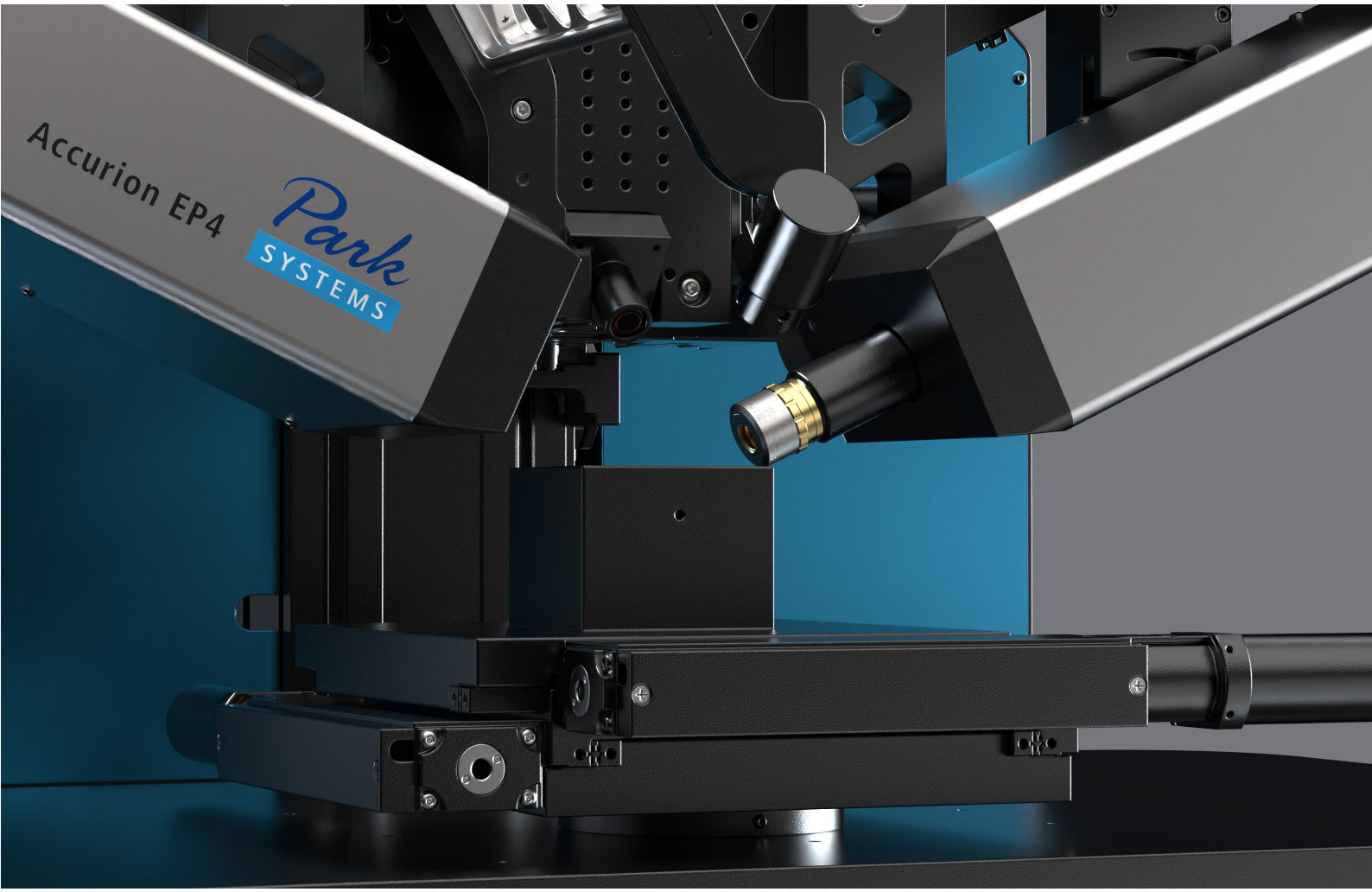
Accurion EP4

Microscopic Thin Film Metrology and Visualization



Park
SYSTEMS

Product Overview

Park Systems provides a wide range of products for Imaging Spectroscopic Ellipsometry,
Referenced Spectroscopic Ellipsometry and Brewster Angle Microscopy, as well as customized solutions.

If you are looking for a product not listed in the catalog, please get in touch.

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Version 1.5 – 2026

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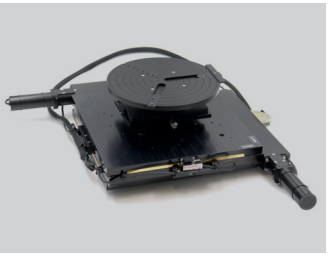
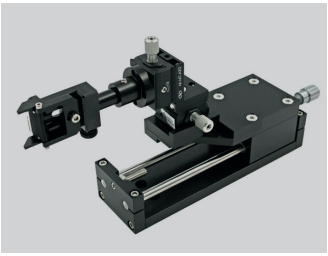
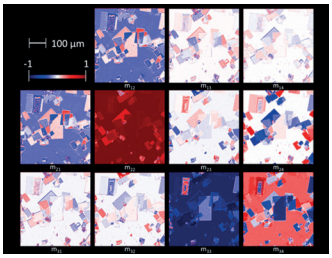


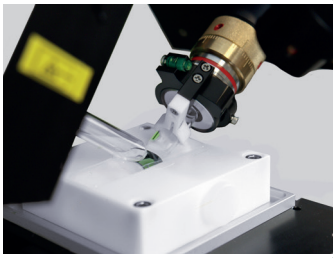
Sample Stages



Beam Cutter

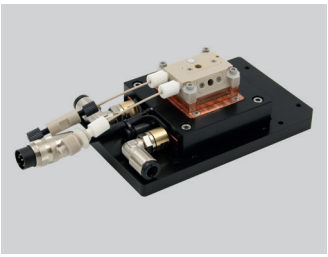


Mueller Matrix AddOn

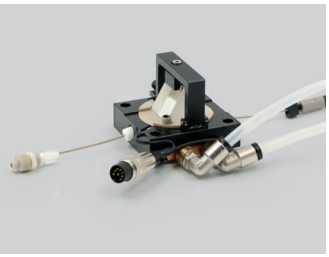


Light Guide Setup

Solid/Liquid Cell (60°)

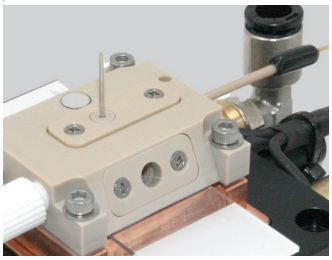


Solid/Liquid Cell (65°)



