

Oxion Inverso for life science

HIGHLIGHTS

- Life Science applications
- Observation of tissue cultures, living cells
- Brightfield, phase contrast and fluorescence
- Long working distance IOS plan achromatic objectives
- Revolving quintuple nosepiece
- 5 W LED transmitted illumination
- 100 W mercury vapor lamp for fluorescence
- 10 years warranty



OX.2053-PLPH

TECHNICAL SPECIFICATIONS

EYEPIECE(S)

- Pair of DIN HWF plan 10x/22 mm eyepieces

HEADS

- Trinocular 45° inclined tubes with extended low and high positions for eyepieces
- One diopter adjustment on left eyepiece
- Interpupillary distance of 54 to 75 mm
- Trinocular head with 100-0 % and 80-20 % positions

NOSEPIECES

- Revolving quintuple nosepiece on ball-bearings

OBJECTIVES FOR BRIGHTFIELD

(models OX.2003-PL and OX.2053-PL)

- Infinity color corrected long working distance plan 10x/0.25, 20x/0.40, 40x/0.60 IOS objectives
- An optional 60x/0.70 IOS objective is also available

OBJECTIVES FOR PHASE CONTRAST

(models OX.2003-PLPH and OX.2053-PLPH)

- Infinity color corrected long working distance plan phase 10x/0.25, 20x/0.40, 40x/0.60 IOS objectives

OBJECTIVES FOR BRIGHTFIELD AND FLUORESCENCE MICROSCOPY

(models OX.2253-PLF and OX.2453-PLF)

- Infinity color corrected long working distance plan Fluarex 10x/0.30, 20x/0.45, 40x/0.65 IOS objectives
- An optional plan Fluarex 60x/0.75 IOS objective is also available

OBJECTIVES FOR PHASE CONTRAST AND FLUORESCENCE MICROSCOPY

(models OX.2253-PLPHF and OX.2453-PLPHF)

- Infinity color corrected long working distance plan fluarex 10x/0.30 and plan phase fluarex 20x/0.45 and S40x/0.65 IOS objectives
- All objectives corrected for 1.2 mm thickness
- All optics are anti-fungus treated and anti-reflection coated for maximum light throughput

STAGE

- Stage 250 x 230 mm equipped with a coaxial mechanical 120 x 78 mm X-Y stage, delivered with metallic insert for Ø 35 mm cell culture dish dishes, 76 x 26 mm slide holder, glass insert with hole and optional universal cell culture dish holder

CONDENSER

- N.A. 0.30 condenser with iris diaphragm. Working distance 72 mm
- The models for the phase contrast OX.2003-PLPH, OX.2053-PLPH, OX.2253-PLPH and OX.2453-PLPH are delivered with a slider with 4x/10x and 20x/40x pre-centered phase rings

FOCUSING ADJUSTMENT

- Coaxial 25 mm coarse and fine adjustments, 2 µm precision and with friction adjustment

ILLUMINATION

- Transmitted 5 W LED Intensity adjustable with internal 100-240 V power supply. Fuse holder 3.15 A / 250 V
- The fluorescence models are equipped with a reflected 100 W HBO mercury vapor light source with external 100-240 V power supply. Fuse holder 3.15 A / 250 V, UV protection shield

FILTERS FOR PHASE CONTRAST MODELS

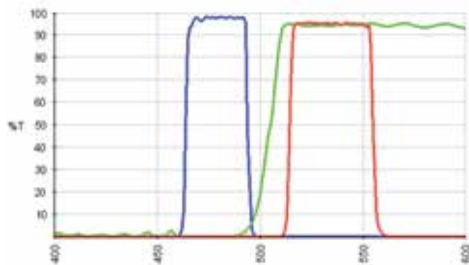
- Interference filter 550 nm green and blue filter, 45 mm diameter

STANDARD FLUORESCENCE FILTERS

(for fluorescence models)

- The fluorescence models OX.2253-PLF and OX.2453-PLF are standard supplied with 2 filter sets for excitation:
 - in the blue spectrum, OX.9745, EX465-495 (BP) DM505 (LP) EM515-558 (BP)
 - in the green spectrum, OX.9746, EX520-600 (BP) DM600 (LP) EM605-665 (BP)
- The fluorescence models OX.2253-PLF and OX.2453-PLPH equipped with a 4 positions filter rail equipped with 3 standard filter sets for excitation:
 - in the blue spectrum, OX.9745, EX465-495 (BP) DM505 (LP) EM515-558 (BP)
 - in the green spectrum, OX.9746, EX520-600 (BP) DM600 (LP) EM605-665 (BP)
 - in the UV spectrum, OX.9747, EX361-381 (BP) D415 (LP) EM435-495 (BP)

