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About Ossila

STREAMLINE YOUR RESEARCH

Backed by decades of experience, we specialize in the manufacture and supply of lab equipment, components, and materials to enable efficient, high-impact scientific research and discovery. With expertise in physics, chemistry, biology, engineering, and more, our technical teams offer indepth product support and free resources to help you jump-start new projects.

Accelerate the pace of your research with dependable products at accessible prices.

Trusted by worldleading institutions across 100+ countries Winner of *The King's Award for Enterprise*2024

Backed by decades of hands-on experience



Glove Box

L2007A1

Easily create and maintain a controlled inert environment for handling, processing, and storing air sensitive samples. Achieve oxygen levels below 0.5% and moisture levels as low as **15 ppm** with high-accuracy sensors, which provide continuous feedback and trigger automated purge cycles.

Constructed from low-ingress materials, these robust inert conditions are well suited to many research and development needs. The Ossila Glove Box is a smart, cost-effective choice without sacrificing quality or results.





Cost-Effective Purge Cycles

Extensive environmental control



ISO Class II System

<0.25% vol/hour leak rate



High-Accuracy Sensors

Real-time data tracking



Antechamber Access

Protect your inert environment

Specifications

Leak Rate	<0.25% vol/hour (ISO Class II)
Maximum Input Pressure	2 bar
Working Overpressure Range	0.1 mbar - 5 mbar
Purge Overpressure Range	10 mbar - 15 mbar

Environmental Sensors

Oxygen Sensor Range	0.5% to 25%
Oxygen Sensor Resolution	0.01%
Moisture Sensor Range	0% Relative Humidity to 100% Relative Humidity
Moisture Sensor Resolution	0.1% Relative Humidity (15 ppm)
Pressure Sensor Range	300 mbar to 1200 mbar
Pressure Sensor Resolution	0.005 mbar
Temperature Sensor Range	40 °C to 120 °C
Temperature Sensor Resolution	0.1 °C

Dimensions

Main Chamber External Dimensions (D x W x H)	500 mm x 750 mm x 500 mm (19.7" x 29.5" x 19.7")
Main Chamber Internal Dimensions (D x W x H)	450 mm x 600 mm x 500 mm (17.7" x 23.6" x 19.7")
Antechamber Internal Dimensions (D x W x H)	150 mm x 150 mm x 150 mm (5.9" x 5.9" x 5.9")
Weight	33.85 kg (74.63 lbs)





Spin Coater

L2001A3

Produce high-quality films with zero substrate warping using a vacuum-free system that is trusted by academics and researchers around the world. Inbuilt controls enable you to customize your spin coating process—from slow-dry crystallization and ultra-thin films to multilayer coatings and graded film properties. Perfect for shared research facilities, you can save your coating processes in separate user profiles.











Vacuum-Free

Range of Speeds

Long Spin Cycles

Multi-Substrate Chuck

Produce uniform films

Up to **6,000 rpm**

Up to **1,000** seconds

With improved air flow

Speed Stability	<2% error
Speed	120 – 6,000 rpm
Spin Time	1 – 1,000 seconds
User Profiles	10
Materials	Polypropylene bowl, steel casing, tempered glass lid
Weight	2.75 kg

Additional Specifications

Max Substrate Size	100 mm (4") diameter
Programs	10 programs on each user profile, with up to 50 steps each
Safety Switch	Magnetic safety switch on the door
Additional Features	Built-in spirit level and adjustable feet
Dimensions (D x W x H)	225 mm x 170 mm x 140 mm (8.86" x 6.69" x 5.51")
Power Supply	DC 24 V 2 A, via 100–240 V 50/60 Hz power adapter

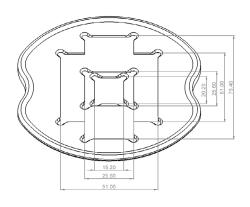
Spin Coater Chuck Specifications

Choose between polypropylene, PTFE, or PEEK chuck material depending on your application. The design incorporates all of the most commonly used substrates including:

• 20 mm x 15 mm

- 25 mm x 25 mm (1" x 1")
- 50 mm x 50 mm (2" x 2")
- 75 mm x 25 mm (3" x 1")

For other substrates sizes, we can produce custom chucks based on your requirements. When ordering a custom chuck, please specify the length, width, and depth.