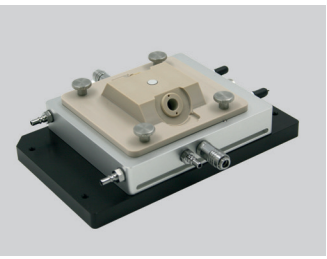
Kinetics/SPR Cell

Temperature Control Unit

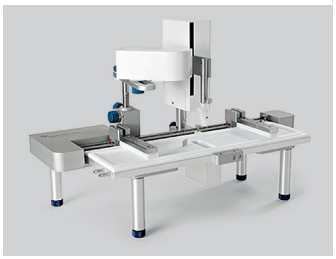


Electro-Chemistry Upgrade

Liquid Handling



Linkam Temperature Control Stage (RT to +600°C)

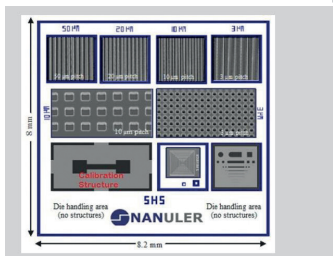


KSV NIMA® Langmuir-Blodgett (LB)

Support Frame

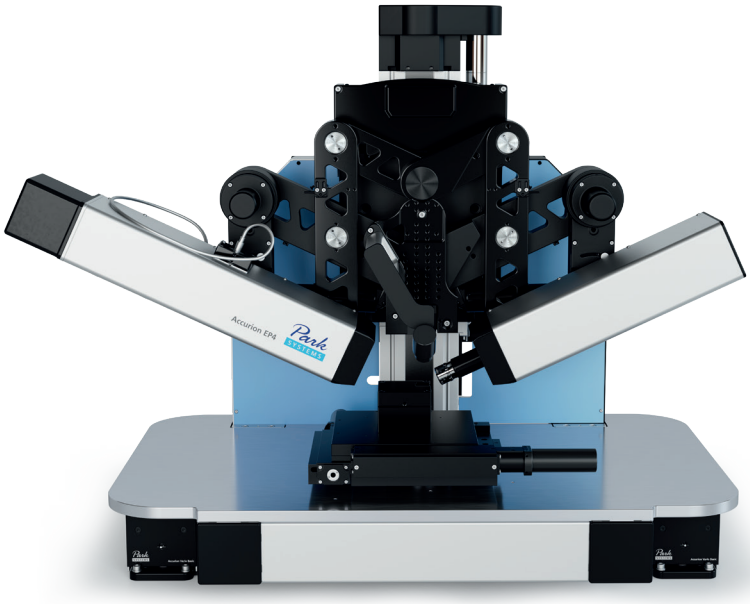
Dust Covers

Safety Enclosures



Nanuler Imaging Ellipsometry Standard

Accurion EP4 Base Setup
Part No.: 014-0001



Accurion EP4, our latest Imaging Spectroscopic Ellipsometer (ISE), combines ellipsometry and microscopy for precise characterization of thickness and refractive index on micro-structures as small as 1 µm.

Key Features:

- Simultaneous measurement of all pixels inside the Field-Of-View (FOV) – Spectroscopic Ellipsometry on each pixel.
- Highest lateral ellipsometric resolution, allowing to determine thickness and refractive index on micro-structures as small as 1 µm.
- First identify, then measure: Intuitive selection of measurement area by drawing Regions-of-Interest directly in live ellipsometric view.
- Continuous Spectroscopic Imaging Ellipsometry from UV to NIR.

Application Example:
https://iopscience.iop.org

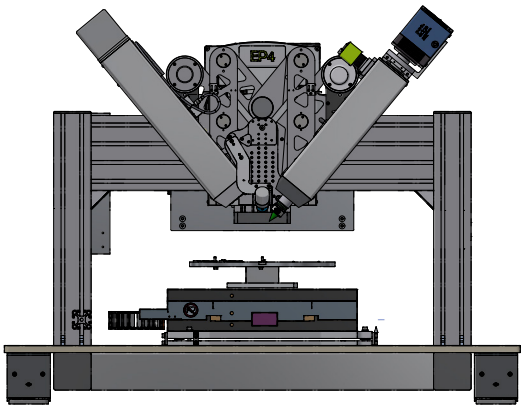
This is the base setup of the EP4 Imaging Ellipsometer.
These items need to be selected on the following pages in order to configure a full Imaging Ellipsometer:

Item	Technical Description
Goniometer	■ High-precision automatic, software controlled goniometer to enable variable Angle-Of-Incidence (AOI) measurements (Max. AOI range: 38° – 90°, angle resolution: 0.001°, accuracy: 0.01°, speed of motion: ~ 5°/s)
Z adjustment	■ Motorized Z-axis to adjust the height of the optical head with respect to the sample surface (Max. vertical travel range: 100mm, accuracy: 1 µm, precision: 1 µm)
Tilt alignment	■ Automatic tilt alignment with respect to the plane of incidence (Max. tilt ranges: 5°, accuracy: 0.001°, precision: 0.001° in both tilt axes) ■ Alignment sensor to detect tilt and Z-position of the sample (Max tilt detection range: 2°, accuracy: 0.001°, Z-axis accuracy: 1µm)
Vibration isolation	■ Built-in active vibration isolation system
PC/Software	■ Fully configured state of the art PC, 2 LCD monitors and accessories ■ EP4 software package for instrument control, data evaluation and ellipsometric modelling ■ Free regular software updates

Accurion EP4 Base Setup (300 mm)

Part No.: 014-0003

Similar to the standard EP4, but designed to support a 300 mm sample stage.



This is the base setup of the EP4 (300 mm) Imaging Ellipsometer.

These items need to be selected on the following pages in order to configure a full imaging ellipsometer:

Item	Technical Description
Z Adjustment	Motorized Z-axis to adjust the height of the optical head with respect to the sample surface (Max. vertical travel range: 50 mm, accuracy: 1 µm, precision: 1 µm)

Spectroscopic Light Sources / Spectral Ranges

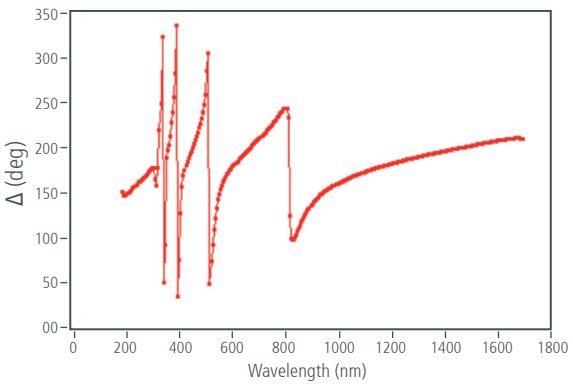
One primary light source / spectral range must be selected for each EP4. It is possible to select one (1) non-spectroscopic light source in addition to the primary light source.

