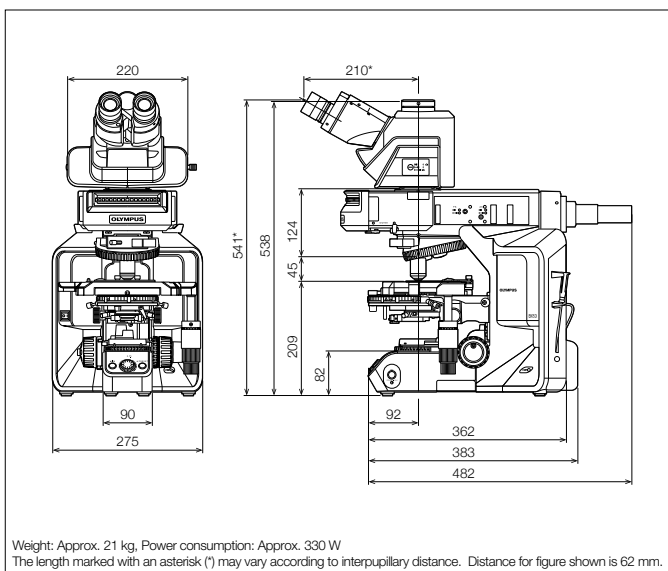
## BX3-CBH DIMENSIONS

(unit: mm)



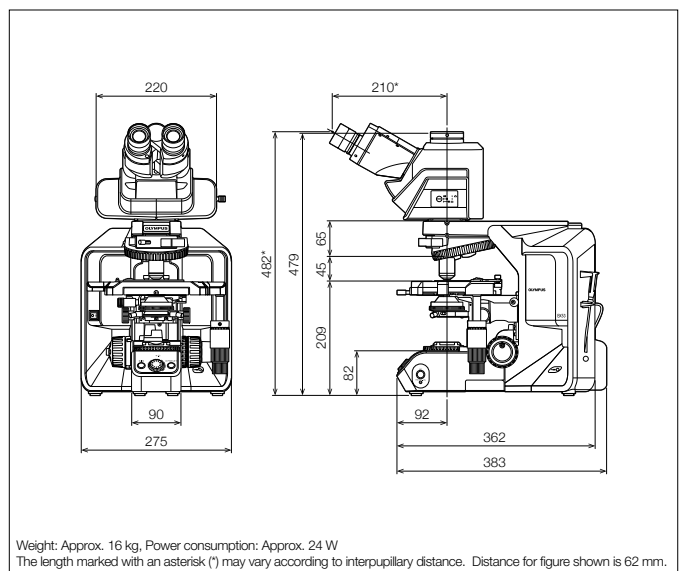
## BX53 FL DIMENSIONS

(unit: mm)



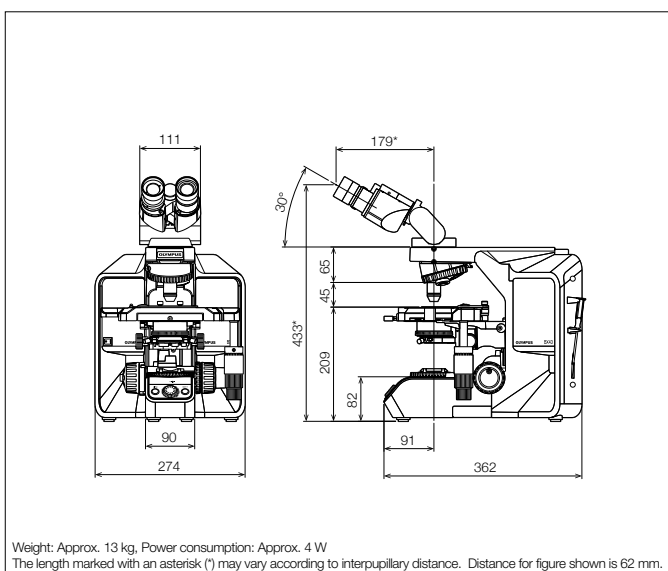
## BX53 DIMENSIONS

(unit: mm)



