Select a Nikon microscope unit for your manufacturing equipment and other systems that require high precision.

Contents

Modular Focusing Unit IM-4 4
LV-9M IM Modules 4
LV-FM FM Modules 7
LVGA-N DIA Base N 8
LV/ARM Basic Arm 9
LV/ECON E Controller 9
LV-UEPI-N Universal Epi-Illuminator 14
LV-UEPI2 Universal Epi-Illuminator 2 15
LV-UEPSA Motorized Universal Epi-Illuminator 2 15
TV-PS100W/A Power Supply 16
LV-EPILED White LED Illuminator 16
CFSx-2 / CFSx Revolving Nosepieces 17
CFA/C Objectives 18-21
Compact Reflected Microscopes CM Series 22-24
Objectives for Measuring microscopes 24
2nd Objective Lens Units 25
Straight Tubes 27
Eyepiece Lenses 28-29
Straight Tubes 27
Eyepiece Tubes / Double Port 27
CCD Camera Adapters 30
CCTV Camera Adapters 30
Glossary 31

The development, manufacture, and evaluation of products require sub-micron precision, as symbolized by semiconductor manufacturing technology. Nikon’s microscope units support such high precision and can be integrated with a variety of equipment.

This catalog presents technical data on using Nikon's microscope units.

Select a Nikon microscope unit for experiments and research, as well as manufacturing and inspection.

Nikon’s microscope units support such high precision and can be integrated with a variety of equipment.

Revolving Nosepieces

1. LV-10×ESD
2. LV-12.5×ESD
3. LV-15×ESD
4. LV-20×ESD
5. LV-50×ESD
6. LV-100×ESD

For more information, see page 27.
Modular Focusing Unit IM-4

Accommodates an epi-illuminator and motorized nosepiece or a maximum load of 10kg by adding a balancer. Accommodates the LV-UEPI-N or LV-EPILED universal illuminator as well as a motorized nosepiece.

- Attachment of the LV-UEPI-N Universal Epi-illuminator enables the use of brightfield, darkfield and Nomarski DIC techniques.
- The built-in balancer ensures smoother vertical motion, even when the arm is heavily loaded.
- The standard maximum load is 4kg, which is expandable to 10kg by adding a balancer.
- A coarse motion stroke of 5.2mm per revolution improves the equipment’s load handling capability and increases durability.
- The distance from the optical axis to the mounting surface is 14.1mm.

Note: For adding a balancer, consult your Nikon representative.

Fixing Unit (Option)

Used to attach the Modular Focusing Unit IM-4 to a ø24.5mm post.

Fixing Unit M20681/240g

Unit: mm

![Image of Modular Focusing Unit IM-4 and Fixing Unit](image-url)
LV-IM IM Modules

This focusing module is suitable for incorporation into systems. It enables the mounting of a universal illuminator (LV-UEPI-N/LV-UEPI2/LV-UEPI2A or LV-EPILED) and a motorized nosepiece.

LV-IMA IM Module A (Motorized)
- Selectable mounting surface (back or bottom).
- 30mm vertical stroke.
- Dramatically improved rigidity enables the mounting of the LV-UEPI2A motorized universal illuminator, etc.
- External control is possible via the LV-ECON E Controller.
- The standard maximum permissible weight is 3-6kg, which is expandable to 9kg by adding a balancer.

LV-IM Module (Motorized) MBD64070/4000g
- Selectable mounting surface (back or bottom).
- 30mm vertical stroke.
- Dramatically improved rigidity enables the mounting of the LV-UEPI2A motorized universal illuminator, etc.
- External control is possible via the LV-ECON E Controller.
- 20mm vertical stroke.
- Only the bottom mounting surface is supported.
- The standard maximum permissible weight is 3-6kg, which is expandable to 9kg by adding a balancer.