Spin Coater Advanced

L2001B1

Take control in complex and high-precision applications with the Spin Coater Advanced. The superior speed stability and lower error margin of <0.25% ensure more consistent and reliable coating processes.

Use the broader spin speed range to accommodate a wider range of coating materials, including those with higher viscosities, and more easily achieve your desired coating thicknesses. With the increased maximum spin cycle time, ensure better solvent evaporation and more controlled layer formation in multilayer or graded coatings.









Range of Speeds



Long Spin Cycles



Multi-Substrate Chuck

Produce uniform films

Up to **10,000 rpm**

Up to **3,600** seconds

With improved air flow

Speed Stability	<0.25% error
Speed	500 – 10,000 rpm
Spin Time	1 – 3,600 seconds
User Profiles	15
Materials	PTFE bowl, powder coated steel casing, tempered glass lid
Weight	3.7 kg

Additional Specifications

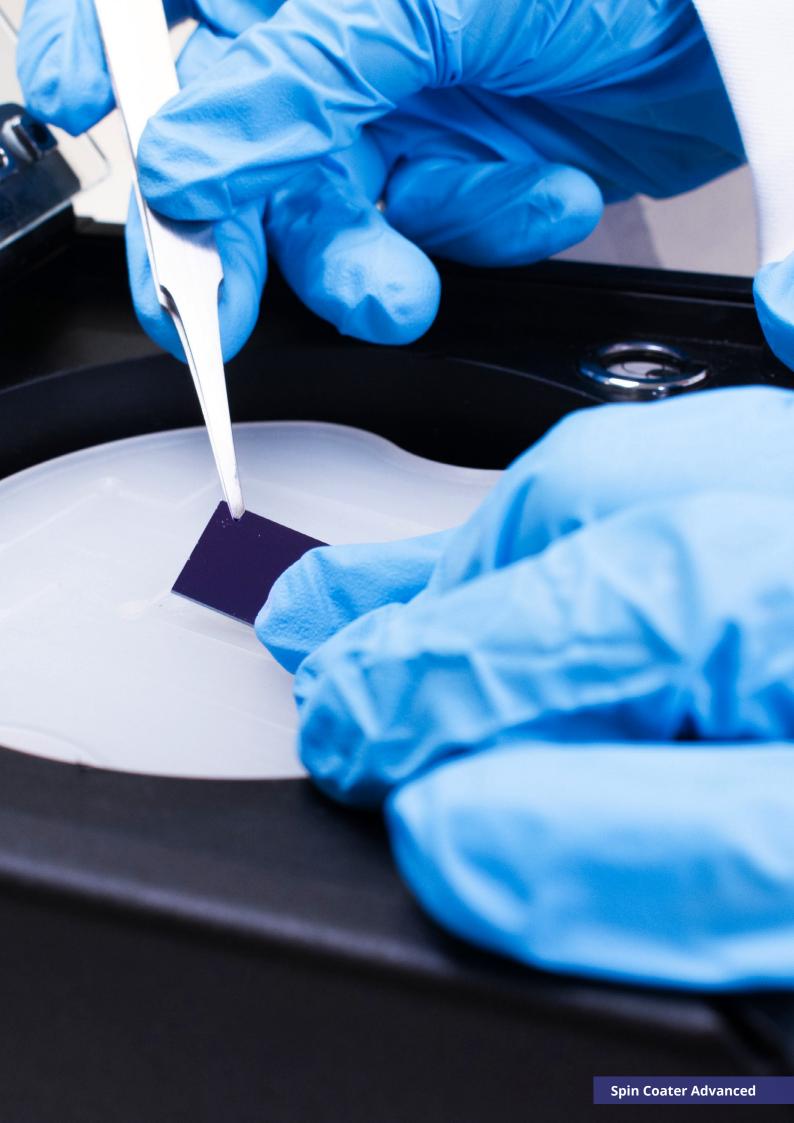
Max Substrate Size	100 mm (4") diameter
Programs	10 programs on each user profile, with up to 50 steps each
Safety Switch	Magnetic safety switch on the door
Additional Features	Built-in spirit level and adjustable feet
Dimensions (D x W x H)	225 mm x 170 mm x 140 mm (8.86" x 6.69" x 5.51")
Power Supply	DC 24 V 2 A, via 100–240 V 50/60 Hz power adapter



