

Teaching Microscopes



CETI is an international manufacturer of leading-edge microscopes ranging from educational up to advanced scientific models for both biological and industrial applications.

APOLLO E



The Apollo-E range is ideal for the classroom or lab, offering an affordable microscope, particularly suited for basic particle/specimen examination.

Model: APOLLO E
Product reference. 1111.0100

Optical head: Monocular, inclined at 45° and 360° rotatable
Eyepieces: 10x/18mm
Objectives: 4x, 10x, 40x Achromatic
Stage: 110 x 120mm, with 2 slide clips
Condenser: Brightfield Abbe - NA. 0.65
Illumination: Halogen 6V/20W (variable)
Mains Power: 220-240V/50-60Hz

APOLLO P



The Apollo-P range is ideal for the classroom or lab, offering an affordable microscope, particularly suited for basic particle/specimen examination, under supervision.

Model: APOLLO P
Product reference. 1111.0200

Optical head: Monocular, inclined at 45° and 360° rotatable with additional teaching head
Eyepieces: 10x/18mm
Objectives: 4x, 10x, 40x Achromatic
Stage: 110 x 120mm, with 2 slide clips
Condenser: Brightfield Abbe - NA. 0.65
Illumination: Halogen 6V/20W (variable)
Mains Power: 220-240V/50-60Hz

AKROPOL



The Akropol is an effective introductory model where samples need to be viewed through polarised light.

Product reference. 1111.2443

Optical head: Binocular, 360° degree rotatable, inclined at 30°
Eyepieces: 10x/20mm
Objectives: 4x, 10x, 40x + 100x Achromatic
Stage: 360° rotatable stage - 120mm Ø with 2 slide clips
Condenser: Brightfield Abbe - NA1.25
Illumination: Halogen 6V/20W (variable)
Mains Power: 220-240V/50-60Hz

COLT



The Colt is a superb unit for introducing students to the world of biological microscopy. Options are available for phase contrast, polarisation and darkfield applications.

Product reference. 1100.5101

Optical head: Binocular, inclined at 30° and 360° rotatable
Eyepieces: 10x/18mm
Objectives: 4x, 10x, 40x, 100x Achromatic
Stage: 110 x 120mm, with slide clamp
Condenser: Brightfield Abbe - NA. 0.65
Illumination: Halogen 6V/15W (variable)
Mains Power: 220-240V/50-60Hz

FOCUS II



Product reference. 1100.4000

Optical head:

Monocular, inclined at 45° and 360° rotatable

Eyepieces:

- 10x/18mm wide-field with pointer mounted and student-proof

Nosepiece:

- Triple, revolving with click stop

Objectives: achromatic

- 4x / 0.10 / 160 / 0.17
- 10x / 0.25 / 160 / 0.17
- 40x / 0.65 / 160 / 0.17 spring loaded

Condenser:

- Brightfield Abbe - NA 1.25

Stage:

- 120 x 120mm with built-in condenser (N.A. 0.65) and slide clamp

Focusing: Coaxial coarse & fine knobs

Illumination: Halogen 12V/20W (variable)

Mains power: 220-240V/50-60Hz

Optional accessories:

- Mechanical stage with nonius
- Mirror, plan concave, with holder
- Simple polarising set

MAX II MONO



Product reference. 1201.4000

Optical head:

Monocular, inclined at 45° and 360° rotatable interpupillary distance adjustment 55 to 75mm

Eyepieces: 10x/18mm wide-field (fixed)

Nosepiece: quadruple, revolving with click stop

Objectives: achromatic

- 4x / 0.10 / 160 / 0.17
- 10x / 0.25 / 160 / 0.17
- 40x / 0.65 / 160 / 0.17 spring loaded
- 100x / 1.25 / 160 / 0.17 (oil) spring loaded

Condenser:

- Brightfield Abbe - NA 1.25
- Iris diaphragm and filter holder
- Focusable in spiral mount

Stage:

- 140 x 140mm with built-in mechanical stage and slide clamp
- 75mm transversal movement
- 50mm longitudinal movement

Focusing: Coaxial coarse & fine knobs

Illumination: Halogen 12V/20W (variable)
(Optional LED available)

Mains power: 220-240V/50-60Hz

Optional accessories:

- Polarising set, analyser + polariser
- Phase contrast attachments

MAX II BINO



Product reference. 1202.4000

Optical head:

- Binocular, inclined at 45° and 360° rotatable interpupillary distance adjustment 55 to 75mm

Eyepieces:

- 10x/18mm wide-field (fixed)

Nosepiece:

- Quadruple, revolving with click stop

Objectives: Achromatic

- 4x / 0.10 / 160 / 0.17
- 10x / 0.25 / 160 / 0.17
- 40x / 0.65 / 160 / 0.17 spring loaded
- 100x / 1.25 / 160 / 0.17 (oil) spring loaded

Condenser:

- Brightfield Abbe - NA 1.25 - precentred
- Iris diaphragm and filter holder
- Focusable in spiral mount

Stage:

- 140 x 140 mm with built-in mechanical stage and removable slide clamp
- 75mm transversal movement
- 50mm longitudinal movement

Focusing: Coaxial coarse & fine knobs

Illumination: Halogen 12V/20W (variable) (Optional LED available)

Mains power: 220-240V/50-60Hz

Optional accessories:

- Polarising set, analyser + polariser
- Phase contrast attachments
- Trinocular head, inclined at 30°
- 60x achromatic CCS optics
- Planachromatic CCS optics
- Carrying/Storage case (pictured)



DIGIMAX II



Product reference. 1202.9000

Specifications as per standard Max II Bino (1202.4000) with the additional features:

- Flip out LCD display
- 3 Mpx high resolution digital camera
- Integrated frame grabber to convert analogue signals into digital
- Plug & play connection with simple USB plug
- User-friendly image analysis software
- Standard connection cables (USB, RCA & S-video cables)
- Up to 17 frames per second
- Full resolution and 40fps at XGA (1024 x 768) resolution
- Complete with USB cable and image analysis software

MAGNUM



The all new **MAGNUM** range provides an extremely high quality, high specification biological compound microscope for a broad array of laboratory and life-science applications.

The Magnum has been ergonomically designed for operational comfort.

With its new, eye-catching streamlined body and composite alloy construction it will withstand the rigours of daily use.

