Olympus innovation. A lineup of Olympus objectives for a range of research applications. What’s your objective?

**UPLSAPO Series**
Like diamonds, objectives come in a range of qualities. The UPLSAPO class has some of the highest levels of compensation for both spherical and chromatic aberrations from UV to near-infrared region.

**PLFLN Objective**
High-quality flat-field objectives for routine use.

**PLAPON Series**
Provides flat images from high transmission factors up to the near-infrared region of the spectrum.

**XLUMPLFLN-W Objective**
Superior transmission and high NA for excellent clarity of images in live cell dipping applications. The new “Super 20x” has an improved NA from 0.95 to 1.0.

**UAPON340 Series**
Features highest transmission of 340nm wavelength light for applications using UV such as laser cutting and ablation.

**TIRF Objectives**
Olympus is a pioneer in the field of TIRF microscopy with the widest range of objectives for applications from membrane dynamics to super-resolution.

**UPLFN Series**
Provides flat images with high transmission factors up to the near-infrared region of the spectrum through the employment of UW multi-coating.

**LUMPLFLN-W Series**
Dipping objectives designed with long working distances and special angles. Developed for experiments in electrophysiology.

**MicroProbe Objectives**
Olympus innovation. A lineup of Olympus objectives for a range of research applications. What’s your objective?

**SCALEVIEW Immersion 25X Objectives for Multiphoton: Revolutionary New Imaging Depths**

**Ultra 25X MPE Water Immersion Objective: The Ultimate for Multiphoton Imaging**

**MicroProbe Objectives: Intravital Imaging with Unparalleled Clarity in a Unique Size**

**30X and 60X Silicone Oil Objectives: Ideal for Live Cell Imaging**

**Super-Corrected 60XO Objective Lens: A Must for Colocalization**
What’s Your Objective?

Bringing new focus to your research

From silicone oil objectives that allow for long-term time-lapse imaging to microprobe objectives that enable deep imaging in vivo, Olympus is innovating high-performance objective solutions to meet your microscopy needs.

Image captured by Shane Andrews, Dr. Sam Pfaff Laboratory, Salk Institute, La Jolla, CA.

Optics are the heart of any microscopy system, and Olympus is constantly designing unique and exciting new objectives optimized for a range of optical techniques and research needs. From pioneering microprobe, TIRF, and multiphoton objectives to super-corrected colocalization objectives and silicone objectives optimized for live cell imaging, Olympus innovation provides the solutions needed to achieve your goals.

Excellence in optical engineering. The core technology of Olympus.

Super-Corrected 60XO Objective Lens—THE lens for colocalization

Delivering optimal colocalization performance levels out to an unprecedented 405nm excitation wavelength

- Enhanced point spread function optimized with Olympus FV1000 for confocal imaging at ultraviolet wavelengths and improved brightness to field periphery
- Chromatic aberration compensated to less than 0.1-0.2µm within the range of 405-650nm
- Images down to 405nm greatly benefit from highly improved optical performance with better flatness and virtually no shadowed areas at periphery

Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Magnification</th>
<th>N.A.</th>
<th>W.D. (mm)</th>
<th>Field Number Comp</th>
<th>Chromatic Aberration Compensation</th>
<th>Immersion Medium</th>
<th>Operating Temperature</th>
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</thead>
<tbody>
<tr>
<td>PLAPON60XOSC</td>
<td>60X</td>
<td>1.4</td>
<td>0.12</td>
<td>22</td>
<td>On-Axis ≤ 0.1µm</td>
<td>Oil</td>
<td>23ºC±3ºC</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>OR-On-Axis ≤ 0.2µm &amp; F.N. 6</td>
<td>IMMOIL-F30CC</td>
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Sales restrictions may apply.
### MicroProbe Objectives

**Minimally invasive, high-resolution imaging deep within live animals**

- True lens technology, not GRIN lenses, these objectives have slim diameter tips of 1.3mm (6X and 20X) and 3.5mm (27X), all with working distance of 200 microns.
- Allows observation of various fluorescence signatures where standard objectives cannot reach.
- Transmission and chromatic correction throughout visible and near-infrared (NIR) spectra (450-1000nm) provide excellent image quality.