LV-IM Module (Manual)
- Selectable mounting surface (back or bottom).
- 30mm vertical stroke.
- Dramatically improved rigidity enables the mounting of the LV-UEPI2A motorized universal illuminator, etc.
- The standard maximum permissible weight is 4-7kg, which is expandable to 10kg by adding a balancer.

LV-FM FM Modules

This focusing module is suitable for incorporation into systems. It enables the mounting of a universal illuminator (LV-UEPI-N/LV-UEPI2/LV-UEPI2A or LV-EPILED) and a motorized nosepiece.

LV-FMA FM Module A (Motorized)
- Only the bottom mounting surface is supported.
- 30mm vertical stroke.
- Enables an enhanced system with motorized up/down mechanism when combined with the LVDIA-N DIA Base N.
- External control is possible via the LV-ECON E Controller.
- The standard maximum permissible weight is 3-6kg, which is expandable to 9kg by adding a balancer.

LV-FM Module (Manual) MBD65040/5000g
- Only the bottom mounting surface is supported.
- 30mm vertical stroke.
- Creates a system with revolving up/down mechanism that has an ultra-long vertical stroke of 68mm when combined with the LVDIA-N DIA Base N.
- Enables an enhanced system with motorized up/down mechanism when combined with the LV-UEPI-N/LV-UEPI2A or LV-EPILED.
- The standard maximum permissible weight is 4-7kg, which is expandable to 10kg by adding a balancer.
LVDIA-N DIA Base N

This base unit is for the ECLIPSE LV series of modular microscopes. The attachment of an optional power source enables the incorporation of a transmission illuminator.

LV-ARM Basic Arm

This arm unit is for the ECLIPSE LV series of modular microscopes.

LV-ECON E Controller

This controller enables external control of various units from a PC and other devices.

- Enables external control of motorized universal reflection illuminators and various light sources, universal motorized revolvers, and motorized focusing modules from a PC or other devices.
- Communication with PC possible via USB.
- Max. 11° inclination when using tilt (unit's feet).
CFI T Plan EPI/CFI TU Plan Fluor EPI/CFI L Plan EPI

Brightfield Objectives

CFI S-2/CFI S objectives for brightfield use; Nomarski DIC is also possible with the TU type.

Ultra-Widefield CFI eyepieces

CFI TU Plan EPI ELWD

Long Working Distance Objectives for Brightfield/Nomarski DIC Use

Dramatically extended working distances facilitate observations of samples having irregular surfaces. Working distances have been extended significantly.

Ultra-long Working Distance Objectives for Brightfield Use

Particularly useful when observing the bottom of a depression in the sample. Working distances have been extended significantly.
CFI TU Plan Fluor BD

**Brightfield/Darkfield/Nomarski DIC Objectives**

Perfect for brightfield, darkfield, and Nomarski DIC observations.

- CFI TU Plan Fluor BD 5x
- CFI TU Plan Fluor BD 10x
- CFI TU Plan Fluor BD 20x
- CFI TU Plan Fluor BD 50x
- CFI TU Plan Fluor BD 100x

**Code No.**

- CFI TU Plan Fluor BD 5x
- CFI TU Plan Fluor BD 10x
- CFI TU Plan Fluor BD 20x
- CFI TU Plan Fluor BD 50x
- CFI TU Plan Fluor BD 100x

**Unit:** mm

#### Ultra-Widefield CFI eyepieces

- CFI TU Plan Fluor BD

#### Code No.

- MUC42250: CFI TU Plan Fluor BD 5x
- MUC42250: CFI TU Plan Fluor BD 10x
- MUC42250: CFI TU Plan Fluor BD 20x
- MUC42250: CFI TU Plan Fluor BD 50x
- MUC42250: CFI TU Plan Fluor BD 100x

**NA**: 0.15

- W.D.: 15.0
- Focal length: 120
- Magnification: 5x
- NA: 0.15
- Unit: mm

**Code No.**: MUC42250

**Unit**: mm

- Code No.: MUC42250
- Code No.: MUC42250
- Code No.: MUC42250
- Code No.: MUC42250
- Code No.: MUC42250