Optional sextuple nosepiece now available, fitted as standard on MAGNUM PC series (**2638.0000**).

Product reference. 2721.0000 (pictured, standard trinocular model with semi-planachromatic objectives).



Ceti 'CCS' Zi Objectives enable greater image clarity with enhanced colour definition and depth.

Technical Specifications :

Optical head: 30° with interpupillary adjustment from 55 to 75mm

Eyepieces: 10x/20mm wide-field

Nosepiece: Quintuple reversed and revolving with click stop

Objectives: 4x / 10x / 40x / 100x (oil) Zi Objectives

Optional: Achromatic/Semi-Planachromatic/Planachromatic/Infinity corrected (please ask for details)

Stage: 208 x 138mm, with built in mechanical stage & slide clamp

Condenser: Brightfield Abbe - NA 0.90 (1.25 with immersion oil) /iris diaphragm

Illumination: Halogen 6V/30W (variable)
(LED illumination also available - Page 16)

Mains Power: 220-240V/50-60Hz

MAGNUM PC



MAGNUM for phase contrast.

Biological microscope equipped for complete positive phase contrast.

Product reference. 2638.0000 (Binocular version)

Standard specification to Magnum B or T with the following differences:

- Phase contrast turret type - NA 1.25 (including centering telescope)
- Sextuple nosepiece

Objectives: 4 planachromatic positive phase objectives

- PC 10x / 0.25 / 160 / 0.17 PH+ spring loaded
 - PC 20x / 0.40 / 160 / 0.17 PH+ spring loaded
 - PC 40x / 0.65 / 160 / 0.17 PH+ spring loaded
 - PC 100x / 1.25 / 160 / 0.17 PH+ (oil) spring loaded
- Condenser:**
- 4 phase annular stops, centrable and 1 neutral brightfield position

Brightfield application via neutral position in turret condenser.

MAGNUM EFL



MAGNUM for epi-fluorescence.

Trinocular microscope with epi-fluorescence illumination - HBO 100W.

Product reference. 2747.2000

Specifications identical to standard Magnum with the following differences:

Optical head: trinocular, including vertical photo/video port (Ø30mm)

Objectives: Infinity planachromatic (CCS Optics)

Fluorescent attachment: - centrable through a centring device

- Focusable with rack and pinion height adjustment system
- A fluorescent filter turnplate with 5 positions:

Filters:

- UV (ultraviolet) excitation filter 330-400 nm, barrier filter 425nm
- V (violet) excitation filter 395-415 nm, barrier filter 455nm
- B (blue) excitation filter 420-485 nm, barrier filter 520nm
- G (green) excitation filter 460-550 nm, barrier filter 580nm

Illumination: Brightfield 6V/30W (variable)

Reflected: High pressure Mercury bulb - HBO 100W

Supplied with: external lamphouse and power supply (for fluorescent attachment) with connecting cable and Anti-UV protection screen.

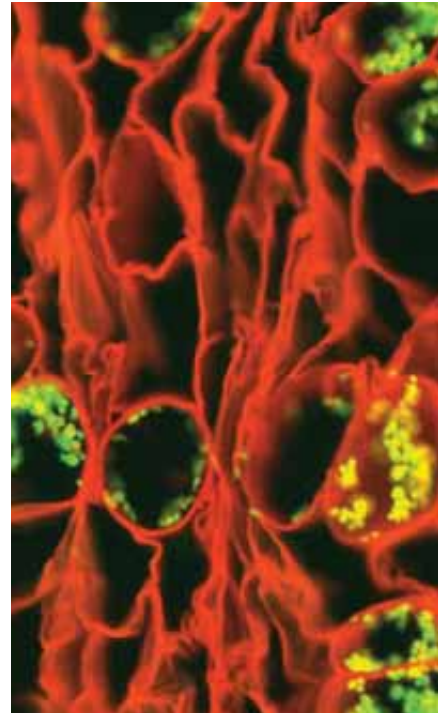
Optional accessories:

- Polarising Set
- Phase Contrast Sets
- Darkfield Condensers
- Digital & CCD cameras

External lamphouse for high pressure mercury bulb HBO-100W.

External power supply delivered with power cable and connecting cable.

Supplied with fluorescence free oil (10 ml) and blocking plate for stage.



Fluorescence LED Module & Microscope.

Product reference. 2766.0000

Standard specifications to 2747.2000 with the following differences:

- Clamp-on LED source adapter
- High efficiency back-light illuminator
- 3 position emission filter holder
- Excitation wavelengths from UV to Red (Blue and Green included)
- One wavelength per LED cassette
- 50,000+ hours of LED light source life
- Very high S/N ratio for all wavelengths
- 7.5V DC low voltage operation

Optional accessories:

- Battery pack option for field work
- 6 position filter holder

MAGNUM PLR



MAGNUM for polarisation.

Product reference. 2653.0000 (Binocular version)

Optical head:

- Binocular or Trinocular, inclined at 30° with Bertrand lens (iris diaphragm) Interpupillary distance adjustment (Siedentopf type): 55 to 75mm Dioptic compensation on both eyepiece tubes

Slit under the optical head to accept lambda compensating plates (included)

Eyepieces:

- High eyepoint 10x/18mm wide-field additional eyepiece single focusable 10x/18 with cross-line scale

Objectives:

Tension free and parcentered

- SP 4x / 0.10 / 160 / 0.17
- SP 10x / 0.25 / 160 / 0.17
- SP 40x / 0.65 / 160 / 0.17 spring loaded
- SP 60x / 0.80 / 160 / 0.17 spring loaded

Condenser: Brightfield Abbe - NA 1.25

Polarising set: Polariser and analyser

Stage:

- Round centrable and rotating (360°)
- Graduated
- Diameter: 145mm
- Two stage clips

Focusing: Coaxial coarse & fine knobs (complete with pre-focusing mechanism & tension adjustment ring)

Illumination: Halogen 12V/30W (variable)

Mains power: 220-240V/50-60Hz

MAGNUM SLR



Product reference. 2685.0000 (Binocular)

Objectives:

Semi-planachromatic

- SP-zi 4x / 0.10 / 160 / 0.17
- SP-zi 10x / 0.25 / 160 / 0.17
- SP-zi 40x / 0.65 / 160 / 0.17 spring loaded
- SP-zi 100x / 1.25 / 160 / 0.17 (oil) spring loaded