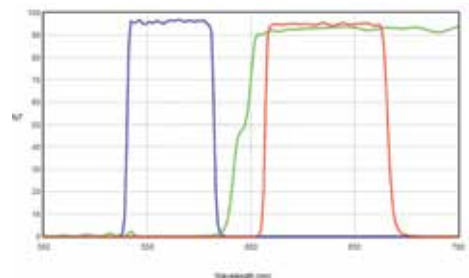
STANDARD GENERAL PURPOSE FLUORESCENCE FILTER SETS



OX.9745 Blue excitation 465-495 nm

FITC EX465-495 (BP) DM505 (LP) EM515-558 (BP)

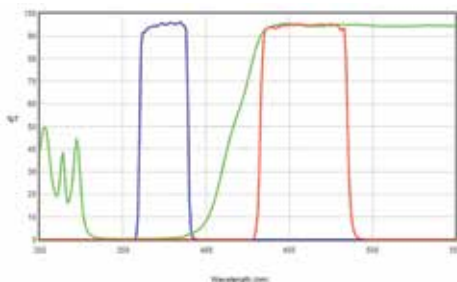
Also suitable for: Acridine Orange + DNA, Alexa Fluor 488™, Atto 488, Azami Green, BODIPY FL/pH7.2, Calcein, Calcium Green™-1, Cy2™, DiO, DyLight 488, EGFP, Emerald GFP, FAM, FITC, Fluo-4, GFP LysoTracker Green/pH 5.2, MitoTracker Green FM/MeOH, mWasabi, Oregon Green™ 488, SYBR® Green I, SYTO 9/DNA, ZsGreen



OX.9746 Green excitation 520-600 nm

Texas Red / mCherry / Alexa Fluor 594 EX520-600 (BP) DM600 (LP) EM605-665 (BP)

Also suitable for: Alexa Fluor 568™, Alexa Fluor 594™, CAL Fluor® Red 610, Cy3.5™, DyLight 594, FusionRed, Killer Red, mCherry, MitoTracker Red/MeOH, mKate2, mRFP1, ReAsH-CCPGCC, Rhodamine Red™-X, ROX, Sulforhodamine 101, Texas Red®, Texas Red®-X, X-rhod-1/Ca2+

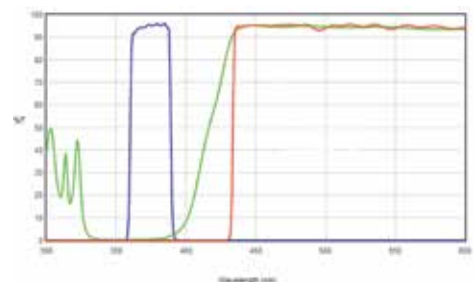


OX.9747 UV excitation 361-381 nm

DAPI / Hoechst / Alexa Fluor 350 EX361-381 (BP) D415 (LP) EM435-495 (BP)

Also suitable for: Alexa Fluor 350™, Biosearch Blue, Coumarin, DAPI, DyLight 350, Hoechst 33258, LysoTracker Blue/MeOH

The fluorescence microscopes can be equipped with more specific, optimized and application related fluorescence filters sets, see accessories section and/or separate fluorescence filter catalog



OX.9748 Violet excitation 361-389 nm

UV / DAPI Longpass, Calcofluor White EX 361-389 (BP) DM 415 (LP) EM 435 (LP)

PACKAGING

- Supplied with power cord, dust cover and user manual
- Phase contrast models are supplied with green filter and centering telescope

MODELS

	LWD Plan 10x/20x/40x objectives	LWD Plan phase 10x/20x/40x objectives	LWD Plan fluarex 10x/20x/40x objectives	LWD Plan fluarex 10x and plan phase fluarex 20x/40x objectives	2 position filter block	4 position filter block	Mechanical stage
OX.2003-PL	•						
OX.2053-PL	•						•
OX.2003-PLPH		•					
OX.2053-PLPH		•					•
OX.2253-PLF			•		•		•
OX.2453-PLF			•			•	•
OX.2253-PLPHF				•	•		•
OX.2453-PLPHF				•		•	•