**Objectives (Magnifications)**

- Code No.: MUC42250
- Code No.: MUC42250
- Code No.: MUC42250
- Code No.: MUC42250
- Code No.: MUC42250

**W.D.:** 15

- Magnification: 5x
- NA: 0.15
- Unit: mm

**Height (ømm):**

- CFI TU Plan Fluor BD 5x: 1.72
- CFI TU Plan Fluor BD 10x: 1.72
- CFI TU Plan Fluor BD 20x: 1.72
- CFI TU Plan Fluor BD 50x: 1.72
- CFI TU Plan Fluor BD 100x: 1.72

**Weight (g):**

- CFI TU Plan Fluor BD 5x: 150
- CFI TU Plan Fluor BD 10x: 150
- CFI TU Plan Fluor BD 20x: 150
- CFI TU Plan Fluor BD 50x: 150
- CFI TU Plan Fluor BD 100x: 150

**Depth of focus (µm):**

- CFI TU Plan Fluor BD 5x: 0.61
- CFI TU Plan Fluor BD 10x: 0.61
- CFI TU Plan Fluor BD 20x: 0.61
- CFI TU Plan Fluor BD 50x: 0.61
- CFI TU Plan Fluor BD 100x: 0.61

**Unit**: mm

#### CFI TU Plan Fluor BD ELWD

**Long Working Distance Objectives**

For Brightfield/Darkfield/Nomarski DIC Use

- CFI TU Plan Fluor BD ELWD 20x
- CFI TU Plan Fluor BD ELWD 50x
- CFI TU Plan Fluor BD ELWD 100x

**Code No.**

- CFI TU Plan Fluor BD ELWD 20x
- CFI TU Plan Fluor BD ELWD 50x
- CFI TU Plan Fluor BD ELWD 100x

**Unit**: mm

#### CFI TU Plan Apo EPI/CFI TU Plan Apo BD/

CFI LU Plan Apo EPI/CFI LU Plan Apo BD

**High-Resolution Objectives for Brightfield or for Darkfield/Brightfield**

Achromat-type objectives virtually eliminate chromatic aberration and feature excellent resolution. Nomarski DIC is also possible with the TU/LU type.

- CFI TU Plan Apo EPI 50x
- CFI TU Plan Apo EPI 100x
- CFI TU Plan Apo EPI 150x
- CFI TU Plan Apo BD 50x
- CFI TU Plan Apo BD 100x

**Ultra-Widefield CFI eyepieces**

- CFI TU Plan Apo EPI 50x
- CFI TU Plan Apo EPI 100x
- CFI TU Plan Apo EPI 150x
- CFI LU Plan Apo BD 50x
- CFI LU Plan Apo BD 100x

**Code No.**

- CFI TU Plan Apo EPI 50x
- CFI TU Plan Apo EPI 100x
- CFI TU Plan Apo EPI 150x
- CFI LU Plan Apo BD 50x
- CFI LU Plan Apo BD 100x

**Unit**: mm

#### CFI LU Plan Apo EPI 150x

**Code No.:** MUC11900

**Objectives (Magnifications)**

- Code No.: MUC11900
- Code No.: MUC11900
- Code No.: MUC11900
- Code No.: MUC11900
- Code No.: MUC11900

**W.D.:** 4.5

- Magnification: 150x
- NA: 0.9
- Unit: mm

**Height (ømm):**

- CFI TU Plan Apo EPI 50x: 2.6
- CFI TU Plan Apo EPI 100x: 2.6
- CFI TU Plan Apo EPI 150x: 2.6
- CFI LU Plan Apo BD 50x: 2.6
- CFI LU Plan Apo BD 100x: 2.6

**Weight (g):**

- CFI TU Plan Apo EPI 50x: 102.0
- CFI TU Plan Apo EPI 100x: 102.0
- CFI TU Plan Apo EPI 150x: 102.0
- CFI LU Plan Apo BD 50x: 102.0
- CFI LU Plan Apo BD 100x: 102.0