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**XLPL25XWMP Basic Specifications**

<table>
<thead>
<tr>
<th>Parfocal length</th>
<th>75mm</th>
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<tbody>
<tr>
<td>Magnification</td>
<td>25X</td>
</tr>
<tr>
<td>N.A.</td>
<td>1.05</td>
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<tr>
<td>WD</td>
<td>2.0mm</td>
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<tr>
<td>Correction collar</td>
<td>0-0.23mm</td>
</tr>
<tr>
<td>F.N.</td>
<td>18</td>
</tr>
<tr>
<td>Max. angle for patch-clamping</td>
<td>35°</td>
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Sales restrictions may apply.

**Specifications**

<table>
<thead>
<tr>
<th>Model</th>
<th>Lens Diameter (mm)</th>
<th>N.A.</th>
<th>W.D. (mm)</th>
<th>Practical Field of View (mm)</th>
<th>Immersion Media</th>
<th>Magnification</th>
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<tbody>
<tr>
<td>IV10-MP27X35</td>
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<td>0.70</td>
<td>0.2</td>
<td>0.22</td>
<td>Water</td>
<td>27X</td>
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<tr>
<td>IV10-MP20X13</td>
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<td>Water</td>
<td>20X</td>
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<td>0.2</td>
<td>0.67</td>
<td>Water</td>
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</tr>
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</table>

Sales restrictions may apply.

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**Ultra 25X MPE Water Immersion Objective**

**Engineered specifically for two-photon excitation and deep imaging**

- Optimal performance in IR range
- New coating gives more than 82% transmittance from 400-1000nm
- Correction collar creates very small focal spot even in deep imaging, compensating for refractive index mismatch
- FV1000MPE light path engineered to completely fill back aperture and make full use of resolution available from 1.05 N.A.

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**Blood vessels (red) and enterocytes (green) imaged using a 20X MicroProbe objective inserted within a small incision in the wall of the jejunum. Image captured by Dr. Herlen Alencar, Massachusetts General Hospital, Boston.**

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**Transgenic zebrafish with cell membranes labeled with CFP. CFP is shown in green and YFP in magenta. Image data provided by Dr. Rachel O. Wong and Philip Williams, Department of Biological Structure, University of Washington.**
30X and 60X Silicone Oil Objectives

Minimizing spherical aberration and delivering higher resolution at greater depths

- Improved optical performance for live cell confocal, widefield fluorescence, multiphoton, and differential interference contrast (DIC)
- Ideal for long-term time-lapse imaging
- Enhance image resolution and contrast by adjusting correction collar
- 30X silicone objective for macro observation at high resolution
- High numerical apertures and transmission for use in both multiphoton and single-photon microscopy

Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Magnification</th>
<th>N.A.</th>
<th>W.D. (mm)</th>
<th>Immersion Media</th>
<th>Field of View</th>
<th>Cover Glass Correction</th>
<th>Temperature</th>
<th>DIC Observation</th>
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<tbody>
<tr>
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<td>60X</td>
<td>1.3</td>
<td>0.3</td>
<td>Silicone oil</td>
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<td>23-37°C</td>
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<tr>
<td>UPLSAPO30X</td>
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<td>0.8</td>
<td>Silicone oil</td>
<td>22</td>
<td>0.13-0.19mm</td>
<td>23-37°C</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Sales restrictions may apply.

UPLSAPO30XS and UPLSAPO60X, Silicone Immersion Objectives for Live Imaging

This immersion objective is designed exclusively for use with silicone oil, which has a refractive index even closer to live cells than that of water. Time-lapse observations become more reliable because silicone oil does not dry at 37°C and its refractive index remains constant. This objective also offers a long working distance to enable observation at deeper tissue levels and across broader fields. In a nutshell, this silicone objective offers a comprehensive solution for both macro and deep tissue observation in the fields of generative and regenerative science.

Refractive Index is important with Deep Tissue Observation

Silicone Immersion Oil SIL300CS-30SC

- Refractive index: ne=1.406, 23°C
- Net: 30ml
- Low autofluorescence

SCALEVIEW Immersion 25X Objectives for Multiphoton

Reach revolutionary new imaging depths with remarkable clarity

- Optimized for multiphoton imaging
- Correction collar creates very small focal spot even in deep imaging, compensating for refractive index mismatch
- Specially designed for SCALEVIEW-A2 super-deep morphologically intact tissue imaging
- Supports water immersion

Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Numerical Aperture</th>
<th>Working Distance (mm)</th>
<th>Cover Glass Thickness (mm)</th>
<th>Field of View (mm)</th>
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<tbody>
<tr>
<td>XLPN25XSVMF</td>
<td>1.0</td>
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<td>XESLPN25XSVMF</td>
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<td>8mm</td>
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Sales restrictions may apply.