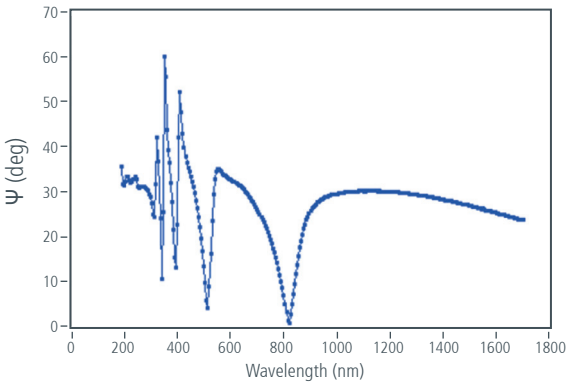
Application Example:
https://iopscience.iop.org

Key Features:

Each spectroscopic light source includes:

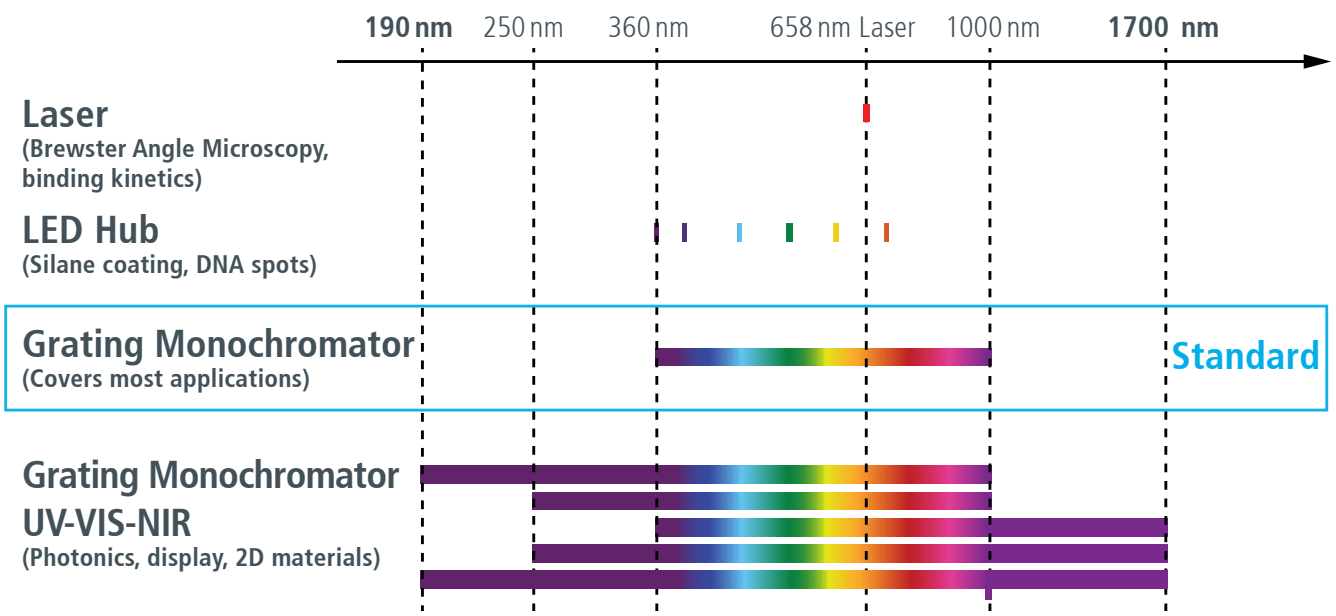
- Laser-stabilized Xenon light source
  (Continuous emission from 190 nm to 2100 nm,
  typ. bulb life time > 9000 h, optional nitrogen purging)
- Triple-grating monochromator
  (average bandwidth: 6 nm (FWHM), accuracy: < 1 nm, precision: < 1 nm)





Light Source Options

EP4 Configuration	Wavelength Range



Part No.	Spectral Range	Technical Description
790-0004	**360 nm – 1000 nm (Standard range)**	■ **Standard VIS camera***
790-0001	190 nm – 1000 nm	■ Standard VIS camera + UV camera ■ 11x UV Objective Lens NC3**
790-0002	250 nm – 1000 nm	■ Standard VIS camera + UV camera ■ 11x UV Objective Lens NC3**
790-0003	250 nm – 1700 nm	■ Standard VIS camera + UV camera + NIR camera ■ 11x UV Objective Lens NC3**
790-0005	360 nm – 1700 nm	■ Standard VIS camera + NIR camera
790-0007	190 nm – 1700 nm	■ Standard VIS camera + UV camera + NIR camera ■ 11x UV Objective Lens NC3**

*** See objective lenses,See page 7*

*

Part No.	Spectral Range	Technical Description
	Standard VIS camera	■ **High-quality, monochrome GigE CCD camera** ■ **Resolution: 1392 x 1040 pixel** ■ **Pixel size: 6.45 µm x 6.45 µm** ■ **Frame rate: max. 40 fps**
	UV camera (Only for spectral range <360 nm)	■ High-quality, monochrome, back-illuminated sCMOS UV camera ■ Resolution: 2048 x 2048 pixel ■ Pixel size: 6.5 µm x 6.5 µm ■ Frame rate: max. 40 fps
	NIR camera (Only for spectral range >1000 nm)	■ High-quality, monochrome, cooled InGaAs NIR camera ■ Resolution: 320 x 256 pixel ■ Pixel size: 30 µm x 30 µm ■ Frame rate: max. 40 fps

Non-spectroscopic Light Sources

Instead of a spectroscopic system, the EP4 can be used as a single wavelength ellipsometer, using one of the following items as the primary light source.

It is also possible to integrate one (1) non-spectroscopic light source in addition to the selected primary light source.

The EP4 may include a maximum of two (2) light sources

Part No.	Item	Technical Description	Recommended for
711-0102	Broadband Laser (658 nm)	■ Diode laser (incl. 1 laser protection glasses) ■ Wavelength: 658 nm, Output power: max. 50 mW	■ Brewster Angle Microscopy ■ Kinetics experiments ■ Detection of ultra-thin residuals
711-0100	High-power multi-wavelength LED box	■ LED Hub including 6 different high-power LEDs connected to the instrument via optical fiber ■ Center wavelengths: 385 nm, 455 nm, 530 nm, 595 nm, 655 nm, 850 nm (others on request) ■ Average bandwidth: 10 nm – 30 nm (FWHM)	■ Measurement of silane coatings or DNA spots ■ Measurements with 50x objective lens on low reflectivity samples

Objective Lenses

The objective lenses used in the EP4 are special long working distance objective lenses with high numerical aperture. They are individually calibrated for each EP4 to offer an automatic scaling of maps and images as well as birefringence correction. The lateral ellipsometric resolution is specified at 400 nm wavelength.

