



Microscopes  
for Life-  
and Material  
Sciences



The Oxion series has been designed with all kind of Life- and Material Sciences applications and great durability in mind. This resulted in a modern, robust and high level microscope for everyday use, equipped with excellent optical and mechanical components. Specific attention to production methods resulted also in an excellent price/performance ratio

## Infinity color corrected optical system

The Oxion features an unique swiveling concept allowing the viewing height to be easily matched with the user height and - compared to traditional microscopes - add approximately 40 mm extra viewing height

The Siedentopf tubes have standard HWF plan 10x eyepieces with 22 mm field of view and adjustable diopter. The interpupillary distance is 50 to 75 mm

Eyepieces can be secured to the tubes.  
The Oxion head has an ergonomic viewing angle of 30° and 45° for Inverted models



The Oxion is available in various configurations suitable for Life- and Material sciences, high schools, universities but also for routine medical applications. Besides the bright field contrast method, configurations with phase contrast, cardioid mirror dark field, basic polarization and several epi-illumination sources for fluorescence and Material science applications can be used

## A microscope with well conceived details

The computer optimized design of the Oxion ensures high stability and durability which results in an all-round advanced ergonomical microscope. Below the head of the upright Oxion microscope there is an opening that enables insertion of an optional polarizer. The handgrip at the back of the stand allows easy transportation of the microscope

The large 150 x 140 mm table with 76 x 50 mm translation mechanical stage and the reversed nosepiece for up to 5 objectives makes the Oxion suitable for advanced laboratory work. Ergonomically positioned adjustment knobs minimize fatigue during long microscopy sessions

The general shape of the stand has been specifically designed to match today's standards

The height adjustable Abbe N.A. 1.25 condenser accepts sliders for economical phase contrast and basic dark field applications

The Oxion can be equipped with a heating stage which can be set up to 50° Celsius by a real PID controller. Higher temperatures can be achieved on special request

The 3 Watt adjustable **NeoLed** diascopic and episcopic solutions offer the user a comfortable illumination with a constant color temperature and long term usage. The Koehler illumination provides high contrast and a maximum achievable resolving power of the optics

The high powered **NeoLed** offers low energy consumption, no heating and a long operating lifetime

A vertical reflected 100 W mercury-vapor light source with up to 4 filter cubes or a single filter cube FluoLed module enables a large range of fluorescence microscopy

Multihead models with 2, 3 or 5 heads with laser pointer allow simultaneous observation of specimens



*FluoLed fluorescence Oxion*



*Mercury-vapor fluorescence Oxion*

# Contrast methods for a large range of applications

## Brightfield

A large scale of applications is covered by the common light-transmitted brightfield contrast method. Besides the standard Semi Plan and Plan achromatic 4x, 10x, 20x, S40x, S60x, S100x oil brightfield objectives, the Oxion can also be equipped with newly designed high contrast Plan Semi-Apochromatic objectives. The improved correction of these objectives results in reduced aberrations and improved resolving power for the complete optical system. All objectives are treated with a multi-layer anti-reflection coating and are anti fungus

## Phase contrast

The observation of living cells and unstained specimens with poor contrast can be done by using the the phase contrast method. The upright Oxion models can use either one of two available Zernike disc phase condensers or 2 sliders equipped with phase contrast rings. The inverted microscope Oxion Inverso have positive phase contrast Plan Phase 4x, 10x, 20x and 40x long working objectives and a 72 mm working distance N.A 0.3 condenser

## Darkfield

A state-of-the-art condenser equipped with reflective cardioid mirrors, a high powered 5 W LED and a S100x objective with iris enables a real 1000x magnification darkfield solution

## Contrast methods for Material science

3 W diascopic and episcopic light sources together with LWD Plan 50x and 100x semi-apo objectives and polarization filters allow a high class observation for Material science applications

## Fluorescence microscopy

The Oxion series offer two types of microscopes for fluorescence applications One can be equipped up to 4 filter cubes using a 100 W mercury-vapor light source. The other is a single filter cube FluoLed module using a 455 nm LED source for fast detection of small pathogens