Spin Coater Foot Switch

Start and stop coating processes with your feet, leaving your hands free for the controlling and dispensing of your solutions. The foot switch helps to improve the timing and accuracy of your coatings, giving you better results. Simply plug the switch into the jack at the rear of your spin coater and, with a quick press of your foot, start the current recipe. To stop the process, simply hold down the switch.

L3001F1

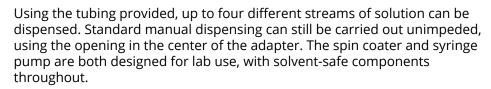




Spin Coating Kit

L2001A3-L2003D

The Ossila Spin Coating Kit includes a spin coater and syringe pump, along with a connection adapter, disposable syringes, PTFE tubing, needles, and spin coater chuck. The adapter enables you to easily combine the precision and automatic control of an Ossila Syringe Pump with the versatility of an Ossila Spin Coater.





The kit is available with any combination of our syringe pump and spin coater models, so you can choose the system that fits your research needs.



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Universal Syringe Clamps

For **0.5 µl** to **60 ml** syringes

Versatile Flow Rates

2.1 nl.hr-1 to **15 l.hr**-1

High Maximum Force

For high viscosity solutions

More Applications

Independent syringe control

Spin Coater

	Standard Model	Advanced Model
Speed Stability	<2% error	<0.25% error
Speed	120 – 6,000 rpm	500 – 10,000 rpm
Spin Time	1 – 1,000 seconds	1 – 3,600 seconds
User Profiles	10	15
Materials	Polypropylene bowl, steel casing, tempered glass lid	PTFE bowl, powder coated steel casing, tempered glass lid
Weight	2.75 kg	3.7 kg

Syringe Pump

	Single Model	Dual Model
Syringe Channels	1	2
Channel Dependency	N/A	Independent channel control
Overall Dimensions (W x H x D)	240 mm x 150 mm x 150 mm (9.8" x 6.1" x 6.1")	240 mm x 150 mm x 260 mm (9.8" x 6.1" x 10.2")

Large Range of Spin Speeds and Flow Rates

With spin speeds from **120 rpm** to **10,000 rpm** across our spin coater range and syringe pump flow rates from **2.1 nl/hr** to **15 l/hr**, take complete and precise control of your thin film processes.

Syringe Pump

L2003S2

Precise infusion and extrusion of solutions with a powerful system that can be seamlessly integrated into your existing setup. Pre-program simple or complex sequences with the inbuilt software or control using serial commands. For flexibility across a wide range of applications, the syringe clamp fits syringes from all major brands in volumes from $0.5 \, \mu l$ to $60 \, ml$.

Six Norm-Ject disposable Luer Lock syringes included.