Fluarex™ objectives are made of low-absorption glass for fluorescence applications

Fluarex™ is a trademark of Euromex microscopen bv

LWD = long working distance



ISCI SET FOR OXION INVERSO

TECHNICAL SPECIFICATIONS

- Perfect for inexperienced users in need of training practice as well as for professionals
- Complete manual system, no coarse manipulator is required
- Large movement range
- Easy micropipette position at each time 'Manual Home Position'
- Adjustable micropipette holder angle between 20° and 40°
- Micropipette holder fixing knob reduces vibration and easy handling of the sperm
- Easy installation and service
- 3D Hydraulic Manipulation Joysticks for smooth movement
- Pneumatic Air Injector for ICSI and HOLDING
- No service required for injector
- Same sensitive injectors on both sides and interchangeable if needed
- Top quality for affordable price
- Medical Device CE mark
- Movement Range: X/Y/Z: 20 mm each, 1 mm for one complete turn of the handle
- Optional heating stage with controller



ISCI set (detail)

ISCI SET

Set includes 2 pcs of 3D hydraulic joystick, 2 pcs of pipette setup mechanism, 1 pc of connection bar with moving handle, 2 pcs of air injector with tubing and pen type micromanipulation, pipette holder, 2 pcs of metal plate for injectors, 1 set of allen wrench, 1 set of spare silicone for pen type pipette holder, 1 pc of ruler for mechanic home position adjustment inside carry case

HEATING STAGE

- Warm ITO glass plate for Euromex stages with 110mm circular opening - Flat - 110 mm diameter
- This ITO glass plate fits in the circular opening of the X-Y stage and creates a flat temperature controlled surface at the same height as the rest of the X-Y stage.
- Aluminium frame for superior resistance and flatness.
- Glass thickness 0.5 mm. Plate diameter 110 mm.

Notes: This plate does not change the focal plane. Flat. Glass thickness: 0.5 mm

CONTROLLER

- 2-Channel Temperature Controller with touch screen interface
- One controller can control independently up to two items
- External temperature sensor (included) and self calibration routines allows easy calibration of the heating devices for the highest accuracy on sample temperature
- On board data logging and download procedures to USB drives allow to record temperature as a function of time and to log calibration events and alarms
- The controller is equipped with password protected routines to re-calibrate the sensors against certified thermometers

FEATURES

- T - range: from ambient to 60°C
- T - accuracy on specimen: $\pm 0.3^\circ\text{C}$
- 4.3" touch screen interface
- External T - sensor (included)
- On-board Data logging and download routines to USB drive
- On-board logging of calibration and alarm events
- Alarm buzzer and External Alarm Connector
- One controllers can control independently up to two devices
- Self calibration routines allow to improve temperature accuracy
- Password protected procedure for periodic calibration against certified thermometer

ACCESSORIES AND SPARE PARTS

EYEPIECES

- OX.6010** HWF 10x/22 mm eyepiece
- OX.6015** HWF 15x/16 mm eyepiece
- OX.6110** HWF 10x/22 mm eyepiece with micrometer reticule
- OX.6099** Pair of eyecups

OBJECTIVES FOR BRIGHT FIELD MICROSCOPY FOR INVERTED MODELS (*)

- OX.8304** Plan LWD 4x/0.10 infinity corrected IOS objective, working distance 22 mm
- OX.8310** Plan LWD 10x/0.25 infinity corrected IOS objective, working distance 7.94 mm
- OX.8320** Plan LWD 20x/0.40 infinity corrected IOS objective, working distance 7.66 mm
- OX.8340** Plan LWD 40x/0.60 infinity corrected IOS objective, working distance 3.71 mm
- OX.8360** Plan LWD 60x/0.70 infinity corrected IOS objective, working distance 2.5 mm

OBJECTIVES FOR BRIGHT FIELD AND FLUORESCENCE MICROSCOPY FOR INVERTED MODELS (*)

- OX.8604** Plan fluarex LWD 4x/0.13 infinity corrected IOS objective, working distance 18.5 mm
- OX.8610** Plan fluarex LWD 10x/0.30 infinity corrected IOS objective, working distance 7.1 mm
- OX.8620** Plan fluarex LWD 20x/0.45 infinity corrected IOS objective, working distance 5.91 mm
- OX.8640** Plan fluarex LWD 40x/0.65 infinity corrected IOS objective, working distance 1.61 mm
- OX.8660** Plan fluarex LWD 60x/0.75 infinity corrected IOS objective, working distance 1.04 mm