All objective lenses except the UV objective lens NC3 are useable in the spectral range from 360 nm to 1700 nm.

At least one objective lens must be selected for each EP4.

Objective lenses may be exchanged manually, depending on required FOV and lateral resolution.

The exchange is easy and takes less than a minute.

Part No.	Objective lens	Technical Description	Recommended for
723-1001	2x	■ Lateral resolution: 10 µm ■ FOV: 2 mm × 2 mm, depends on AOI	■ Large area imaging ■ Low reflective samples ■ Flow cells, heating stage
723-1002	5x	■ Lateral resolution: 4 µm ■ FOV: 850 µm × 850 µm, depends on AOI	■ Large area imaging ■ Low reflective samples ■ Flow cells, light guide setup
723-1003	**10x (Standard)**	■ **Lateral resolution: 2 µm** ■ **FOV: 400 µm × 400 µm, depends on AOI**	■ **Standard objective lens** ■ **Good compromise between lateral resolution and FOV**
723-1004	20x	■ Lateral resolution: 1 µm ■ FOV: 200 µm × 200 µm, depends on AOI	■ Small structures
723-1005	50x	■ Lateral resolution: 1 µm* ■ FOV: 85 µm × 85 µm, depends on AOI	■ Micron-sized structures ■ Small samples ■ Note: Max AOI on large sample is 50° *
	11x UV Objective Lens NC3	■ Lateral resolution: 4 µm ■ Lateral Resolution at 250 nm: 2 µm ■ FOV: 800 µm × 800 µm, depends on AOI	■ Necessary for all measurements below 360 nm ■ Covers the whole wavelength range 190 nm-1700 nm

Properties	Olympus 2x	Nikon 5x	Nikon 10x	Nikon 20x	Nikon 50x	NC3 11x
Field-Of-View (FOV)	2000 µm	850 µm	400 µm	200 µm	85 µm	800 µm
NA	0.06	0.13	0.21	0.35	0.45	0.2
Lateral resolution (@ 400 nm wavelength)	10 µm	4 µm	2 µm	1 µm	1 µm	4 µm
Real working distance	31.1 mm	27.5 mm	22.1 mm	21.3 mm	14.4 mm	16 mm
Max. Angle-Of-View (AOV)	68°	64.9°	61.1°	59.1°	50.0°	67.6°

** Note that the maximum AOI using the 50x lens on larger samples is 50°. Measurements at higher AOI is only possible on small samples (ca. 20 mm diameter). The 50x lens cannot be used for BAM or liquid cells.*

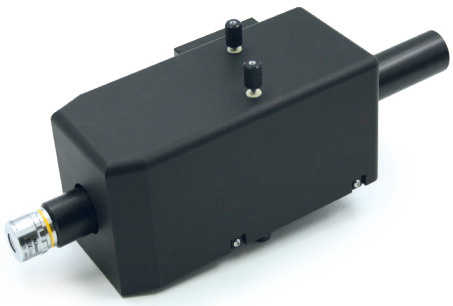
UltraObjective Exchange Unit
Part No.: 780-1486

The UltraObjective exchange unit includes two options:

1) Scanner unit
This unit allows measurements using all previously listed objective lenses except NC3.

2) UltraObjective unit
Unlike the regular objective lenses that provide only a line focus, the UltraObjective unit enables an overall-focused live view for fast mapping, measurements on moving objects (e.g. floating monolayers on liquid surfaces) and multi-spot arrays.

Application Example:
https://youtu.be/122kg_TGUgw



1)

2)

UltraObjective unit works only at a single wavelength 658 nm (laser).

UltraObjective unit works only at AOI 52°-56°.

Systems equipped with an UltraObjective exchange unit may not be upgraded with UV or NIR option.

Item	Technical Description	Recommended for
UltraObjective Exchange unit	■ Lateral ellipsometric resolution: 2 µm ■ FOV: 400 µm × 400 µm, depends on AOI	■ Brewster Angle Microscopy ■ Multi-spot array ■ Fast mapping

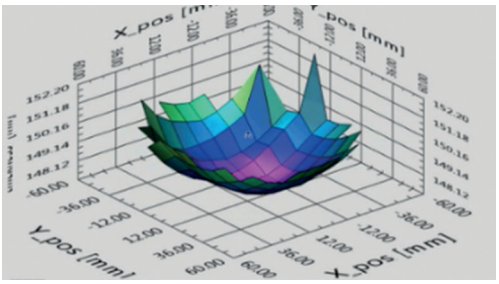
Sample Stages

Park Systems offers various sample stages to position the sample manually or automatically using software.

The motorized sample stages allow precise sample movement, multiple position pattern measurements and stitched maps of larger areas.

Different stage dimensions are available matching the sample size.

Application Example:
https://pubs.acs.org



Except for 300 mm XY stage.

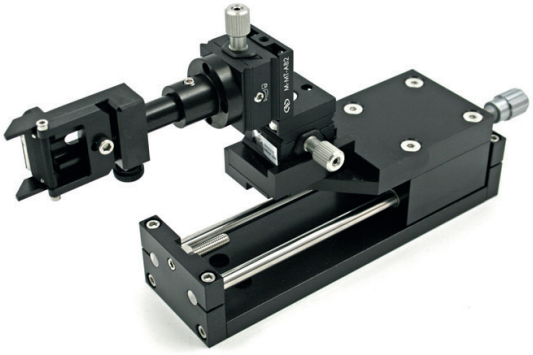
Part No.	Stage	Technical Description	Recommended for
350-0500	Manual XY-Stage (100 mm)	■ Max. travel range: 100 mm (X/Y)	■ Manual movement of sample in two axes ■ No stitching or pattern measurements available ■ Note that some features of the EP4 require motorized stages for shift compensation, such as AOI, Theta-Scan or cell applications **(See page 14)**
350-0501	**Motorized XY-Stage (100 mm) (Standard)**	■ **Max. travel range: 100 mm (X/Y)** ■ **Accuracy: 1 µm (X/Y)** ■ **Precision: 1 µm (X/Y)** ■ **Dedicated software tools (e.g. image stitching, pattern measurement) included**	■ **Motorized sample positioning** ■ **Automatic measurement on multiple points of a pattern or multiple samples** ■ **Stitching of maps of larger areas**
350-0502	Motorized XY-Stage (200 mm)	■ Max. travel range: 200 mm (X/Y) ■ Accuracy: 1 µm (X/Y) ■ Precision: 1 µm (X/Y) ■ Dedicated software tools (e.g. image stitching, pattern measurement) included	■ Similar features as Motorized XY-Stage (100 mm) ■ Suitable for 8 inch wafer
350-0503	Motorized XY-Stage (300 mm)	■ Max. travel range: 300 mm (X/Y) ■ Accuracy: 1 µm (X/Y) ■ Precision: 1 µm (X/Y) ■ Dedicated software tools (e.g. image stitching, pattern measurement) included	■ Similar features as Motorized XY-Stage (100 mm) ■ Suitable for 12 inch wafer
350-0504	Motorized Theta Stage	■ Rotation stage ■ Max. travel range: 0-360° ■ Precision: <0.07° ■ Max speed: 3°/s	■ Measurement of in-plane anisotropy (together with Mueller Matrix option) ■ Rotational alignment of a sample ■ Not available for the Manual XY-Stage