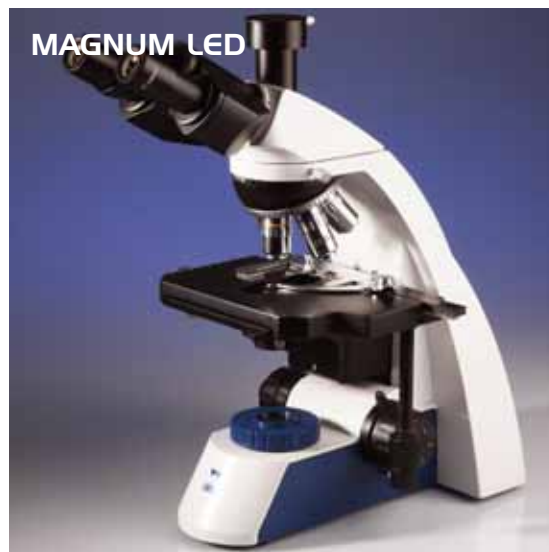
Solar power attachment:

- Polycrystalline solar panel
- Energy Converter
- Two metre power/connecting cable

An integral 12V battery ensures continuity of operation even during low sunlight periods.

240V mains operation remains available for internal use

MAGNUM LED



Product reference. 2621.7000 (Binocular)

Illumination: LED (30 hrs), 18000mcb (variable)

Power: • 9V DC

Optional accessory: • Rechargeable battery



Magnum Ordering information

Description	Product Reference	
	Binocular	Trinocular
Magnum with Semi-planachromatics 4x / 10x / 40x / 100x	2621.0000	2721.0000
Magnum with Planachromatics 4x / 10x / 40x / 100x	2622.0000	2722.0000
Magnum with Infinity corrected planachromatics 4x / 10x / 40x / 100x	2629.0000	2729.0000
Magnum for Phase contrast 10x / 20x / 40x / 100x	2638.0000	2738.0000
Magnum for Polarisation 10x / 20x / 40x / 60x	2653.0000	2753.0000
Magnum with Epi-Fluorescence 4x / 10x / 40x / 100x	N/A	2747.2000
Magnum Solar powered 4x / 10x / 40x / 100x	2685.0000	2785.0000
Magnum LED 2621.7000 4x / 10x / 40x / 100x	2621.7000	N/A

Sextuple nosepiece now available

Accessories for Magnum series

2611.1607	Eyepiece pair 16x/11,5mm wide-field
2613.1005	Eyepiece single with pointer 10x/18mm
2613.1003	Eyepiece micrometer single 10x/18mm with cross line scale 0-10mm: 0,1mm
2249.1001	Object micrometer with scale 1mm: 0,01mm used with micrometer eyepiece for calibration
2637.0104	Phase contrast set 10x - 40x: sliding phase contrast set 10x / 40x with achromatic objectives
2638.5102	Phase contrast, complete, positive: turret condenser (4 phase annular stops + brightfield position with iris diaphragm) 4 pos. phase planachromatic objectives 10x/0,25 - 20x/0,40 -40x/0,65 - 100x (oil)/1,25), centering telescope, filters (green & yellow).
2000.1000	Solar Power kit suitable for all 240v Microscopes (excluding Epi Flu models)
2747.9999	LED Epi flu attachment (upgrade) for Standard magnum B or T
2643.5501	Polarising set, analyser + polariser
2643.5209	Condenser darkfield dry (NA 0.83-0.95)
2633.5303	Condenser darkfield Cardioid (oil) (NA 1.36-1.25)
2751.6902	Microscope adapter for single lens reflex camera including projection lens
2757.2050	C-mount adapter 25mm without lens (For Medline MPX Camera)
2757.6132	Microscope adapter for 1/3 inch CCD-camera, including C-mount
2757.2126	Microscope adapter for 1/2 inch CCD-camera, including C-mount
2647.4804	Aluminium carry case magnum
2644.9202	Filter neutral Ø 32mm
2644.9211	Filter blue Ø 32mm
2644.9229	Filter ground Ø 32mm
2644.9258	Filter yellow Ø 32mm
2644.9267	Filter green Ø 32mm
2480.2075	Cleaning set: Lens cleaning tissues (20 pcs), solution (75ml) and brush

A comprehensive range of objectives, eyepieces and photomicroscopy accessories available.

Please contact Medline Scientific for further details.



Trinocular Biological Microscope with integrated camera adapter for SLR Digital or CCD cameras.

Product reference. 3100.5000

The Triton II has four objectives, attached to a revolving and reversed sextuple nosepiece with click-stop. The powerful illumination and unique condenser ensure optical brightness and clarity.

A removable Kohler illuminator (12V/50W) halogen bulb provides a level of brightness perfectly suited to photomicrography.

A set of filters can be used to heighten contrast and correct colours to guarantee crystal clear definition of ridges, cell walls, pits and particles.

An optional 100W illumination upgrade is available for both models.

TRITON II



Technical Specifications:

Optical head:

- Trinocular, inclined at 30°
- Interpupillary distance adjustment: 48 to 75 mm
- Dioptic compensation on one eyepiece tube
- Vertical photo/video port with beam-splitting prism on sliding mount

Eyepieces:

- 10x/22mm wide-field

Nosepiece:

- Sextuple reversed and revolving with click stop

Objectives: E-plan infinity corrected

- E PL 4x / 0.10 / ∞ / 0.17
- E PL 10x / 0.25 / ∞ / 0.17
- E PL 40x / 0.65 / ∞ / 0.17 spring loaded
- E PL 100x / 1.25 / ∞ / 0.17 (oil) spring loaded

Condenser:

- Swing-out condensing lens – NA 0.90 / NA 1.25
- Focusable with rack and pinion height adjustment
- Iris diaphragm

Stage:

- 185 x 142mm with built-in graduated mechanical stage and slide clamp
- 75mm transverse movement
- 55mm longitudinal movement
- Nonius reading up to 0.1mm

Focusing:

- Coaxial fine and coarse
- Pre-focusing mechanism
- Tension adjustment ring

Köhler Illumination: (variable)

- Halogen 12V/50W with integrated field diaphragm and swing-out concentrating lens
- Optional 100W illumination available

Mains power:

220-240V/50-60Hz

The Triton II is tailor-made for the working laboratory. A high level of build quality ensures it will withstand the rigours of constant daily use and a wide range of spare parts and accessories enables access to many different applications.