±0.16% rate accuracy

Motor



Versatile Flow Rates

2.1 nl.hr-1 to **15 l.hr**-1



High Maximum Force

For high viscosity solutions



Programmable Control

10 programs with **100** steps each

Syringe Channels	1
Operation Modes	Infusion and withdrawal
Minimum Syringe Size	0.5 μΙ
Maximum Syringe Size	60 ml
Safety Features	Limit switches, crashing sensing
Power	24 V DC, 2.0 A
Power Supply Input Voltage Range	100 – 230 V, 50/60 Hz, 50 VA
Operating Temperature/ Humidity	5 °C to 40 °C (41 °F to 104 °F); Up to 80% RH at 31 °C (87.8 °F)
Overall Dimensions (W x H x D)	240 mm x 150 mm x 150 mm (9.8" x 6.1" x 6.1")

Driver

Micro Stepping	1/128
Micro Steps per Revolution	25,600
Maximum Speed	1000 steps. s ⁻¹ ; 5 mm.s ⁻¹ ; 300 mm.min ⁻¹
Minimum Speed	0.015 steps.s ⁻¹ ; 75 nm.s ⁻¹ ; 4.5 μm.min ⁻¹
Rate Accuracy**	±0.16%

^{**} The Ossila Syringe Pump has a stepping accuracy of 0.16%, which gives a rate accuracy of 19 nm.s⁻¹. In practice, the accuracy of the flow rate from a syringe pump depends on the accuracy of the driver and the syringe diameter. Different syringes have different manufacturing tolerances. The diameter of plastic disposable syringes can vary by up to 3%, resulting in an error in dispense rate of up to 6%. Glass and stainless steel syringes have a higher tolerance, with a maximum of 0.5% variation in the internal diameter and volume error of up to 1%.

Software

Number of Programs	10
Steps per Program	100
Syringe Size Settings	5 pre-sets, 1 customizable diameter
Force Tuning	5% to 100% (5% increments)

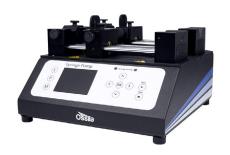




Dual Syringe Pump

L2003D2

Capable of complex solution dispensing with high accuracy and precision using two syringe pump channels. Each channel can be controlled independently with different dispense rates to withdraw and infuse simultaneously, or blend two different solutions in precise ratios. Conduct advanced processes with ease including continuous syringe pumping, emulsification processes, solution mixing, polymerization, and sequential layer deposition.





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Precise Stepper Motor

Versatile Flow Rates High Maximum Force **Dual Channel**

±0.16% rate accuracy

2.1 nl.hr-1 to **15 l.hr**-1

For high viscosity solutions

Independent syringe control

Syringe Channels	2
Channel Dependency	Independent channel control
Operation Modes	Infusion and withdrawal
Minimum Syringe Size	0.5 μΙ
Maximum Syringe Size	60 ml
Minimum Flow Rate	0.6 pl.s ⁻¹ / 2.1 nl.hr ⁻¹ (0.5 μl syringe)
Maximum Flow Rate	4.2 ml.s ⁻¹ / 15 l.hr ⁻¹ (60 ml syringe)
Safety Features	Limit switches, Crashing sensing
Power	24 V DC, 2.0 A
Power Supply Input Voltage Range	100 – 230 V, 50/60 Hz, 50 VA
Operating Temperature/ Humidity	5 °C to 40 °C (41 °F to 104 °F); Up to 80% RH at 31 °C (87.8 °F)
Overall Dimensions (W x H x D)	240 mm x 150 mm x 260 mm (9.8" x 6.1" x 10.2")

Motor

Motor Type	NEMA 17 Stepper Motor
Step Angle	1.8°
Steps per Full Revolution	200
Screw Pitch	1 mm
Travel per Step	5 μm
Maximum Linear Force	500 N

Slot Die Coater

L2005A2

Elevate your research with scalable coating technology. This complete system enables you to adapt your coating processes quickly by including a high-precision syringe pump and customizable head with add-on accessories.

Improve the uniformity of your films by taking full control over the flow rate, coating speed, plate temperature, alignment, channel thickness, head height, multi-step programming, and more.