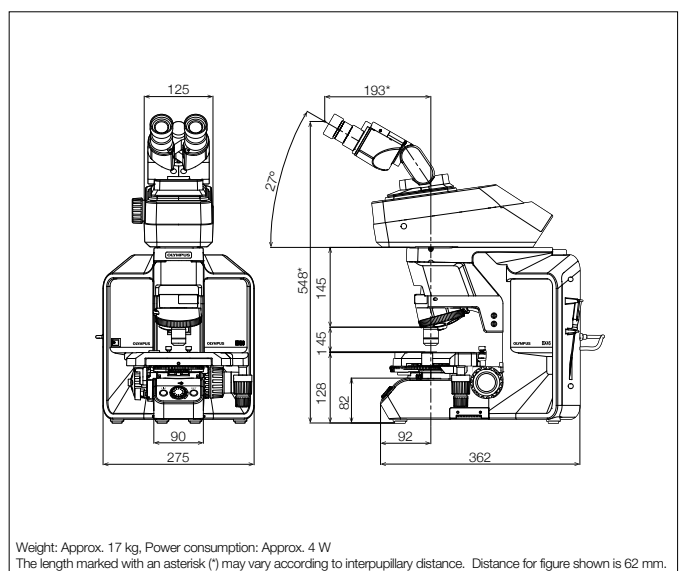
## BX43 DIMENSIONS

(unit: mm)



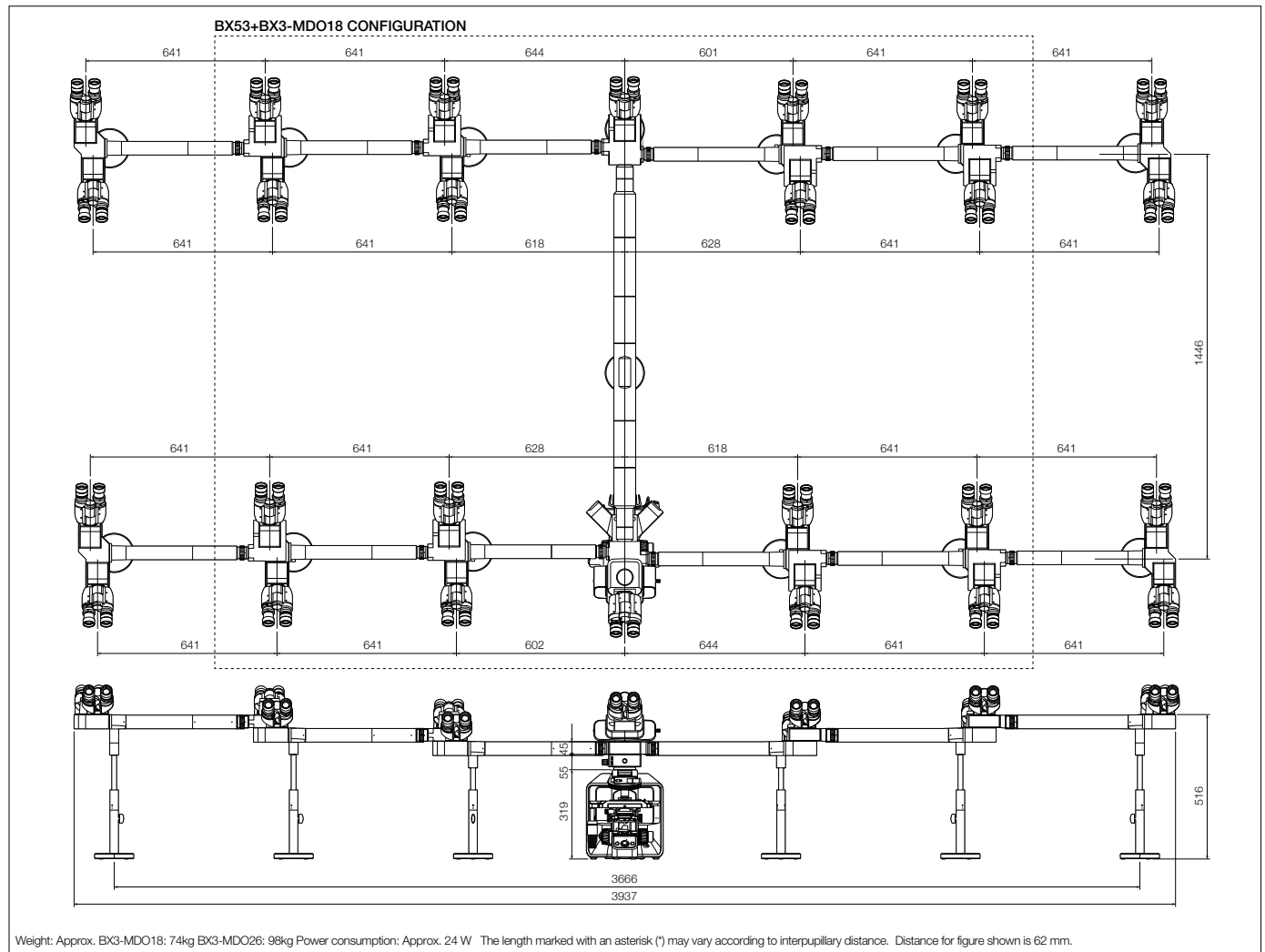
## BX46 DIMENSIONS

(unit: mm)