- Epi-fluorescence attachment with HBO 100W illumination
- Phase contrast system
- Darkfield condenser
- Heating stages

Advanced scientific microscope, with 50W illumination, ergonomic viewing head and sextuple nosepiece.

Product reference. 3100.5050

The Triton II has additional teaching heads available in either left or right hand configurations. Each head includes infinity corrected prisms and optics.

- Separate 100W illumination with power supply included to ensure even light distribution.

3100.9050 Triton II with second viewing head right side.

3100.9100 Triton II with three bino heads right hand side

3100.9200 Triton II with three bino heads left hand side

3100.9500 Triton II with five bino viewing heads

TRITON II PRO



Technical Specifications:

Optical head:

- Trinocular, with variable 'tilting' ergonomic head
- Interpupillary distance adjustment: 48 to 75 mm
- Dioptic compensation on one eyepiece
- Vertical photo/video port with beam-splitting prism on sliding mount

Eyepieces: 10x/22mm wide-field pair

Nosepiece: Sextuple reversed and revolving with click stop

Objectives: Ceti E Plan Infinity Corrected Planachromatic (CCS Optics)

- E PL 4x / 0.10 / ∞ / 0.17
- E PL 10x / 0.25 / ∞ / 0.17
- E PL 40x / 0.65 / ∞ / 0.17 spring loaded
- E PL 100x / 1.25 / ∞ / 0.17 (oil) spring loaded

Condenser:

- Swing-out condensing lens - NA 0.90/N.A1.25

- Centrabale
- Focusable with rack and pinion height adjustment system
- Iris diaphragm

Stage:

- 185 x 142mm with built-in graduated mechanical stage and slide clamp
- 75mm Transversal movement
- 55mm Longitudinal movement

Focusing:

- Coaxial fine and coarse
- Pre-focusing mechanism
- Tension adjustment ring

Köhler Illumination: (variable)

- Halogen 12V/50W with integrated field diaphragm and swing-out concentrating lens
- Optional 100W illumination available

Mains power: 220-240V/50-60Hz



Optional multi-viewing head

Inverted Microscopes

INVERSO



Trinocular inverted biological microscope.

An inverted microscope for both routine and research level work, the unit is complete with a trinocular head (binocular viewing head and vertical photo port) and a beam splitting prism for optimizing the halogen illumination. The long working distance planachromatic objectives and selection of eyepieces give a magnification range from 40x up to 800x.

The phase contrast set allows for viewing of semi-translucent subjects. The stage features a removable microplate holder with XY movement and the swing out condenser allows tissue culture flasks up to 70mm thick to be viewed with ease.

Product reference. 3650.0000

Technical Specifications:

Optical head:

- Trinocular, inclined at 30°
- Interpupillary distance adjustment: 55 to 75mm
- Dioptic correction on one eyepiece tube

Eyepiece:

- 10x/18mm wide-field

Objectives:

- 10x, 25x, 40x long working distance planachromatic
- 10x, 25x, 40x phase contrast

Condenser:

- Annular slide diaphragm for brightfield, LWD N.A 0.40
- Iris diaphragm
- Focusable with rack & pinion height regulation system
- Condenser centering device

Stage:

- 220 x 220mm, with removable microplate holder

Illumination: Halogen 6V/30W (variable)

Mains power: 220-240V/50-60Hz

INVERSO EPI-FLUOR



Inverted trinocular microscope for Epi-fluorescence.

Derived from the Inverso, this model has 30W halogen illumination and external fluorescent light (100W HBO) delivered through lightpath objectives.

It comes complete with a sliding filter holder and green, violet, UV and blue filter blocks. Objectives consist of 10x, 25x, and 40x for both transmitted and reflective light: plus 10x, 25x and 40x for phase contrast with annular rings.

Product reference. 3700.0000

Technical Specifications:

Optical head:

- Trinocular, inclined at 30°
- Interpupillary distance adjustment: 55 to 75mm
- Dioptic correction on one eyepiece tube

Eyepiece:

- 10x/18mm wide-field

Objectives:

- 10x, 25x, 40x long working distance/PL
- 10x, 25x, 40x long working distance/Phase Contrast

Condenser:

- Annular slide diaphragm for bright field, LWD N.A 0.40
- Iris diaphragm
- focusable with rack & pinion height regulation system
- Condenser centering device

Stage:

- 205 x 220mm, with removable microplate holder

Illumination: Halogen 6V/30W (variable)

- 100W HBO external source with controller

Mains power: 220-240V/50-60Hz

Trinocular inverted biological microscope.

The Inverso TC100 is tailor-made for the working laboratory. A high level of build quality ensures it will withstand the rigours of constant daily use and a wide range of spare parts and accessories enables access to many different applications.

Product reference. 3660.5000

The Inverso TC100 is also available with a fully integrated attachment for Epi-fluorescence applications (100W - HBO).

Product reference. 3660.7000

INVERSO TC100



Technical Specifications:

Optical head:

- Trinocular, inclined at 45°
- Interpupillary distance adjustment (Siendentopf-type): 48 to 75 mm
- Dioptic compensation on one eyepiece tube
- Vertical photo/video port with beam-splitting prism on sliding mount (80-20%)

Eyepieces:

- 10x/22mm wide-field

Nosepiece:

- Quintuple revolving with click stop, inverted

CCS and Objectives:

- Planchromatic
- P 4x / 0.10 / ∞ / 1.2 LWD
- PL 40x / 0.65 / ∞ / 1.2 LWD

Phase Contrast:

- Planchromatic objectives
 - PH+ 10x LWD
 - PH+ 20x LWD
 - + PH+ 40x LWD

- 10x / 20x and 40x annular phase plates
- Centering telescope

Condenser:

- NA 0.3 (removable)
- Working distance: 72mm

Stage:

- 160 x 250mm with additional mechanical movement with slide clamp
- Glass stage plate
- Side extension board

Focusing:

- Coaxial fine and coarse
- Pre-focusing mechanism (on the left)
- Tension adjustment ring (on the right)

Lamp house:

- Lamp holder adjustable
- Field diaphragm

Illumination:

Halogen 6V/30W (variable)

Mains power:

220-240V/50-60Hz

Optional accessories:

- Additional LWD PL - phase infinity objectives
- Additional LWD PL - infinity objectives
- Stage accessories
- Filters
- Digital and CCD cameras
- Image analysis software



Si-3000 / 3Mpx Digital USB camera with integrated image capture & analysis software.