Flexible Coating Speeds

50 μm.s-1 to **75 mm.s**-1



Temperature Controlled Stage

Up to **140 °C** (284 °F)



Reliable Flow Rates

1.8 ml/hr to **2.24 l/hr**



Large Coating Area

Up to **100 mm** x **150 mm**

Maximum Hotplate Temperature	140 °C (284 °F)
Stage Surface Roughness (RMS)	<3 μm*
Stage Surface Flatness	<20 μm*
Linear Motion Levelness	0.05% variation (50 μm/100 mm travel)*
Maximum Stage Travel Length	150 mm
Maximum Head Width	100 mm
Minimum Stage Speed	50 μm.s ⁻¹
Maximum Stage Speed	75 mm.s ⁻¹
Maximum Head to Substrate Travel Distance	13 mm
Power Supply	DC 24 V, 6.2 A, via 100 – 240 V 50/60 Hz power adapter
Dimensions (D x W x H)	360 mm x 280 mm x 190 mm (14.2" x 11" x 7.5")
Weight	10.35 kg

^{*} Values determined at a stage temperature of 21 °C (69.8 °F).

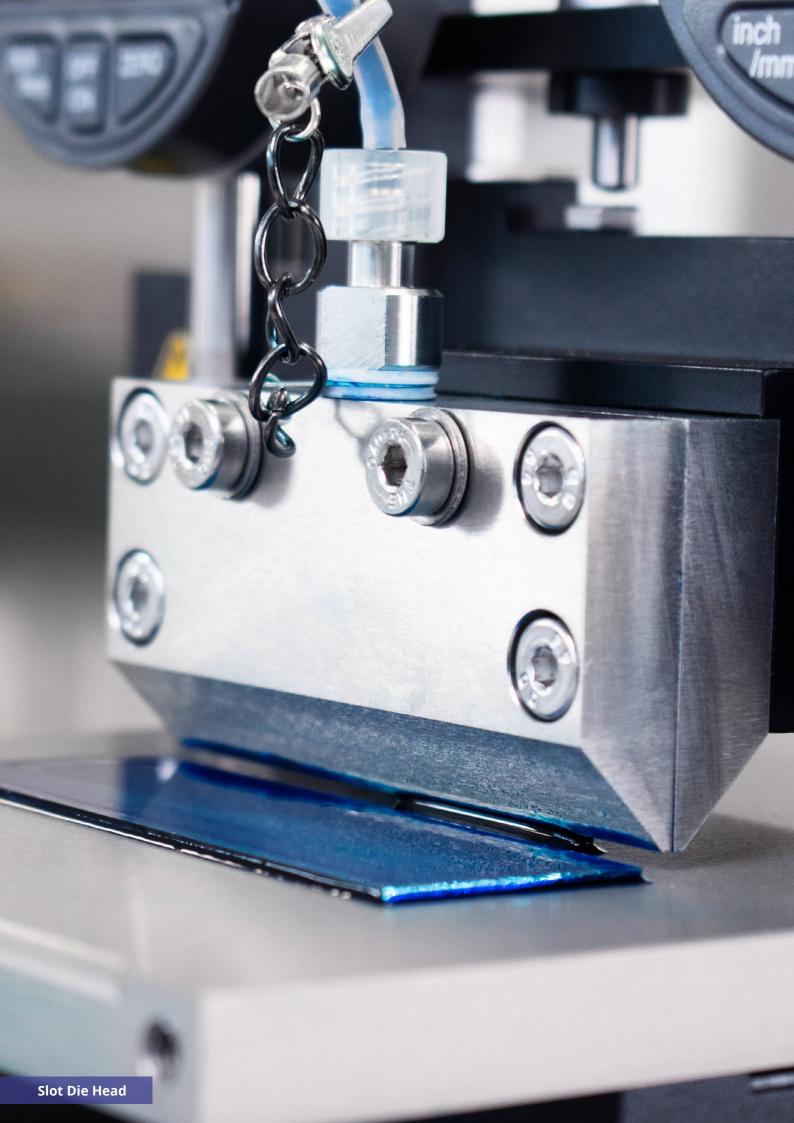
Integrated Syringe Pump

Minimum Syringe Speed	6 μm.s ⁻¹
Maximum Syringe Speed	7.5 mm.s ⁻¹

Interchangeable Accessories

Improve and customize your coating optimization process. Choose from our range of accessories including two slot die head sizes with a variety of shims and meniscus guides, a roll attachment for coating flexible substrates and foils, and an air knife to control drying conditions.





Slot Die Coater Accessories





Air Knife

Compatible with the Ossila Slot Die Coater for increased control over the drying of your films. Optimize your drying conditions across a **100 mm** width by adjusting the distance from the film and angle of air flow. Connect to a compressed air or pressurized gas line with the **4 mm** push-fit adapter.

L3005K1

Roll Attachment

Compatible with our slot-die coating system, easily coat rolls of foils and other flexible substrates up to **100 mm** in width. For a uniform gap height across the entire coating, the clamping and ratcheting mechanism holds the substrate flat against the stage during deposition.

L3005F1



Bar Coating Attachment

Expand the functionality of your Ossila Slot Die Coater mounting Mayer Bars to the slot die gantry. The spring loaded mounting mechanism allow you to quickly change you bar type and keeps them in contact with the coating surface at all times.

L3005B1





Meniscus Guides & Shims