Beam Cutter: For measurements on transparent substrates
Part No.: 780-1484

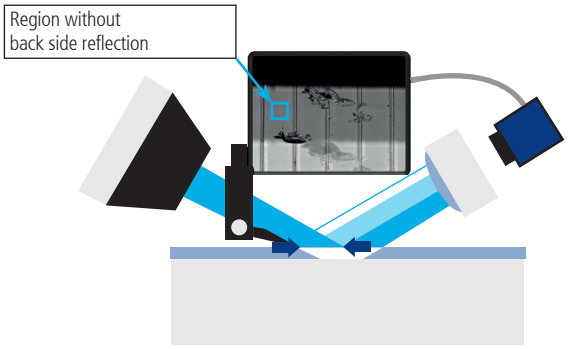
In case of measurements on transparent substrates (e.g. glass, SiC, GaN,…) the light is not only reflected from top side of the substrate, but also from the back side.

These back-side reflections usually disturb the measurement and lead to wrong results.

The Beam Cutter is a non-contact method to optically eliminate back-side reflections for a selected region.



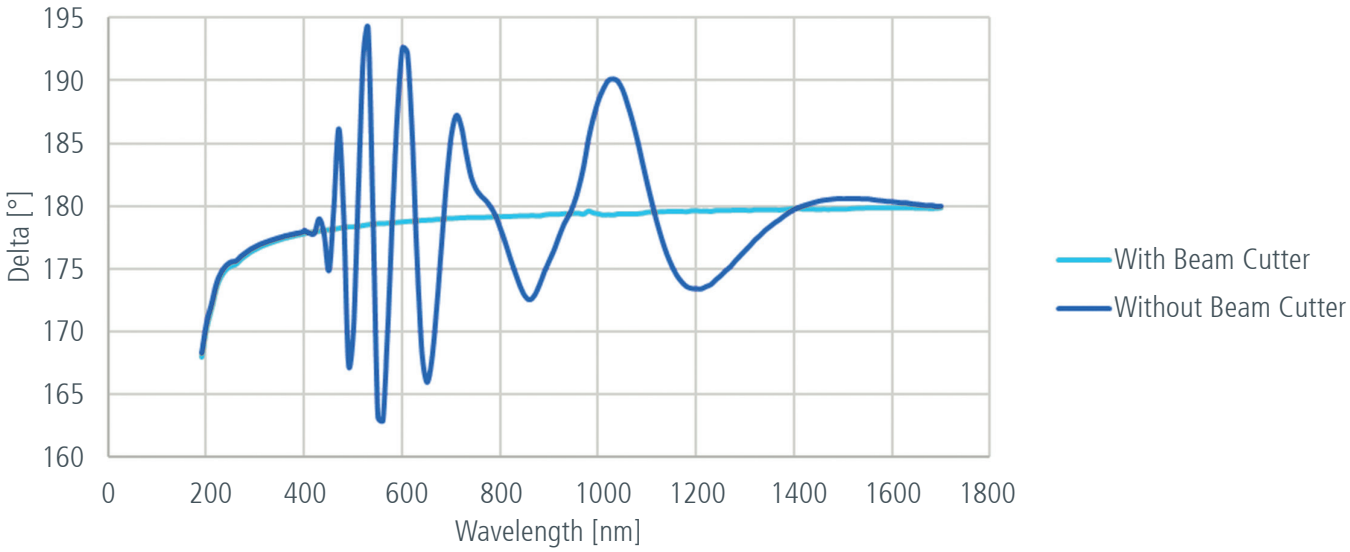
Please note that also silicon substrates are transparent at wavelengths >900 nm.



Application Example:
https://youtu.be

Item	Technical Description	Recommended for
Beam Cutter	A sharp edge is moved into the light beam to eliminate reflections from back side of the sample	Allows measurements on transparent substrates like glass, SiC, GaN, etc.

Effect of the Beam Cutter on SiC:

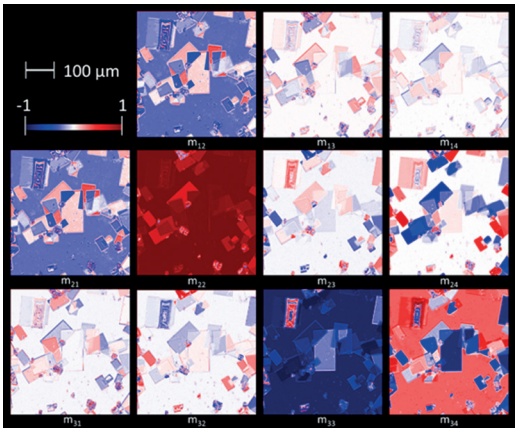


Mueller Matrix AddOn
Part No.: 780-1485

The upgrade enables the measurement of 11 elements of the normalized Mueller Matrix (first three rows, M11 = 1). The measurement is limited to a wavelength range of 400 nm to 900 nm.

The software supports the optical modeling of anisotropic layers and substrates. Dedicated software tools (e.g. for studies of in-plane anisotropy) are included.

Application Example:
www.researchgate.net



A Theta Stage for sample rotation is recommended for the Mueller Matrix AddOn in order to measure in-plane anisotropy.

Item	Technical Description	Recommended for
Mueller Matrix AddOn	Hardware, software and calibration to enable 11 elements of Mueller Matrix	Measurement of anisotropic layers and substrates

Light Guide Setup
Part No.: 780-1501

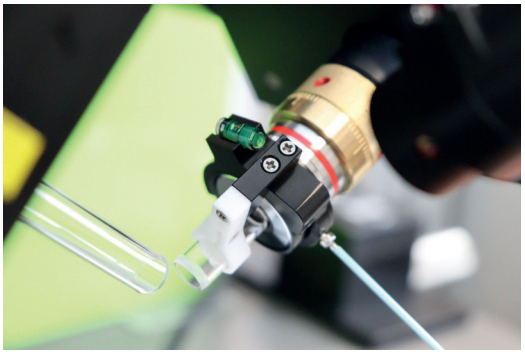
The light guide setup enables visualization and characterization of liquid/liquid and solid/liquid interfaces. Two glass tubes attached to the optical path guide the light into a liquid.

The liquid is not exchanged during the experiment.

Applications at the liquid/liquid interface are emulsions, crude oil technology, biophysics, polymers, nanoparticles or cells.