**Depth of focus (µm):**

- CFI TU Plan Apo EPI 50x: 0.45
- CFI TU Plan Apo EPI 100x: 0.45
- CFI TU Plan Apo EPI 150x: 0.45
- CFI LU Plan Apo BD 50x: 0.45
- CFI LU Plan Apo BD 100x: 0.45

**Unit**: mm

#### CFI LU Plan Apo BD 150x

**Code No.:** MUC11900

**Objectives (Magnifications)**

- Code No.: MUC11900
- Code No.: MUC11900
- Code No.: MUC11900
- Code No.: MUC11900
- Code No.: MUC11900

**W.D.:** 1.5

- Magnification: 150x
- NA: 0.9
- Unit: mm

**Height (ømm):**

- CFI TU Plan Apo EPI 50x: 1.5
- CFI TU Plan Apo EPI 100x: 1.5
- CFI TU Plan Apo EPI 150x: 1.5
- CFI LU Plan Apo BD 50x: 1.5
- CFI LU Plan Apo BD 100x: 1.5

**Weight (g):**

- CFI TU Plan Apo EPI 50x: 30.5
- CFI TU Plan Apo EPI 100x: 30.5
- CFI TU Plan Apo EPI 150x: 30.5
- CFI LU Plan Apo BD 50x: 30.5
- CFI LU Plan Apo BD 100x: 30.5

**Depth of focus (µm):**

- CFI TU Plan Apo EPI 50x: 0.45
- CFI TU Plan Apo EPI 100x: 0.45
- CFI TU Plan Apo EPI 150x: 0.45
- CFI LU Plan Apo BD 50x: 0.45
- CFI LU Plan Apo BD 100x: 0.45

**Unit**: mm

**Note:** This product has been discontinued, and only available from stock.
Universal Epi-Illuminator LV-UEPI2/LV-UEPI2A

This universal illuminator supports the CFi6o-2 / CFi6o optical system.

**LV-UEPI2**
- Equipped with advanced optics suitable for a wide variety of observation methods, ranging from brightfield, darkfield, simple polarizing, sharp polarizing, and DIC, to epi-fluorescence.
- Includes a feature for automatically maintaining optimal illumination conditions for the field and aperture diaphragms, shutter, and UV cut filters, thereby reducing tedious microscope operations to an absolute minimum.

**LV-UEPI2A**
- Accurate reproduction of illumination conditions thanks to the motorization of the illumination changeover turret and aperture diaphragm and control of the illumination voltage.
- Automatic optimization of the aperture diaphragm according to the objective lens and illumination technique. Can also be changed manually depending on the sample and purpose.
- Control possible from the microscope or a PC when combined with LV100DA-U.
- External control also possible from a PC when combined with the LV-ECON II Controller.

**Universal Epi-Illuminator LV-UEPI2/MBE60300**
- Motorized Universal Epi-Illuminator LV-UEPI2A/MBE60310

**Field diaphragm**
- Centerable and synchronized with BD changeover

**Aperture diaphragm**
- Centerable and synchronized with motorized brightfield/darkfield changeover
  - Automatic optimization according to objective lens

**Illumination**
- 12V-50W high-intensity halogen lamp illuminator
- Motorized motorcontrol (possible for 12V 50W high-intensity halogen lamp illuminator and illumination changeover turret)

**Filters**
- Supports insertion of four 2x2mm filters (ND11, ND16, 1x Fluorescence filter cube, analyzer/analyser, L-phase, or an excitation light balancer. Also supports ESD.
- Weight: 2.40kg / 2.275kg

---

**Universal Epi-Illuminator LV-UEPI2/MBE60300**
- Motorized Universal Epi-Illuminator LV-UEPI2A/MBE60310

**Field diaphragm**
- Centerable and synchronized with BD changeover

**Aperture diaphragm**
- Centerable and synchronized with motorized brightfield/darkfield changeover
  - Automatic optimization according to objective lens