A variety of compatible meniscus guides and shims for either the **50 mm** or **100 mm** slot die head. Meniscus guides aid the pinning of the coating width with lip depths from **1 mm** to **1.5 mm**. With shim thicknesses from **0.1 mm** to **0.05 mm**, define your coating width from **5 mm** to **100 mm**.

L3005M2 | L3005S1

	50 mm Coating Head	100 mm Coating Head
Head Material	Stainless Steel 316	Stainless Steel 316
Total Head Width	70 mm	120 mm
Input Adaptor	5 mm threaded screw	5 mm threaded screw

Slot die coater heads provide channels for the even distribution of solution across the width of coating. The shape of the lips at the exit to the head can help to stabilize the coating bead and provide improved coating quality. Combined with the slot die shims, slot die heads can provide an even coating across a wide range of different coating rates and solution viscosities.

Automatic Film Applicator

L2009A1

Automate your thin film coating processes for bar coating, doctor blade coating, and more. Control coating consistency with speeds from **0.05 mm.s**⁻¹ and **250 mm.s**⁻¹ across large samples. With the grid-patterned stage for quickly aligning samples and software for controlling the direction of travel, setting up your experiments is simple.



Use with our Mayer rods for consistent bar coating, or with our adjustable film applicator for versatile doctor blade coating.









Repeatable Coatings

Adaptable Design

Large Coating Area

Quick-Lock Magnets

Fixed or variable coating thickness

For different applicators

Up to **225 mm** x **290 mm**

For easy and efficient cleaning

Stage Travel Length	290 mm (A4) (Maximum)
Minimum Stage Speed	0.05 mm.s ⁻¹
Maximum Stage Speed	250 mm.s ⁻¹
Stage Speed Increments	0.01 mm.s ⁻¹
Maximum Coating Width	255 mm (accommodates Mayer bars with a 255 mm coating width)
Minimum Mayer Bar Length	220 mm
Stage Type	8 mm toughened glass with printed grid lines
Power Supply	DC 24 V, 2 A, via 100 – 240 V 50/60 Hz power adapter
Dimensions (D x W x H)	360 mm x 280 mm x 190 mm (14.2" x 11" x 7.5")
Weight	6.45 kg





Adjustable Film Applicator

Quickly adjust coating thickness for a wide range of reproducible wet film coatings. Accurately control the gap height down to the micron level, with either analogue or digital readout options. Available in various sizes with coating widths from **50 mm** to **200 mm** and **0 mm** to **10 mm** coating height.