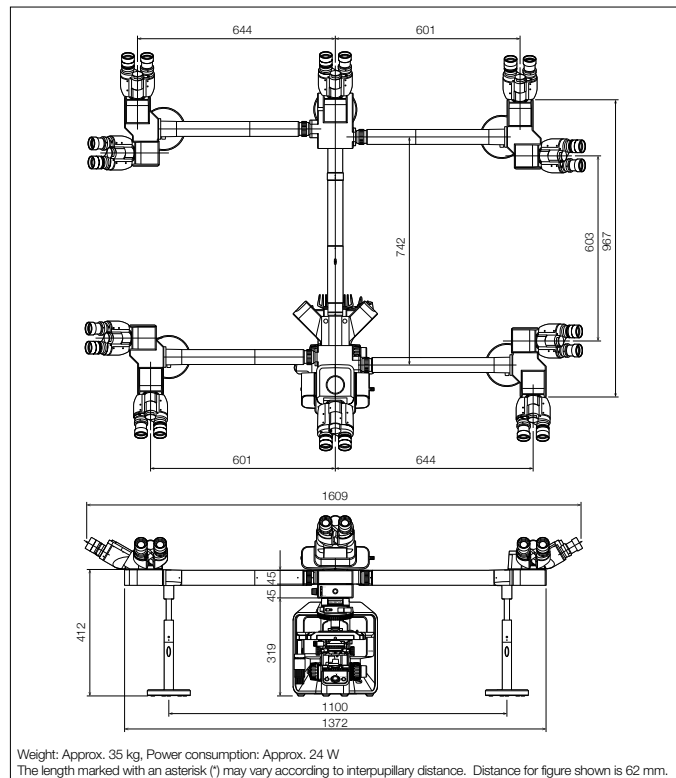


**BX53+BX3-MDO18/MDO26 DIMENSIONS**

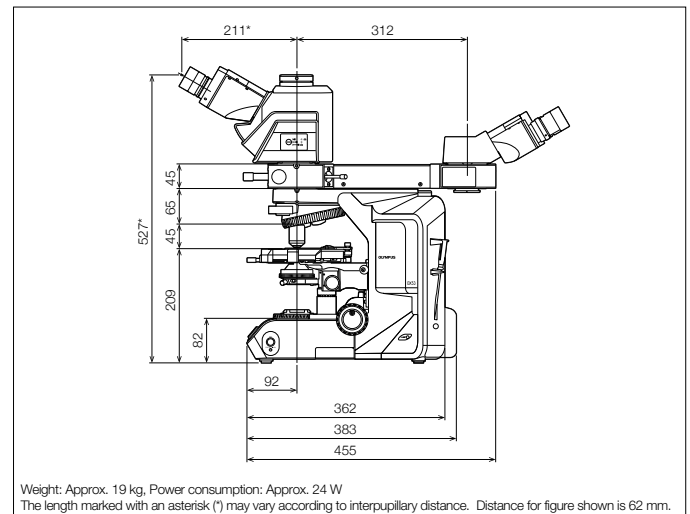
(unit: mm)

**BX53+U-MDO10 DIMENSIONS**

(unit: mm)

**BX53+U-DO DIMENSIONS**

(unit: mm)



- EVIDENT CORPORATION is ISO14001 certified.
- EVIDENT CORPORATION is ISO9001 certified.
- EVIDENT CORPORATION is ISO13485 certified.
- Illumination devices for microscope have suggested lifetimes.  
Periodic inspections are required. Please visit our website for details.

- All company and product names are registered trademarks and/or trademarks of their respective owners.
- Images on the PC monitors are simulated.
- Specifications and appearances are subject to change without any notice or obligation on the part of the manufacturer.

[EvidentScientific.com](https://www.evidentscientific.com)

**EVIDENT**

**EVIDENT CORPORATION**  
Shinjuku Monolith, 2-3-1 Nishi-Shinjuku, Shinjuku-ku, Tokyo 163-0910, Japan

**OLYMPUS**