The plan or plan semi-apochromatic Fluorex objectives together with 22 mm eyepieces and high performance fluorescence filters provide the necessary resolution and field of view to produce excellent contrasted images



*Material Science Oxion with 3 W NeoLed diascopic and episcopic illumination*



*Multihead system up to 5 users with integrated laser pointer*

# Configurations

## Life Science microscopes for bright- & phase contrast applications

OX.3012	Bino	Infinity Semi Plan 4x, 10x, S40x, S100x
OX.3015	Trino	Infinity Semi Plan 4x, 10x, S40x, S100x
OX.3020	Bino	Infinity Plan 4x, 10x, S40x
OX.3025	Trino	Infinity Plan 4x, 10x, S40x
OX.3030	Bino	Infinity Plan 4x, 10x, S40x, S100x oil
OX.3035	Trino	Infinity Plan 4x, 10x, S40x, S100x oil
OX.3040	Bino	Infinity Plan Phase 10x, 20x, S40x, S100x oil
OX.3045	Trino	Infinity Plan Phase 10x, 20x, S40x, S100x oil
OX.3042	Bino	Infinity Plan Phase 10x, S40x, S100x-oil and dark field stop
OX.3047	Trino	Infinity Plan Phase 10x, S40x, S100x-oil and dark field stop
OX.3050	Bino	Infinity Plan Semi-Apo 4x, 10x, S40x
OX.3055	Trino	Infinity Plan Semi-Apo 4x, 10x, S40x
OX.3060	Bino	Infinity Plan Semi-Apo 4x, 10x, S40x, S100x-oil
OX.3065	Trino	Infinity Plan Semi-Apo 4x, 10x, S40x, S100x-oil
OX.5602	Bino	Multihead 2 heads with Infinity Plan 4x, 10x, S40x, S100x oil
OX.5603	Bino	Multihead 3 heads with Infinity Plan 4x, 10x, S40x, S100x oil
OX.5605	Bino	Multihead 5 heads with Infinity Plan 4x, 10x, S40x, S100x oil

*For Life Science microscopes equipped with a heating stage, order also AE.5168-O when ordering a new microscope*

## Life Science microscopes for dark field contrast applications

OX.3064	Trino	Infinity Plan 4x, 10x, S40x, S100x-oil with iris & cardioid dark field condenser and 5W LED
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## Life Science microscopes for fluorescence applications

OX.3067	Trino	Infinity Plan 4x, 10x, S40x, S100x-oil
OX.3070	Bino	Infinity Plan Semi-Apo Fluarex 4x, 10x, S40x
OX.3075	Trino	Infinity Plan Semi-Apo Fluarex 4x, 10x, S40x
OX.3080	Bino	Infinity Plan Semi-Apo Fluarex 4x, 10x, S40x, S100x-oil
OX.3085	Trino	Infinity Plan Semi-Apo Fluarex 4x, 10x, S40x, S100x-oil

*The models OX.3067, OX.3070, OX.3075, OX.3080 and OX.3085 are equipped with a fluorescence illuminator for max. 4 filter blocks*

OX.3230	Bino	Infinity Plan 4x, 10x, S40x, S100x-oil with 455 nm FluoLed
OX.3235	Trino	Infinity Plan 4x, 10x, S40x, S100x-oil with 455 nm FluoLed
OX.3232	Bino	Infinity Plan 4x, 10x, S40x, S100x-oil Fluarex with 455 nm FluoLed
OX.3237	Trino	Infinity Plan 4x, 10x, S40x, S100x-oil Fluarex with 455 nm FluoLed

*The models OX.3230, OX.3235, OX.3232, and OX.3237 are equipped with the fluorescence 455 nm FluoLed module with one filter block*