Mayer Bar

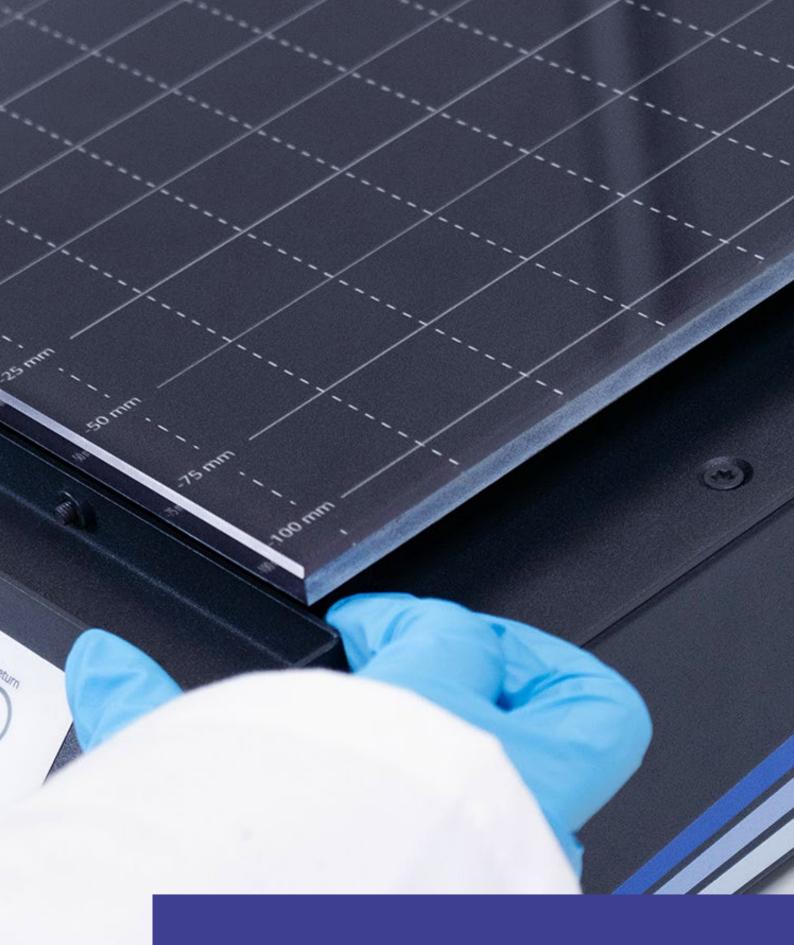
Produce quick and consistent coatings with wirewound or formed bars for thicknesses from **6 µm** to **200 µm**. Corrosion-resistant stainless steel makes these rods suitable for a variety of coating solutions. Available individually or in a set for full flexibility in comprehensive coating research.