**Illumination**
- 12V-50W high-intensity halogen lamp illuminator
- Motorized motorcontrol (possible for 12V 50W high-intensity halogen lamp illuminator and illumination changeover turret)

**Filters**
- Supports insertion of four 2x2mm filters (ND11, ND16, 1x Fluorescence filter cube, analyzer/analyser, L-phase, or an excitation light balancer. Also supports ESD.
- Weight: 2.40kg / 2.275kg

---

**Universal Epi-Illuminator LV-UEPI2A/MBE60300**
- Motorized Universal Epi-Illuminator LV-UEPI2A/MBE60310

**Field diaphragm**
- Centerable and synchronized with BD changeover

**Aperture diaphragm**
- Centerable and synchronized with motorized brightfield/darkfield changeover
  - Automatic optimization according to objective lens

**Illumination**
- 12V-50W high-intensity halogen lamp illuminator
- Motorized motorcontrol (possible for 12V 50W high-intensity halogen lamp illuminator and illumination changeover turret)

**Filters**
- Supports insertion of four 2x2mm filters (ND11, ND16, 1x Fluorescence filter cube, analyzer/analyser, L-phase, or an excitation light balancer. Also supports ESD.
- Weight: 2.40kg / 2.275kg

---

**Universal Epi-Illuminator LV-UEPI2A/MBE60300**
- Motorized Universal Epi-Illuminator LV-UEPI2A/MBE60310

**Field diaphragm**
- Centerable and synchronized with BD changeover

**Aperture diaphragm**
- Centerable and synchronized with motorized brightfield/darkfield changeover
  - Automatic optimization according to objective lens

**Illumination**
- 12V-50W high-intensity halogen lamp illuminator
- Motorized motorcontrol (possible for 12V 50W high-intensity halogen lamp illuminator and illumination changeover turret)

**Filters**
- Supports insertion of four 2x2mm filters (ND11, ND16, 1x Fluorescence filter cube, analyzer/analyser, L-phase, or an excitation light balancer. Also supports ESD.
- Weight: 2.40kg / 2.275kg
TI-PS100W/A Power Supply

This transformer is for the LV-UEPI-N, LV-UEPI2, and LV-UEPI2A universal reflection illuminators.

<table>
<thead>
<tr>
<th>Items</th>
<th>Code No.</th>
<th>Weight (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Cord BJ/BE</td>
<td>MEB11120/MBE11130</td>
<td>100</td>
</tr>
<tr>
<td>TI-UEPI/3-PIN Extension Cable</td>
<td>MSA23012</td>
<td>100</td>
</tr>
</tbody>
</table>

LV-EPILED White LED Illuminator

This LED illuminator supports the CF-e2 / CF-e0 optical system.

- Light-weight, compact white LED illuminator developed specially for brightfield observation.
- Operated via an attached power source controller.
- Can also be externally controlled via the LV-ECON E controller.
- Includes ND4 and ND16 filters.
- Standard cable length : 2.8m

<table>
<thead>
<tr>
<th>Items</th>
<th>Code No.</th>
<th>Weight (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Cord BJ/BE</td>
<td>MEB11120/MBE11130</td>
<td>100</td>
</tr>
<tr>
<td>AC Adapter 2/CN</td>
<td>MBF11250/MBF11300</td>
<td>100</td>
</tr>
</tbody>
</table>

Revolving Nosepieces

Eight types of nosepieces – either manual or motorized – are available to choose from.