OBJECTIVES FOR PHASE CONTRAST (**) MICROSCOPY FOR INVERTED MODELS (*)

- OX.8404** Plan phase LWD 4x/0.13 infinity corrected IOS objective, working distance 10.4 mm (*)
- OX.8410** Plan phase LWD 10x/0.25 infinity corrected IOS objective, working distance 7.94 mm (*)
- OX.8420** Plan phase LWD 20x/0.40 infinity corrected IOS objective, working distance 7.66 mm (*)
- OX.8440** Plan phase LWD 40x/0.60 infinity corrected IOS objective, working distance 3.71 mm (*)

(*) All objectives corrected for 1.2 mm cover glass thickness. All optical parts are anti-fungus treated

(**) Phase contrast objectives require slider with phase contrast annuli OX.9163

OBJECTIVES FOR FLUORESCENCE AND PHASE CONTRAST (**) MICROSCOPY FOR INVERTED MODELS (*)

- OX.8720** Plan phase fluarex LWD 20x/0.45 infinity corrected IOS objective. Working distance 5.91 mm (*)
- OX.8740** Plan phase fluarex LWD 40x/0.65 infinity corrected IOS objective. Working distance 1.1 mm (*)

STANDARD GENERAL PURPOSE FLUORESCENCE FILTER SETS:

- OX.9745** Fluorescence filter block for Blue excitation 465-495 nm
- OX.9746** Fluorescence filter block for Green excitation 520-600 nm
- OX.9747** Fluorescence filter block for UV excitation 361-389 nm
- OX.9748** Fluorescence filter block for Violet excitation 361-389 nm

ALL MODELS

- OX.9149** Telescope for phase contrast alignment
- OX.9190** Slider with 4x/10x and 20x/40x phase contrast annuli
- OX.9500** Mechanical coaxial X-Y 120 x 78 mm stage
- OX.9506** Transparent glass insert with hole
- OX.9512** Insert with 76 x 26 mm slide holder and Ø 54 mm cell culture dish holder
- OX.9535** Metal insert for Ø35 mm cell culture dish holder
- OX.9550** Stage extension plate
- OX.9599** Universal cell culture dish holder
- OX.9985** 5 W NeoLED™ replacement unit

For transmitted illumination:

- OX.9700** Blue filter
- OX.9702** Green filter
- OX.9703** IR cut-off filter
- OX.9749** Empty Filter block
- OX.9753** Filter block rail, 3 positions
- OX.9754** Filter block rail, 4 positions
- OX.9810** CS/C mount with 1.0x objective
- OX.9833** C-mount adapter with 0.33x objective for Oxion microscopes and 1/3" cameras
- OX.9850** C-mount adapter with 0.5x objective for Oxion and Oxion Inverso microscopes and 1/2" cameras
- AE.5120** Standard 23.2 mm diameter tube for Oxion photo port
- AE.5130** Universal SLR camera adapter with 2x projection lens for 23.2 mm tubes. Need T2 adapter and AE.5120
- AE.5025** T2 adapter for Nikon D digital SLR cameras
- AE.5040** T2 adapter for Canon EOS digital SLR cameras
- AE.3199** Glass fuses 3.15 A 250 V packed, per 10 pieces
- PB.5155** Microscope slides 76 x 26 mm, ground edges, 50 pieces
- PB.5165** Cover glasses 18 x 18 mm, thickness 0.13 - 0.17 mm, 100 pieces
- PB.5168** Cover glasses 22 x 22 mm, thickness 0.13 - 0.17 mm, 100 pieces
- PB.5245** Lens cleaning paper, 100 sheets per pack
- PB.5255** Immersion oil, n = 1.482 (25 ml)
- PB.5274** Isopropyl alcohol 99% (200 ml)
- PB.5275** Cleaning kit: lens cleaning fluid, lint free lens tissue, brush, air blower, cotton swabs

ACCESSORIES AND SPARE PARTS

OPTIMIZED FLUORESCENCE FILTERS SETS:

OX.9750.39001

Filter set EX435 (BP20) DM455 (LP) EM480 (BP30) AmCyan, Atto 425, Cerulean, CFP, ECFP fluorophore. Needs empty filter block (OX.9749)