Applications at the solid/liquid interface are swelling processes, electrochemisty or corrosion experiments.

Application Example:
https://www.sciencedirect.com/



The Light Guide Setup works with 2x and 5x lenses only.

Solid/Liquid Cell (60°)

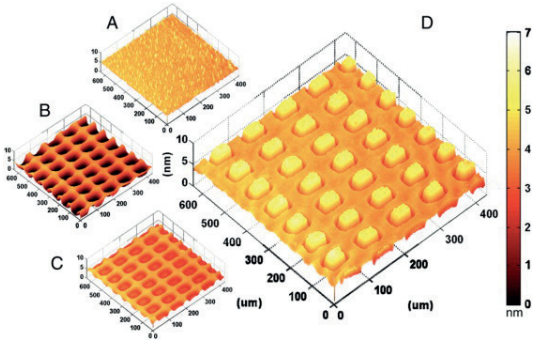
Part No.: 780-1492

In-situ cell for adsorption experiments on non-transparent substrates.

This Solid/Liquid Cell works at a fixed AOI of 60° and is designed for minimal fluid volume and quick liquid exchange.

High quality and chemically inert materials are used to ensure reliability and durability. Standard HPLC connections allow easy integration into existing systems.

The cell is supplied with all necessary components and is preconfigured for the temperature control unit.



Application Example:
www.cell.com

The Solid/Liquid cell (60°) is not compatible with 20x and 50x lenses.

A 658 nm laser source is recommended for better S/N ratio during kinetics experiments.

Specifications	Solid/Liquid cell (60°)	Recommended for
Angle-Of-Incidence (AOI)	60°	■ Kinetics experiments on silicon and other intransparent substrates ■ Small liquid volumes ■ Fast liquid exchange
Liquid volume	0.7 ml (plus volume for tubing > 0.1 ml)	
Sample dimensions	W 15 x D 22 x H 1 to 10 mm³ to W 26 x D 76 x H 1 to 10 mm³	
Observable area	3.8 mm x 5.4 mm	
Material with liquid contact	■ PEEK® cover ■ PEEK® tubings ■ Viton® O-rings	
HPLC fittings	1/4"-28	
Optional EC upgrade	**See page 15**	

Solid/Liquid Cell (65°)

Part No.: 780-1493

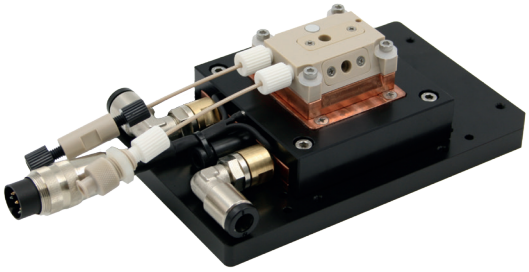
In-situ cell for adsorption experiments on Si substrates.

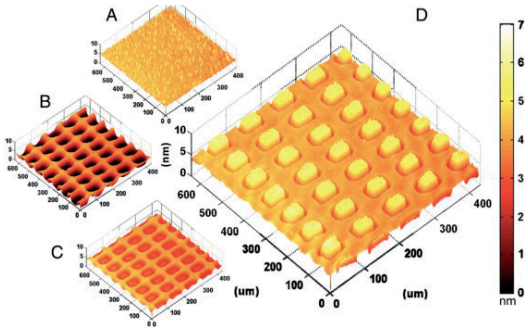
This Solid/Liquid Cell works at a fixed AOI of 65° and is designed for minimal fluid volume and quick liquid exchange.

High quality and chemically inert materials are used to ensure reliability and durability. Standard HPLC connections allow easy integration into existing systems.

The cell is supplied with all necessary components and is preconfigured for the temperature control unit.

Application Example:
www.cell.com





The Solid/Liquid cell (65°) is not compatible with the 50x lens.

A 658 nm laser source is recommended for better S/N ratio during kinetics experiments.

Specifications	Solid/Liquid cell (65°)	Recommended for
Angle-Of-Incidence (AOI)	65°	■ Kinetics experiments on silicon and other intransparent substrates ■ Small liquid volumes ■ Fast liquid exchange
Liquid volume	0.7 ml (plus volume for tubing > 0.1 ml)	
Sample dimensions	W 15 x D 22 x H 1 to 10 mm³ to W 26 x D 76 x H 1 to 10 mm³	
Observable area	3.8 mm x 5.4 mm	
Material with liquid contact	■ PEEK® cover ■ PEEK® tubings ■ Viton® O-rings	
HPLC fittings	1/4"-28	
Optional EC upgrade	**See page 15**	

Kinetics/SPR Cell

Part No.: 780-1494

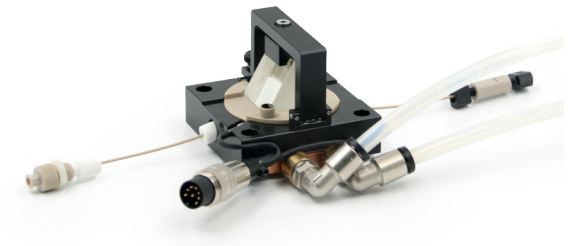
In-situ cell for binding kinetics on transparent substrates or imaging SPR experiments in Kretschmann setup.

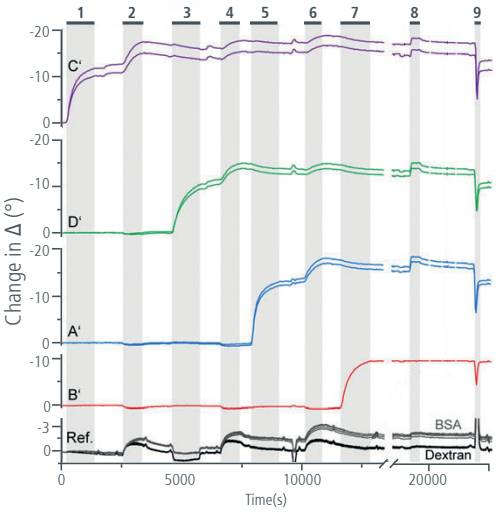
The Surface Plasmon Resonance (SPR) using a gold coated prism uses the plasmon waves below the gold coating and enables very sensitive measurement of bio-molecular interactions.

This cell is designed for minimal fluid volume and quick liquid exchange. High quality and chemical inert materials are used to ensure reliability and durability. Standard HPLC connections allow easy integration into existing systems.

The cell is supplied with all necessary components and is preconfigured for the temperature control unit.

Application Example:
https://link.springer.com





Injections

1 - vesicle DNA_C
2 - ifnar2-His_{10} E79A
3 - vesicle DNA_D
4 - ifnar2-His_{10} W102A
5 - vesicle DNA_A
6 - ifnar2-His_{10} wt
7 - vesicle DNA_B
8 - IFNα2 wt
9 - Imidazole

The Kinetics/SPR cell is not compatible with 20x and 50x lenses.