MAGTEX



Trinocular microscope for materials and biological use.

A trinocular microscope with transmitted and reflected illumination. Ideal for biological and materials usage for both translucent and opaque samples.

Product reference. 2763.000

Optical head:

- Trinocular, including vertical photo/video port (Ø30mm) on sliding prism
- Interpupillary distance adjustment (Siedentopf type): 53 to 75 mm
- Dioptric compensation on one eyepiece tube

Eyepieces:

- 10x/18mm wide-field

Nosepiece:

- Quintuple reversed and revolving with click stop

Objectives: Planachromatic LWD

- 5x / 10x / 20x / 50x

Condenser:

- Brightfield Abbe - NA 1.25
- Iris diaphragm and filter holder

Stage:

- 210x140mm with built-in mechanical stage and slide clips
- Transversal and longitudinal adjustment by fingertip control
- 70mm transversal movement
- 50mm longitudinal movement
- Nonius reading up to 0.1 mm

Focusing:

- Coaxial coarse and fine
- Pre-focusing mechanism (on left knob)
- Tension adjustment ring (on right knob)

Illumination: Halogen (variable)

- Incident Light: 6V/30W
- Transmitted Light: 6V/30W

Polarisation:

- Simple polariser and analyser

Mains power:

- 220-240V/50-60 Hz

MAGTEX POL



Reflected and transmitted light microscope for polarisation.

Product reference. 2783.0000

Technical Specifications:

As per 2763.0000 with the following differences:

Stage:

- 180mm round
- Centrabale and rotating 360°
- Two stage clips

Objectives:

Planachromatic LWD tension free and parcentered

- Pol 4x / 0.10 / 160 / 0,17
- Pol 10x / 0.25 / 160 / 0.17
- Pol 40x / 0.65 / 160 / 0.17 spring loaded
- Pol 60x / 0.80 / 160 / 0.17 (oil) spring loaded

Lambda compensating plates included.

Optional accessories:

- Additional LWD PL objectives
- Stage accessories
- Filters
- Digital and CCD cameras
- Image analysis software

Trinocular inverted materials microscope.

An inverted trinocular (reflected light) microscope for geological and engineering uses. The quadruple nosepiece accepts the 4 reflected light objectives and the open stage imposes no height limitations on the subject material. The rear facing external lamp housing protects both subject and user from adverse heating effects.

Product reference. 6322.0000

Technical Specifications:

Optical head:

- Trinocular, inclined at 30° with vertical photo port
- Interpupillary distance adjustment: 55 to 75mm
- Dioptic adjustment on one eyepiece tube

Eyepieces:

- 10x/18mm wide-field

Objectives: Planachromatic LWD

- 10x / 25x / 40x / 60x

FEROX



Stage:

- 150 x 180mm, fully mechanical

Illumination:

- Halogen 6V/20W (variable)

Mains power:

- 220-240V/50-60Hz

Optional accessories:

- Additional LWD PL - objectives
- Stage accessories
- Filters
- Digital and CCD cameras
- Image analysis software

REFLEX



Trinocular reflected-light microscope for industrial use.

A top viewing version of the Ferox designed for thin opaque subjects or test samples. Trinocular, with a vertical photo port and beam splitting prism, it too benefits from an external lamp housing. The flat mechanical stage allows for observation of prepared subject matters with magnifications up to 1600x with optional eyepieces and objectives.

Product reference. 6400.0000

Technical Specifications:

Optical head:

- Trinocular, inclined at 30° with vertical photo port
- Interpupillary distance adjustment: 55 to 75mm
- Dioptic adjustment on one eyepiece tube
- Built in polariser with removable analyser

Eyepieces:

- 10x/18mm wide-field

Objectives: Planachromatic LWD

- 10x / 40x / 60x

Stage:

- 140 x 185mm, fully mechanical

Köhler Illumination:

- Halogen 6V/20W (variable)

Mains power: 220-240V/50-60Hz

STEREO-20



Product reference. 1111.0020

Head type:

- Binocular, inclined at 45°
- Interpupillary distance adjustment: 55 to 75mm
- Dioptic adjustment on one eyepiece

Eyepieces:

- 10x/20mm wide-field

Magnification:

- 20x

Illumination: (fixed settings)

- Episcopic ~ 12V / 10W Tungsten

Stage:

- 60mm Ø Frosted and black/white contrast plate, 2 stage clips

Mains power:

- 220-240V / 50-60Hz

STEREO-30 2L



Product reference. 1111.0030

Head type:

- Binocular, inclined at 45° and 360° rotatable
- Interpupillary distance adjustment: 55 to 75mm
- Dioptic adjustment on one eyepiece

Eyepieces:

- 10x/20mm wide-field

Magnification:

- 20x and 40x

Illumination: (fixed settings)

- Episcopic ~ 12V/10W Tungsten
- Diascopic ~ 12V/10W Halogen

Stage:

- 95mm Ø Frosted and black/white contrast plate, 2 stage clips

Mains power:

- 220-240V/50-60Hz

TWIN-7 C



Product reference. 1111.0007

Head type:

- Binocular, inclined at 45° and 360° rotatable
- Interpupillary distance adjustment: 55 to 75mm
- Dioptic adjustment on one eyepiece

Eyepieces:

- 10x/20mm wide-field

Magnification:

- 20x and 40x

Illumination: (variable)

- Episcopic ~ 12V/10W Halogen
- Diascopic ~ 12V/10W Halogen

Stage:

- 60mm Ø Frosted and black/white contrast plate, 2 stage clips

Mains power:

- 220-240V/50-60Hz

STAR-24ED



The Star is a stereo microscope designed for educational and professional use. It is particularly well suited to viewing specimens at low magnifications.