OX.9750.39002

Filter set EX480 (BP30) DM505(LP) EM535 (BP40) Acridine Orange + DNA, Alexa Fluor 488™, Atto 488, Azami Green, BODIPY FL/pH7.2, Calcein, Calcium Green™-1, Cy2™, DiO, DyLight 488, EGFP, Emerald GFP, FAM, FITC, Fluo-4, GFP, LysoTracker Green/pH 5.2, MitoTracker Green, FM/MeOH, mWasabi, Oregon Green™ 488, SYBR® Green I, SYTO 9/DNA, ZsGreen fluorophore. Needs empty filter block (OX.9749)

OX.9750.39003

Filter set EX495 (BP20) DM515 (LP) EM540 (BP30) Alexa Fluor 514™, Citrine, EYFP/pH 7, F/IAsh-CCPFCC, mCitrine, Oregon Green™ 514, Rhodamine 123, Topaz. Needs empty filter block (OX.9749)

OX.9750.39004

Filter set EX540 (BP25) DM565 (LP) EM605 (BP55) Alexa Fluor 546™, Alexa Fluor 555™, Atto 550, CAL Fluor® Red 590, Cy3™, DiI, DsRed, DyLight 549, MitoTracker Orange/MeOH, Resorufin, Rhod-2, TagRFP, TAMRA tdTomato, Tetramethylrhodamine isothiocyanate, TRITC. Needs empty filter block (OX.9749)

OX.9750.39005

Filter set EX540 (BP25) DM565 (LP) EM 620 (BP60) TRITC-red-shifted, Ethidium homodimer-1/DNA, Propidium Iodide. Needs empty filter block (OX.9749)

OX.9750.39007

Filter set EX620 (BP50) DM655 (LP) EM 690 (BP50) Alexa Fluor 647™, Allophycocyanin (APC), Atto 647N, Cy5™, DiD, Draq5, DyLight 649 MitoTracker Deep Red 633/MeOH, Nile Blue, Quasar® 670, SYTO® 60, TO-PRO™-3. Needs empty filter block (OX.9749)

OX.9750.39008

Filter set EX420 (BP40) DM455 (LP) EM 535 (BP40) Lucifer Yellow/Tetracycline/AlexaFluor 430. Needs empty filter block (OX.9749)

OX.9750.39009

Filter set EX480 (BP30) DM505 (LP) EM 620 (BP60) for Acridine Orange + RNA, Di-8-ANEPPS non-ratiometric, DiA, Ethidium Bromide, FM™ 1-43, LysoTracker Yellow HCK-123, Pulsar™ 650. Needs empty filter block (OX.9749)

On request, the microscope can also be equipped with more specific, optimized and application related fluorescence filters sets

OPTIMIZED PREMIUM FLUORESCENCE FILTERS SETS:

OX.9750.0401

Premium filter set EX440 (BP21), DM455 (LP), EM480 (BP30) for CFP, Cerulean, CyPet, SpectrumAqua. Needs empty filter block (OX.9749)

OX.9750.0403

Premium filter set EX380 (BP50), DM410 (LP), EM450 (BP60) for BFP, BFP2, DAPI, Alexa Fluor 350, Hoechst 33342 & 33258, BFP. Needs empty filter block (OX.9749)

OX.9750.0404

Premium filter set EX470 (BP40), DM500 (LP), EM535 (BP50) for Alexa Fluor 488, CoralHue Azami Green, Cy2, eGFP, FITC, GFP (sapphire), Emerald. Needs empty filter block (OX.9749)

OX.9750.0407

Premium filter set EX635 (BP30), DM660 (LP), EM710 (BP80) Cy5, Alexa Fluor 647. Also compatible with TO-PRO-3, TOTO-3, Kodak, X-Sight 650. Needs empty filter block (OX.9749)

OS.9750.0412

Premium filter set EX500 (BP25), DM252 (LP), EM545 (BP35) Acridine Oragne (+DNA), Rhodamine Green, CL NERF, (hi pH), YFP. Also compatible with Alexa Fluor 532. Needs empty filter block (OX.9749)

OX.9750.0414

Premium filter set EX560 (BP55), DM505 (LP), EM645 (BP75) Texas Red, Texas Red-X, CryptoLight CF-6. Also compatible with Cy3.5, HcRed, mRaspberry, MitoTracker Red. Needs empty filter block (OX.9749)