A 658 nm laser source is recommended for better S/N ratio during kinetics experiments.

Specifications	Kinetics/SPR cell	Recommended for
Angle-Of-Incidence (AOI)	■ 60° ■ AOI range of 55° - 65° possible	■ Kinetics experiments on transparent substrates ■ SPR experiments for every sensitive biomolecular interactions
Liquid volume	0.1 ml (plus volume for tubing > 0.1 ml)	
Sample dimensions	W 15 x D 22 x H 1 to 10 mm^3 to W 26 x D 76 x H 1 to 10 mm^3	
Observable area	4 mm x 8 mm	
Material with liquid contact	■ PEEK® cell base ■ PEEK® tubings ■ Viton® O-ring	
HPLC fittings	1/4" - 28	
Optional EC upgrade	**See page 15**	

Temperature Control Unit for Solid/Liquid Cells and the Kinetics/SPR Cell
Part No.: 780-1495

The Peltier temperature control device works with the Solid/Liquid Cell (60°), Solid/Liquid Cell (65°) and the Kinetics/SPR Cell.

It enables precise temperature control and stability, ideal for demanding applications.

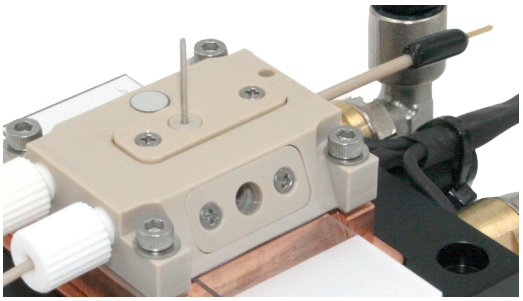
The temperature is controlled via EP4 software.

Specifications	Temperature Control Unit	Recommended for
Temperature range	5° - 75°C	■ Reproducible kinetics experiments ■ Temperature dependent kinetics
Temperature stability	+/- 0.1°C	
Thermometer sensor	PT100	
Controller	PID with self optimization	
Interface	USB	
Heat Exchange	Water based heat exchange	

Electro-Chemistry Upgrade for Solid/Liquid cells and the Kinetics/SPR cell

Two electrodes for electro-chemistry experiments.

Platinum electrode + LF reference electrode.



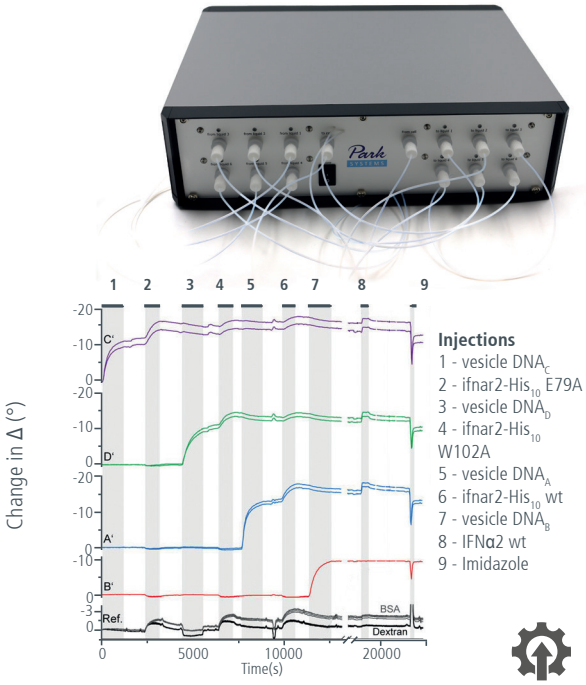
Part No.	Technical Description
780-1540	For Solid/Liquid Cell (60°)
780-1541	For Solid/Liquid Cell (65°)
780-1542	For Kinetics/SPR Cell

Liquid Handling for Solid/Liquid Cells and the Kinetics/SPR Cell
Part No.: 780-1496

The liquid handling system allows fully automated measurements with programmable liquid input and output sequences for up to 6 different liquids.

It includes valve units, tubings, a peristaltic pump and is controlled via EP4 software.

Application Example:
https://link.springer.com



Specifications	Temperature Control Unit	Recommended for
Valve unit	Handling of six different liquids	Automated liquid exchange sequences during kinetics experiments
Peristaltic pump	12 rollers for minimal pressure fluctuations	
Flow rate	0.05 – 2.0 ml/min	
Tubings	PTFE® tubings	

Linkam Temperature Control Stage (RT to +600°C)
Part No.: 780-1490

This customized temperature stage allows imaging ellipsometry exceeding the glass transition point or general experiments at high temperatures.

The temperature is controlled via EP4 software.

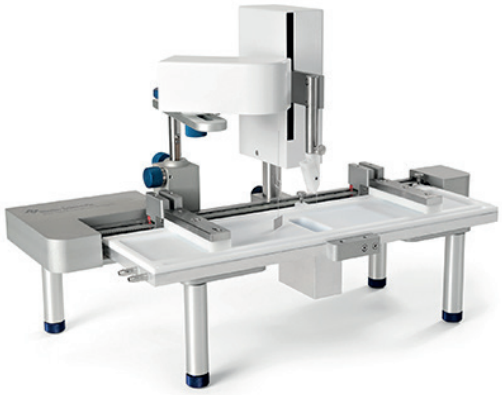
Works with 2x lens only.

Specifications	Temperature Control Unit	Recommended for
Heating stage	THMS600 from Linkam Scientific Instruments	■ Measurements at high temperatures ■ Glass transitions
Temperature range	RT to +600°C	
Angle-Of-Incidence (AOI)	55°	

KSV NIMA® Langmuir-Blodgett (LB)

The Park Systems Imaging Ellipsometers may be used as Brewster Angle Microscopes at the Liquid/Air interface as well. For best BAM performance a 658 nm laser is recommended.

Several troughs are integrated into the ISE hardware and software and may be used for BAM experiments or imaging ellipsometry on liquids. The software interface allows to synchronize the measurement/images with the trough data.



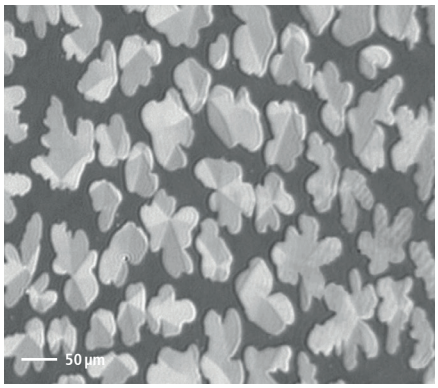
Application Example:
https://www.youtube.com

www.biolinscientific.com

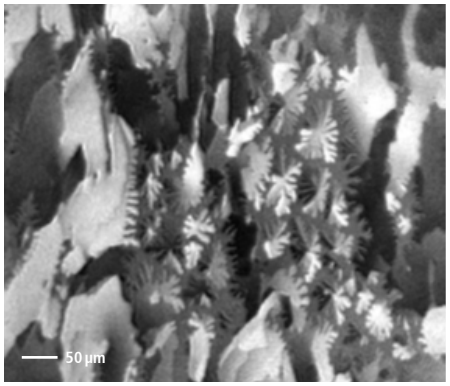
50x lens may not be used for BAM.