## Life Science inverted microscopes for cell culture applications

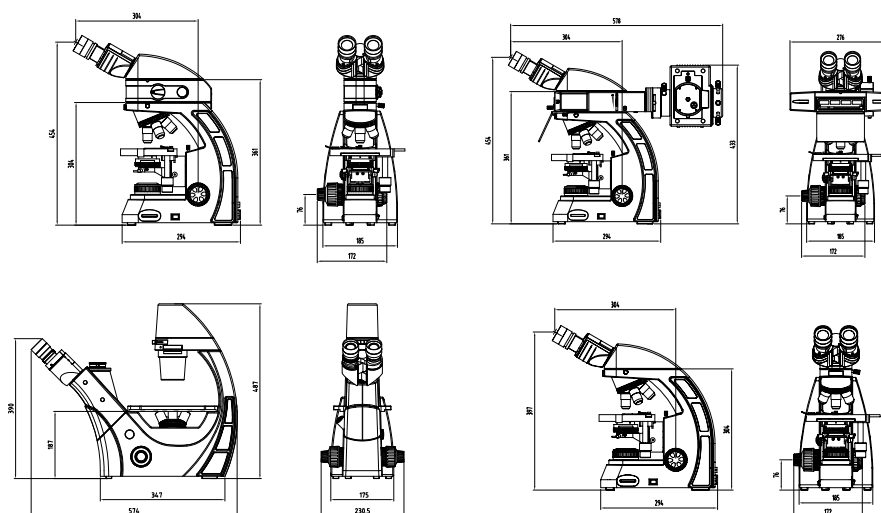
OX.3120	Trino	Infinity Plan Positive Phase 4x, 10x, 20x, S40x
OX.3125	Trino	Infinity Plan Positive Phase 4x, 10x, 20x, S40x with mechanical stage

## Material Science microscope

OX.3245	Trino	Infinity M-IOS Plan 5x, 10x and Plan Semi-Apo 50x, 100x
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# Technical Data

<b>Optical system</b>	Infinity color corrected optical system
<b>Parafocal distance</b>	45 mm
<b>Eyepiece tubes</b>	Swiveling Siedentopf 30° tubes with 50 to 75 mm interpupillary distance Swiveling Siedentopf 45° tubes with 54 to 75 mm interpupillary distance for Oxion inverted models
<b>Eyepieces</b>	PL 10x/22 with adjustable diopter PL 10x/20 with adjustable diopter for Oxion MultiHead systems
<b>Nosepiece</b>	Reversed quintuple nosepiece
<b>Objectives</b>	Infinity Semi Plan achromatic bright field 4x, 10x, S40x, S100x oil Infinity Plan achromatic bright field 4x, 10x, 20x, S40x, S60x, S100x oil Infinity Plan achromatic phase contrast 10x, 20x, S40x and S100x oil Infinity Plan Semi-Apochromatic Fluarex 4x, 10x, 20x, S40x and S100x oil Infinity Plan M-IOS 5x, 10x, 20x and Plan Semi-Apochromatic 50x and 100x for Material Science models Infinity Plan Phase 4x, 10x, 20x and 40x IOS objective for Oxion inverted models
<b>Stages</b>	150 x 140 with mechanical 76 x 50 mm translation stage 250 x 160 with mechanical 120 x 78 mm translation stage for Oxion inverted models Oxion Inverted models delivered with metal inserts for 76 x 26 mm slides, 35 mm Petri dish, Teraski holder
<b>Focus</b>	Coaxial coarse and fine adjustment with 30 mm travel range and 2 µm precision Coaxial coarse and fine adjustment with 9 mm travel range and 2 µm precision for Oxion inverted models Friction control and object protection
<b>Condensers</b>	Abbe condenser N.A. 1.25, height adjustable with iris diaphragm Oxion inverted models delivered with N.A. 0.30 / 72 mm working distance condenser with phase contrast slider
<b>Illuminations</b>	Adjustable 3 W NeoLed for all diascopic illuminations with internal power supply for mains 85-240 V Reflected 100 W mercury-vapor light source for fluorescence models, with external power supply for mains 85-240 V Reflected 3 W 455 nm NeoLed illumination with external power supply for mains 85-240 V for FluoLed models Adjustable 3 W NeoLed for reflected episcopic illumination with external power supply for mains 85-240 V Adjustable 5 W NeoLed illumination with external power supply for mains 85-240 V for Oxion inverted models



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