Product reference. 1800.0000

Head type:

- Binocular, inclined at 45°
- Interpupillary distance adjustment: 50 to 75mm
- Dioptic adjustment on one eyepiece

Eyepieces:

- 10x/20mm wide-field

Magnification:

- 20x and 40x (with turret changer)

Working distance: 75mm

Stage:

- Frosted and black/white contrast plate, 2 stage clips

Illumination: (variable)

- Episcopic ~ 12V / 10W Halogen
- Diascopic ~ 12V / 10W Halogen

Mains power:

- 220-240V / 50-60Hz

Accessories:

- Eyepiece camera (globecam)

STEDDY-B



The Steddy is a stereoscopic zoom microscope with dual illumination.

Product reference. 7200.0000 (Binocular model)

Product reference. 7300.0000 (Trinocular model)

Head type:

- Binocular or Trinocular (including photo port), inclined at 45°
- Interpupillary distance adjustment: 55 to 75mm
- Dioptic adjustment on both eyepiece tubes

Eyepieces:

- 10x/20mm wide-field

Magnification:

- Zoom system ~ bilateral knobs with click stop feature
- Zoom range ~ 1x to 4x

Total Magnification:

- 2.5x to 120x (dependent upon eyepiece & objective used)

Working distance:

- 160mm

Stage:

- Frosted and black/white contrast plate
- 2 stage clips

Illumination: (variable)

- Episcopic ~ 12V/10W
- Diascopic ~ 12V/10W

Mains power:

- 220-240V / 50-60Hz

Accessories:

- Numerous camera attachments (SLR / CCD / Digital and eyepiece)
- Additional lenses and eyepieces

DIGI-STEDDY



The all new Digi-Steady benefits from the addition of a built-in high resolution CCD-Camera with a digital USB connection.

Product reference. 7200.9000

Specifications include:

- Integrated frame grabber to convert analog signals into digital
- Plug & play connection with simple USB plug
- Real time image transmission through the internet
- User friendly image analysis software
- High performance 3 Mpx camera developed for microscopy
- 1/2" 2048 x 1536 (QXGA) image array and on-chip converter
- Up to 27 frames per second
- Full resolution and 40fps at XGA (1024 x 768) resolution
- Sensitivity 1.0V/Lux-sec
- Complete with USB cable and image analysis software
- Tripod fixing thread



Stereo Microscopes



VARIZOOM

Stereoscopic zoom microscope with parallel optical zoom system.

Product reference. 7700.0000

Optical head:

- Infinity Optics
- Binocular, inclined at 20°
- Interpupillary distance adjustment: 45 to 75mm
- Dioptic compensation on both eyepiece tubes

Eyepieces:

- 10x/22mm super wide-field

Magnification:

Zoom system ~ bilateral knobs
three different zoom ranges:

- 1:6 zoom ratio standard magnification 8x to 50x
- 1:8 zoom ratio standard magnification 8x to 64x

- 1:10 zoom ratio standard magnification 8x to 80x

Focusing mount:

- Rack and pinion system

Stage:

- Frosted glass and black/white contrast plates
- Two slide clips

LED Illumination: (variable)

- Episcopic ~ 12V/5W
- Diascopic ~ 12V/5W

Mains power:

- 220-240V / 50-60Hz

Optional Trinocular head available



Both the Steddy and Varizoom series can be fixed onto an independent universal swivel stand with either a table clamp or rectangular base.

Alternatively, they can be fitted directly onto a universal stand that includes a heavy circular base. For both models of microscope simply purchase the required optical head (Binocular or Trinocular) and the focussing device of the specified model and then include the type of stand.

This allows for much greater working distances and is especially useful when viewing large samples.



Additional eyepieces or lenses allow for the degree of magnification to be increased or decreased.



FIBRE OPTIC ILLUMINATORS

For photomicrography, we recommend the use of an external light source. A cold light source (pictured left) or an LED ring illuminator provide high intensity illumination, ideal for capturing excellent shots without heating the sample.

Cold light source. Product reference. 7063.1502

Mains power: 220V AC 50 Hz (euro connector)

Light intensity: Regulation by electronic control 0-100%

Colour temperature: 3200°K

Heat filter bulb: 21V 150W halogen reflector bulb (500 burning hours)

Cooling system: Axial ventilator

LED Ring Illuminator. Product reference. 7062.5001

EYEPIECE GLOBE CAM



Globecam V (video)

Product reference. 9855.1019

The eyepiece camera can easily be inserted into the ocular tube of any microscope.

For convenience a parfocal image is displayed on screen.

Digital Camera on Flexible Arm

Product Reference. 9544.7200



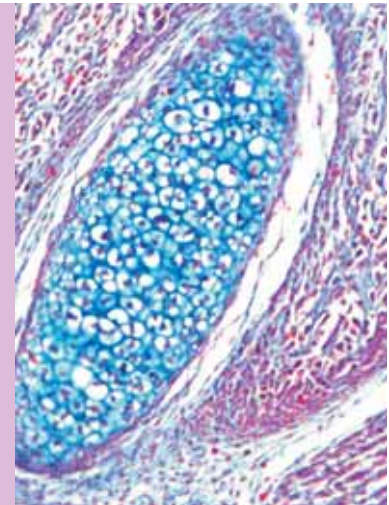
Si-3000



3 MP low-noise digital camera with integrated capture & analysis software.

Product reference. 9556.3000

- High performance 3 Mpx camera development for microscopy
- 1/2" 2048 x 1536 (QXGA) image array and on-chip converter
- Up to 27 frames per second (fps)
- Full resolution and 40fps at XGA (1024 x 768) resolution
- Sensitivity 1.0V/Lux-sec
- Complete with USB cable and image analysis software
- Tripod fitting



DIGITAL USB INSPECTION CAMERA



- High performance 3 Mpx camera mounted on sturdy adjustable stand
- 1/2" 2048 x 1536 (QXGA) image array and on-chip converter
- Up to 27 frames per second (fps)
- Full resolution and 40fps at XGA (1024 x 768) resolution
- Complete with USB cable and image analysis software
- LED ring illuminator high clarity 4x Objective
- Plug and play software
- Option of 4x objective or Pentax adjustable optic system

DIGITAL SLR CAMERA



8MP Digital SLR camera.
Product reference. 9780.3000

Recommended accessory:
Product reference. 9780.2222
 1.6x EOS M42 'C' mount adapter with T2 ring

Model and specification subject to change without prior notification.

* Please remember to order the necessary C-mount adapter



IMAGE ANALYSIS PACKAGE



The ultimate software package for photo-microscopy.