C-N Sextuple Nosepiece
MBPF13610/450g

LV-NUSBD BD Quintuple Nosepiece ESD
MBP60105/580g

LV-NUS Motorized Universal Quintuple Nosepiece ESD
MBP60102/580g

LV-NUSA Motorized Universal Quintuple Nosepiece ESD
MBP60101/580g

LV-NUSAI Motorized Universal Quintuple Nosepiece
MBP60107/890g

LV-NU5I Intellijent Universal Quintuple Nosepiece ESD
MBP60108/600g

LV-NCNT-N Motorized Nosepiece Controller
MBF65331/400g

(Standard cable length : 1.5m)
CF IC EPI Plan ELWD Long Working Distance Objectives for Brightfield Use

Extended working distances facilitate observations of samples with irregular surfaces.

Ultra-long Working Distance Objectives for Brightfield Use

Particularly useful when observing the bottom of a depression in the sample.
**CF IC EPI Plan Apo** High-Resolution Brightfield Objectives

Apochromat-type objectives for brightfield use virtually eliminate chromatic aberration and feature excellent resolution.

**CF IC LCD Plan CR** for LCD Inspection

These objectives, developed specially for LCD inspection, enable the observation of a clear image under the coverglass.

**CF IC EPI Plan DI** Double Beam Interference Objectives

Double beam interference objectives that have large numerical aperture, long working distance and high optical performance.

**CF IC EPI Plan TI** Interference Objectives

An adapter for attaching CF & IC objectives to the C-N Sextuple Nosepiece (page 17) that supports the CFI optical system.
CM-Series Compact Reflected Microscopes

Ultra-compact reflected microscopes designed for integration into production lines to provide on-monitor observations.

- Ultra-compact and lightweight.
- C-mount video cameras having 1/4 to 1-inch CCDs are attachable as standard.
- ENG-mount video cameras can also be mounted via optional ENG-mount adapters.
- The Koehler Illumination Optical System offers a uniformly bright field of view.
- Tread holes ideally located on the surface of the microscope facilitate attachment of various auxiliary equipment.

*1 Use an objective for measuring microscopes on the CM-5A and a CF IC EPI Plan lens on other A series units. In addition,

- Enables simultaneous observation at different imaging magnifications (1×/0.4×). For CF/IC/CI EPI Plan objectives

*2 The ENG-mount for CM is a made-to-order product. When ordering, please inform us of the flange focal distance of the camera that will be used.

<table>
<thead>
<tr>
<th>CM-10A/CM-10L</th>
<th>CM-20A/CM-20L</th>
<th>CM-30A/CM-30L</th>
<th>CM-70L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camera mount</td>
<td>C-mount (ENG-mount possible with option)</td>
<td>C-mount</td>
<td>C-mount</td>
</tr>
<tr>
<td>Tube lens focal length</td>
<td>600mm</td>
<td>1050mm</td>
<td>600mm</td>
</tr>
<tr>
<td>Tube lens magnification</td>
<td>1×</td>
<td>0.3×</td>
<td>1×</td>
</tr>
<tr>
<td>Magnification on CSD surface</td>
<td>Same as objective magnification</td>
<td>Objective magnification × 0.5</td>
<td>Same as objective magnification</td>
</tr>
<tr>
<td>Compatible objectives*</td>
<td>A series, CF IC EPI Plan objectives / L series, CF/IC/CI EPI Plan objectives</td>
<td>A series, CF IC EPI Plan objectives / L series, CF/IC/CI EPI Plan objectives</td>
<td>A series, CF IC EPI Plan objectives / L series, CF/IC/CI EPI Plan objectives</td>
</tr>
<tr>
<td>Illumination optical system</td>
<td>Koehler illumination (high-quality telecentric illumination)</td>
<td>Koehler illumination (high-quality telecentric illumination)</td>
<td>Koehler illumination (high-quality telecentric illumination)</td>
</tr>
<tr>
<td>Attachment surfaces</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Dimensions (mm, Weight (g))</td>
<td>40 x 40 x 204.5mm : 440g</td>
<td>40 x 40 x 120.5mm : 280g</td>
<td>42 x 72 x 107.3mm : 450g</td>
</tr>
</tbody>
</table>

* On the above-mentioned A series and L series, use CF IC EPI Plan and CF/IC/CI EPI Plan Objectives, respectively.
2nd Objective Lens Units

Used to focus parallel light beams coming through CFI60-2 / CFI60 objectives and CF&IC objectives onto the image plane.