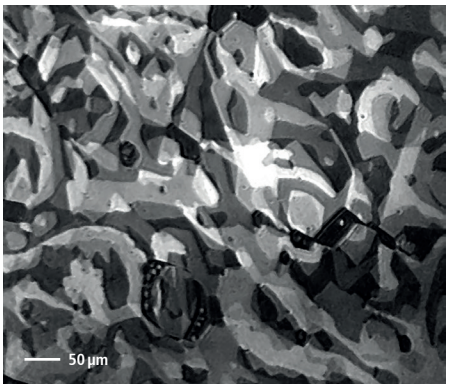
The UltraObjective unit enables overall focused live view of floating monolayers.

Part No.	Trough	Specifications	Recommended for
780-1487	KSV NIMA Langmuir-Blodgett Trough Small	■ Model: KN2001 from Biolin Scientific ■ Surface area: 98 cm² ■ Trough top inner dimensions: L 195 x D 50 x H 4 mm ■ Maximum compression ratio: 5.2	Small amount of liquid
780-1488	KSV NIMA Langmuir- Blodgett Trough Medium	■ Model: KN2002 from Biolin Scientific ■ Surface area: 273 cm² ■ Trough top inner dimensions: L 364 x D 75 x H 4 mm ■ Maximum compression ratio: 10.8	Medium amount of liquid and compression ratio
780-1489	KSV NIMA Langmuir- Blodgett Trough Large	■ Model: KN2003 from Biolin Scientific ■ Surface area: 841 cm² ■ Trough top inner dimensions: L 580 x D 145 x H 4 mm ■ Maximum compression ratio: 18	High compression ratio



Monolayer of DMPE during first-order phase transition, contrast in domains caused by long range orientation order





Ethyl-stearate
Visualization of long range molecular orientation order

Support Frame

Rigid support for optimal performance of active vibration isolation systems.

The light source and controllers of the ISE are placed on the lower shelf. The additional casters allow easy relocation of the ISE.

Part No.	Item	Dimensions	Recommended for
780-1497	Support Frame ISE	W 810 x D 600 x H 665 mm	
780-1498	Support Frame EP4 (300 mm)	W 1100 x D 640 x H 665 mm	

Dust Covers

Protection against dust and air convection.

Part No.	Item	Dimensions	Recommended for
780-1530	Dust Cover ISE	W 1500 x D 770 x H 1618 mm	Protection against dust and air convection
780-1531	Dust Cover ISE (300 mm)	W 1500 x D 1000 x H 1618 mm	Protection against dust and air convection

Safety Enclosures

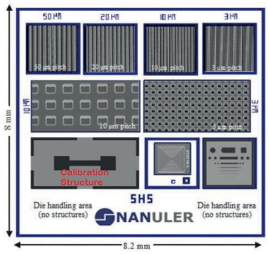
The safety enclosures additionally protect against scattered radiation according to IEC 60825-1:2014.

Part No.	Item	Dimensions	Recommended for
780-1532	Safety Enclosure ISE	W 1500 x D 880 x H 1648 mm	■ Protection against dust and air convection ■ Protection against scattered radiation according to IEC 60825-1:2014 (incl. door interlock)
780-1533	Safety Enclosure ISE (300 mm)	W 1500 x D 930 x H 1700 mm	■ Protection against dust and air convection ■ Protection against scattered radiation according to IEC 60825-1:2014 (incl. door interlock)

Nanuler Imaging Ellipsometry Standard

Multi-pattern SiO_2 on silicon sample to measure and test ISE capabilities. Features include lines and grid structures of different pitch.

4 different SiO_2 thicknesses are available.



Non traceable

Part No.	Item	Technical Description
780-1543	100 nm SiO_2 thickness	SiO_2 step height is about 100 nm
780-1544	200 nm SiO_2 thickness	SiO_2 step height is about 200 nm
780-1545	500 nm SiO_2 thickness	SiO_2 step height is about 400 nm
780-1546	1000 nm SiO_2 thickness	SiO_2 step height is about 1000 nm

Thickness Reference Samples

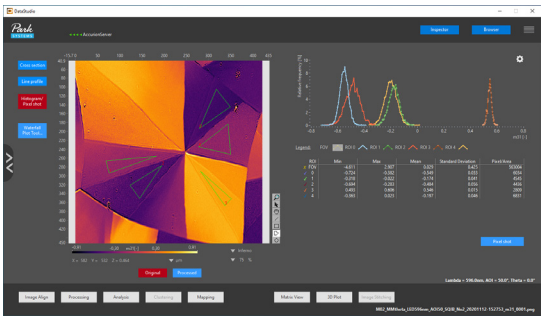
Part No.: 780-1547

One set of 3 different SiO_2 layers (25 nm; 50 nm; 100 nm) on silicon substrates with NIST traceable SiO_2-thicknesses.

EP4 Software (Offline version)
Part No.: 780-1526

Accurion EP4 Software for offline analysis. This allows data analysis (modelling, mapping) without occupying the EP4.

Including software components: Accurion Server, DataStudio, EP4Model.



Each ISE already includes one offline license that may be installed on another PC.

Download links and license key will be provided after purchase order.

Warranty Extension

Standard warranty for the EP4 is one (1) year.

Warranty extensions are possible for up to four (4) years.

Warranty extensions are only available before the end of the current warranty period.

Part No.	Description
910-0400	Extended warranty for second additional year
910-0401	Extended warranty for third additional year
910-0402	Extended warranty for fourth additional year

** Excluding discount and shipping, installation and training*

Service Contract for 1 year
Part No.: 910-0403

The Service Contract is valid for one (1) year and contains:

Item	Description
Maintenance	Yearly on-site maintenance service to minimize downtime of the instrument and to avoid de-calibration, which could lead to wrong results (including all travel expenses)
Remote service	Access to the remote control service capabilities
Application support	10 hours of free application support, including remote control support
Travel expenses	Included for yearly maintenance visit

Support on Demand

Technical support, service and training may be offered on demand.

Part No.	Item	Description
910-0404	One hour	Technical support, service or training on hourly base
910-0405	One day	Technical support, service or training on daily base

Enabling Nanoscale Advances

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Park SYSTEMS
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