Product reference. 9600.0011

- Capture & enhancement of images
- Full analysis & measuring tools/techniques

Image Pro Express is a cost effective software package perfect for routine imaging. The software comes equipped with all the features needed to capture and enhance images for scientific, medical and industrial research.

Image processing, measurement and analysis software.

Exceptional levels of software technology and analysis tools will allow you to streamline image capture, measurements and enhancements whilst improving the accuracy of your results.

All packages feature (as standard):

Live Measurement and Overlay Settings / Calibration (automatic & manual) / Extended Focus Imaging (EFI) / 3D Visualisation / Image Stitching / Live Image Comparisons / Time Lapse Capture and Movie File Production / Combine Image Planes (Fluorescence Imaging) / Import data into Excel / Large selection of Measuring and Analysis Functions (including annotation).

Available in 3 Packages:

i-Solution Lite: Manual measurements, including moderate image processing functions.

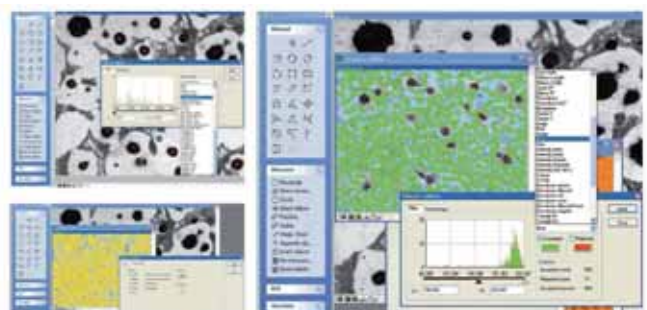
Product reference. 9600.1010

i-Solution: Advanced image processing and enhancement, including both manual and automated image analysis.

Product reference. 9600.1012

i-Solution DT: Premium software package incorporating all elements of image analysis found in i-Solution and i-Solution Lite, including motorized stage control and 3D analysis. Customized modules can also be added by request.

Product reference. 9600.1013



Whether it's in the lab, the factory or out in the field, CETI refractometers offer precision, versatility and excellent value. We have designed a spectrum of refractometers to meet the challenges that your work presents. Our product range begins with the analogue pocket models, the DIGITS, expanding to the SR-Series, then on to table top models such as the CONVEX and PRISMA and finishing with the semi-automatic table model, the QUARTZ.



DIGIT

The Digit series comprises 25 lightweight hand-held refractometers for measuring the Brix or refractive index value of specific products. Simply place a drop of liquid onto the prism, close the cover plate and point towards a light source; the refractive value is measured. Suitable for general applications to industry specific: examples include the control of sugar or alcohol

levels in food and beverages and spot testing of petrochemicals.

As the Digit is such a compact and lightweight instrument, it is ideal for quick and reliable measurements out in the field or on the factory floor.

Product references.

See below

Scale:

8100.0120 DIGIT-012/Clinical

- Refractive index 1.3330 to 1.3600
- Protein 0 to 12 g/dl
- Specific gravity 1.000 to 1.050

8100.0150 DIGIT-015/Sugar/oil

- 0-15% Brix
- Refractive index 1.3330 to 1.3560

8100.0250 DIGIT-025/Alcohol

- 0-25% Alcohol (Volume / volume)

8100.0320 DIGIT-032/Sugar

- 0-32% Brix

8100.0500 DIGIT-050/Battery

- Ethylene glycol from -50°C to 0°C
- Specific gravity 1.15 to 1.30 sg
- Battery fluid from -50°C to 0°C

8100.0800 DIGIT-080/Sugar

- 0-80% Brix

8100.0900 DIGIT-090/Sugar

- 0-42% Brix
- 42-71% Brix
- 71-90% Brix

8100.2862 DIGIT-2862/Sugar

- 28-62% Brix

Precision

0.0005
0.2 g/dl
0.002 sg

0.2% Brix
0.0005 nD

0.2%

0.2% Brix

5°C
0.01sg
5°C

0.5% Brix

0.2% Brix
0.2% Brix
0.2% Brix

0.2% Brix

Scale:

8100.5890 DIGIT-5890/Honey

- 58-90% Brix
- 12-27% Water
- 38-43% Baumé

8100.3014

DIGIT-30~140/Oechsle scale 30-140

- 0-32% Brix
- 30-140 Oechsle

8145.0001 DIGIT-010 ATC/Sugar

- 0-10% Brix

8145.0250 DIGIT-025 ATC/Alcohol

- 0-25% Alcohol/Volume

8145.0320 DIGIT-032 ATC/Sugar

- 0-32% Brix

8145.5890 DIGIT-5890 ATC/Honey

- 58-90% Brix
- 12-27% Water
- 38-43% Baumé

8145.0100 DIGIT-100 ATC/Salinity

- 0-100‰ Salinity
- Gravity 1.000 to 1.070 sg

Precision

0.5% Brix
1% Water
0.5% Baumé

0.20%
0.10%

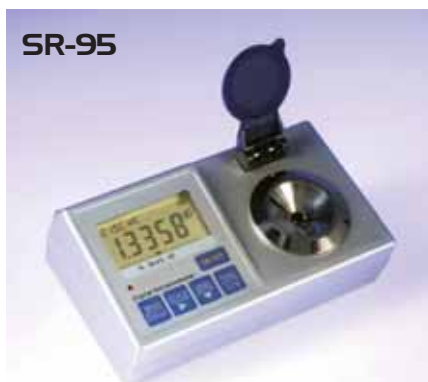
0.1% Brix

0.2% Brix

0.2% Brix

0,5% Brix
1% Water
0.5% Baumé

1‰ Salinity
0.001 sg



SR-95

The SR-95 digital refractometer has a triple range of Brix, Refractive Index and Salinity coupled with the convenience of an RS232 interface. Other additions include automatic temperature

compensation, Centigrade and Fahrenheit measurements, a stainless steel sample plate and instantaneous digital results.

Product reference. 8950.0000

Type	Range	Resolution	Accuracy
Brix	0-95%	0.1%	+/- 0.1%
Refractive Index	1.3330-1.5318	0.0001	+/- 0.00015
Salinity	0-30%	0.1%	+/- 0.1%

Refractometers

CONVEX



The Convex is highly versatile, allowing measurements of a wide range of substances to be taken. Both upper and lower prisms have their own light entry ports, which can be closed, thereby making it possible to take readings from both reflected and transmitted light. The Convex can also test solids, powders, pastes & plastic films.