Built-in Type 2nd Objective Lens Unit

- Compatible with CFI60-2, CFI60 and CF&IC infinity objectives.
- Focal length: f/200mm.
- To obtain the optimal objective performance, keep the distance between the lens unit and the objective’s shoulder within 100-200mm as shown in the diagram at right.

TV-Use 2nd Objective Lens Unit 0.5x/
TV Relay Unit 1x

- Image plane magnification: 0.5x; Focal length: f/100mm.
- Image plane magnification: 1x; Focal length: f/200mm.
- With a field number of 11mm, this lens unit can be used with CCD cameras smaller than 2/3-inch types.
- Distance between the lens unit and the objective’s shoulder: 60-160mm (110mm optimum).
Filters

A color balance compensation filter and neutral density filter are available.

ND Filters

This filter, such as illumination light and spectral properties (color balance).

* The numbers (xx) in NDxx signify the light reduction. For example, 4 means a 1/4 reduction and 16 and 1/16 reduction.

Such as illumination light and spectral properties (color balance).

GIF Filter

Allows only a green spectrum near the 548nm wavelength to pass through.

This compensation filter maximizes the color reproduction of daylight-type color film, when the halogen lamp voltage of the brightfield light source is set to 9V.

Effective for increasing the contrast of monochrome photographs and black-and-white TV images.

These lens tubes can be combined with illuminators such as the LV-UEPI, LV-UEPI2, LV-UEPI2A and LV-EPILED. The trinocular eyepiece tube supports both ultrawide and wide fields of view with a change of the eyepiece lens.

Eyepiece Tubes/Double Port/Straight Tubes

These lens tubes can be combined with illuminators such as the LV-UEPI, LV-UEPI2, LV-UEPI2A and LV-EPILED. The trinocular eyepiece tube supports both ultrawide and wide fields of view with a change of the eyepiece lens.

ND Filters

This filter, such as illumination light and spectral properties (color balance).

* The numbers (xx) in NDxx signify the light reduction. For example, 4 means a 1/4 reduction and 16 and 1/16 reduction.

Such as illumination light and spectral properties (color balance).

GIF Filter

Allows only a green spectrum near the 548nm wavelength to pass through.

This compensation filter maximizes the color reproduction of daylight-type color film, when the halogen lamp voltage of the brightfield light source is set to 9V.

Effective for increasing the contrast of monochrome photographs and black-and-white TV images.

These lens tubes can be combined with illuminators such as the LV-UEPI, LV-UEPI2, LV-UEPI2A and LV-EPILED. The trinocular eyepiece tube supports both ultrawide and wide fields of view with a change of the eyepiece lens.

Double Port

Installed between the epi-illuminator and the trinocular tube, the double port enables simultaneous attachment of CCTV and 35mm cameras.

These attachments are used to change the format of the straight tube of a trinocular tube.

Y-IDP Double Port

Y-TV55 TV Tube 0.55x

Y-TEP2 DSC Port For Ergonomic

This compensation filter maximizes the color reproduction of daylight-type color film, when the halogen lamp voltage of the brightfield light source is set to 9V.

Effective for increasing the contrast of monochrome photographs and black-and-white TV images.

These filters can be divided by light reduction. For example, 4 means a 1/4 reduction and 16 and 1/16 reduction.

Such as illumination light and spectral properties (color balance).

GIF Filter

Allows only a green spectrum near the 548nm wavelength to pass through.

This compensation filter maximizes the color reproduction of daylight-type color film, when the halogen lamp voltage of the brightfield light source is set to 9V.

Effective for increasing the contrast of monochrome photographs and black-and-white TV images.