For measuring substances that require a stabilised temperature the upper & lower prisms of the Convex can be connected to a water bath.

Supplied with digital thermometer.

Product reference. 8200.0000

Specifications include:

Scale:

- Refractive index 1.3000 to 1.7200
- Sugar 0-95% Brix

Precision

- 0.0005nD
- 0.25% Brix

PRISMA



The Prisma is designed for the finest precision, to ensure the integrity of all research undertaken.

This Abbe refractometer is equipped with an integral LED illuminator for its external scale unit, allowing readings to be easily taken whilst taking notes. An easy-to-manipulate regulation knob controls the separation line by simply positioning it against the crossed lines viewed through the eyepieces. A user-

friendly colour compensation knob eliminates any colour shift. In addition to transparent solutions, the PRISMA is equipped to measure the RI of solids, powders, pastes and plastic films. Both the upper and lower prisms are of the highest quality and include connecting nozzles for a thermostatic water bath.

Supplied with digital thermometer.

Product reference. 8300.0000

Specifications include:

Scale:

- Refractive index 1.3000 to 1.7200
- Sugar 0-95% Brix

Precision

- 0.0005nD
- 0.25% Brix

QUARTZ



The Quartz is a semi-automated Abbe refractometer. Its fast, digital read-out offers a speedier throughput, which is particularly useful in manufacturing centres and on production lines. Presentation of a sample produces an almost instantaneous, accurate read-out of the RI, %Brix value and %Brix temperature on the LCD display.

An RS232 PC/Printer interface is supplied as standard making manual note taking obsolete.

Product reference. 8400.0000

Specifications include:

Scale:

- Refractive index 1.3000 to 1.7200
- Brix 0-90% Brix
- Brix (Temp. comp.) 0-90% Brix
- Temperature range 15°C-50°C

Precision

- 0.00025nD
- 0.10% Brix
- 0.10% Brix
- 0.2°C

Readability

- 0.0001nD
- 0.10% Brix
- 0.10% Brix
- 0.2°C

POLARIS



The Polaris Polarimeter is a high quality, low cost instrument capable of measuring the rotation of optically active samples and matches the performance of many digital instruments in the market today. The well known variable half waveplate effect is used to obtain a balance between the two halves of a circle when viewed through an eyepiece. The reading is then taken from the scale.

The Polaris accepts sample tubes of lengths up to 220mm and is used for measuring concentrations and optical rotations in the food, sugar, flavouring, fragrance, pharmaceutical and chemical industries.

Specifications include:

- Rotating polarimeter 360° with 180° left & right rotation
- Double vernier scale (accuracy 0.05°)
- Monochromatic light source of 589nm (20W Sodium bulb)

Product reference.
9100.0000

DIGI POLARIS



The all new digital polaris includes a self test for rotating the angle and sugar degree as one complete operation time; all results are clearly displayed on the unique LCD display.

Product reference.
9100.5000

Specifications include:

Measuring range:

- -45° to +45°
- -120° to +120°

Minimum reading:

- 0.001°
- -120°

Accuracy:

- $\pm(0.01^\circ + \text{Test Value} \times 0.05\%)$
- $\pm(0.03^\circ + \text{Test Value} \times 0.05\%)$

Repeatability:

- $\leq 0.002^\circ$
- $\leq 0.02^\circ$

Minimum sample transmittance:

- 1%

Net weight:

- 30kg

Outer dimensions:

- 600 x 320 x 220mm

Visible & UV Spectrophotometers

The MD range offers low cost, yet high specification instruments comprising:

- MD-1105 and MD-2100 for visible light only
- MD-2000UV and MD-2100UV for UV/visible

All units come complete with microprocessor control offering fully automated functions including auto self test. RS232 analogue output and optional software are available. The instruments feature 4mm spectral bandwidth and soft keyboard operation. They also include a large sample compartment that will accept from 5mm to 100mm pathlength rectangular cuvettes. These units are ideal for the many tests performed in environmental protection, water, biochemistry, clinical, food, beverage and industrial laboratories.

- High performance scanning
- Single and multi-wavelength operation
- Kinetics, transmittance and absorbance analysis
- Clear easy to read display
- Advanced optical system ensures very low stray light
- Superior quality optical components ensure accurate and reliable analytical data
- Deuterium and tungsten lamps are used as the light sources



Glass and quartz spectrophotometer cuvettes also available



Product reference	MD-1105	MD-2100	MD-2000UV	MD2100UV	MD-1900UV
Optics	Single beam	Single beam	Single beam	Single beam	Double beam
Wavelength range	340-1000nm	320-1000nm	200-1000nm	190-1000nm	190 ~ 1100nm
Accuracy	±2nm	±1nm	±2nm	±1nm	+/-1 1nm
Bandwidth	6nm	4nm	5nm	4nm	0.5, 1, 2, 4
Grating	1200 lines/mm	1200 lines/mm	1200 lines/mm	1200 lines/mm	1600 lines/mm

Transmission range	0-100.0%T	0-125%T	0-125%T	0-125%T	0.0 ~ 200%T
	0-1.999A	-0.097-3.000A	-0.97-2.5A	-0.97-3.000A	-0.3 ~ 4.0A
	0-1999C	0-9999C	0-9999C	0-9999C	n/a
Accuracy	±1%T	±0.5%T	±0.5%T	±0.5%T	+/-0.5%T
Repeatability	0.5%T	0.3%T	0.3%T	0.3%T	0.3% T
Stability	±0.004A/h	±0.002A/h	±0.002A/h	±0.002A/h	+/- 0.002A/h

Specification	MD-1105	MD-2100	MD-2000UV	MD2100UV	MD-1900UV
Display	3.5LCD	2-line LCD	2-line LCD	2-line LCD	n/a
Cell holder	4 position	4 position	4 position	4 position	1 (fixed)
Dimensions (mm)	415 x 315 x 155	475 x 420 x 180	475 x 420 x 180	475 x 420 x 180	400 x 700 x 330
Weight (Kgs)	7	9	11	11	10

Mains power

220 - 240V / 50 - 60Hz