These lens tubes can be combined with illuminators such as the LV-UEPI, LV-UEPI2, LV-UEPI2A and LV-EPILED. The trinocular eyepiece tube supports both ultrawide and wide fields of view with a change of the eyepiece lens.

Date of tube in the infinity corrected optics: 200mm, Equipment magnification: 1×, Diameter of the circular dovetail mount to the body: 51mm.

Image type

E.P.: Eyepoint

Unit: mm

Field number

50~75mm

50~75mm

50~75mm

50~75mm

50~75mm

50~75mm

Code No. | Item Code No. | Weight (g) | Type | Image type | Field number | Tube's tilt angle | Tube's tilt angle | Interchangeability | Interchangeability |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MBB63400</td>
<td>LV-TE Trinocular Tube T</td>
<td>255</td>
<td>Siedentopf</td>
<td>Erect</td>
<td>22/25</td>
<td>20</td>
<td>100/0:100</td>
<td>50~75mm</td>
<td></td>
</tr>
<tr>
<td>MBB61000</td>
<td>LV-TE Trinocular Tube F</td>
<td>250</td>
<td>Siedentopf</td>
<td>Inverted</td>
<td>22/25</td>
<td>20</td>
<td>100/0:100</td>
<td>50~75mm</td>
<td></td>
</tr>
<tr>
<td>MBB63311</td>
<td>C-TE Trinocular Tube F</td>
<td>250</td>
<td>Siedentopf</td>
<td>Inverted</td>
<td>22/25</td>
<td>20</td>
<td>100/0:100</td>
<td>50~75mm</td>
<td></td>
</tr>
<tr>
<td>MBB63300</td>
<td>C-TE Trinocular Tube T</td>
<td>250</td>
<td>Siedentopf</td>
<td>Inverted</td>
<td>22/25</td>
<td>20</td>
<td>100/0:100</td>
<td>50~75mm</td>
<td></td>
</tr>
<tr>
<td>MBB63110</td>
<td>C-TE Trinocular Tube T</td>
<td>250</td>
<td>Siedentopf</td>
<td>Inverted</td>
<td>22/25</td>
<td>20</td>
<td>100/0:100</td>
<td>50~75mm</td>
<td></td>
</tr>
<tr>
<td>MBB61010</td>
<td>C-TB Binocular Tube F</td>
<td>250</td>
<td>Siedentopf</td>
<td>Inverted</td>
<td>22/25</td>
<td>20</td>
<td>100/0:100</td>
<td>50~75mm</td>
<td></td>
</tr>
<tr>
<td>MBB61000</td>
<td>C-TB Binocular Tube T</td>
<td>250</td>
<td>Siedentopf</td>
<td>Inverted</td>
<td>22/25</td>
<td>20</td>
<td>100/0:100</td>
<td>50~75mm</td>
<td></td>
</tr>
</tbody>
</table>

For attaching Double Port or Double Port, refer to the system diagram on page 5.

* GIF UW 15* and GIF UW 15A are not available for use.
Eyepieces

These eyepieces have a 30mm sleeve diameter and maximize the performance of objective lenses.

Eyepieces

These eyepieces have a 23.2mm sleeve diameter and maximize the performance of objective lenses.
CCTV Camera Adapters

Both C-mount and ENG-mount types are available.

- ENG-mount TV Adapter
- C-mount TV Adapter
- 1X Relay Lens
- ENG-mount Adapter/CCTV Zooming Lens

Adapters for 1/3-inch(0.35×), 1/2-inch(0.45×), and 2/3-inch(0.6×) CCD cameras are available.

Note: ENG Mount for Zooming Lens have been discontinued, and only available from stock.

The ENG-mount TV Adapter and C-Mount TV Adapter are used in conjunction with the Relay Lens 1x.

Glossary

- Working Distance (W.D.) and Parfocal Distance
- Numerical aperture (NA)
- Depth of Focus (When observing with eyepieces)
- Pupil Diameter
- Total Magnification
- Imaging device size
- Monitor magnification