L3009B2 L3009F1

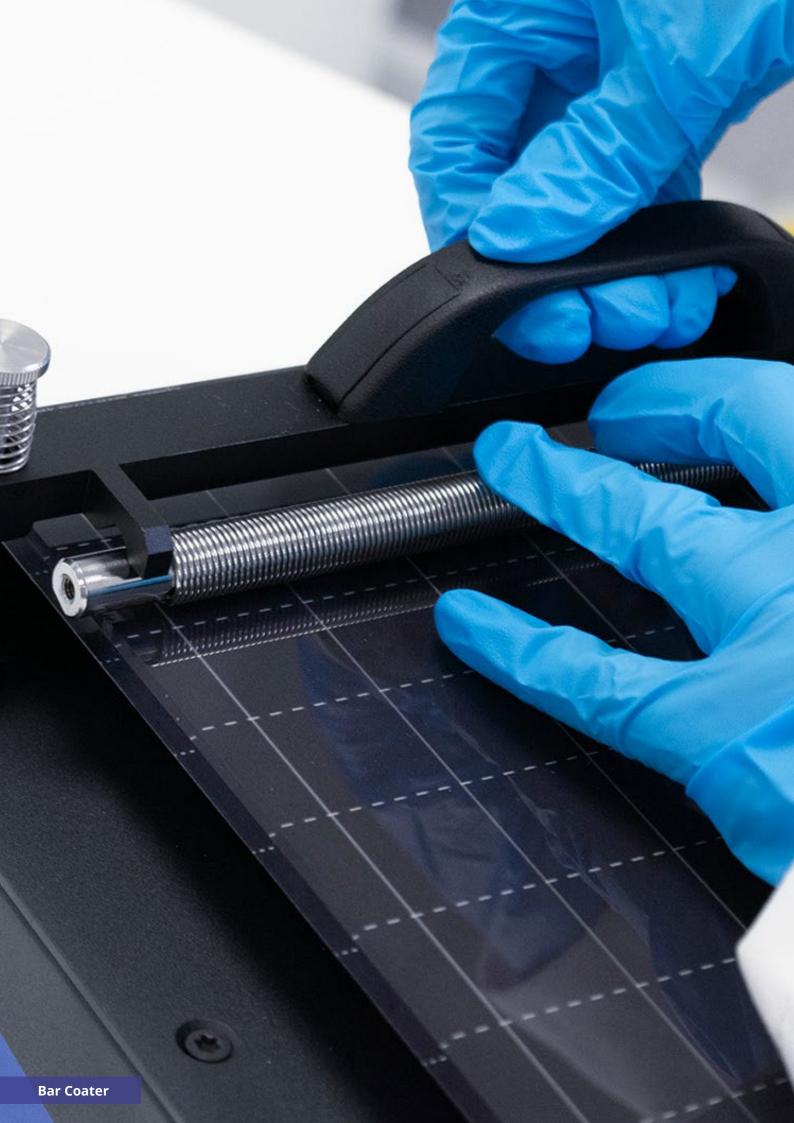
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The Automatic Film Applicator is available as part of our Bar Coater and Doctor Blade Coater systems. Both systems include the highest quality applicator at a discounted price compared to buying the same components separately.



Bar Coater

L2009A1

Speed up your coating processes with the automatic bar coater. Explore a range of wet film coating thicknesses from $6~\mu m$ to $200~\mu m$ with a full set of Mayer rods—wire-wound or formed depending on your preference.

The automated system allows you to precisely control the coating speed to produce repeatable coatings that achieve a fixed thickness, unlike manual bar coating.











Repeatable Coatings

Fixed thickness every

time

Coating Flexibility

Full set of Mayer bars

Uniform Thin Films

Over areas up to A4 **225 mm** x **290 mm**

Quick Setup

Start coating straight away

Mayer Rods

Coating Width	225 mm (accommodates Mayer bars with a 255 mm coating width)
Rod Material	304 stainless steel
End Machining	M4 tapped
Total Width	240 mm
Wire-Wound Rod Diameter	9.9 mm
Formed Rod Diameter	8.6 mm

Wire Diameter for Wire-Wound Rods

Wire Diameter	Wet Film Thickness
0.06 mm	6 µm
0.08 mm	8 µm
0.10 mm	10 μm
0.11 mm	12 µm
0.14 mm	15 µm
0.19 mm	20 μm
0.24 mm	25 μm
0.28 mm	30 μm
0.37 mm	40 μm
0.47 mm	50 μm
0.56 mm	60 µm
0.75 mm	80 μm
0.93 mm	100 µm
1.22 mm	120 µm
1.40 mm	150 µm
1.86 mm	200 μm

Film Applicator Stages

L3009S2

Simplify large-area film application with the use of one of our applicator stages. Select a simple glass stage which is suitable for most samples, or a vacuum stage for a uniform hold across flexible and delicate samples.

Combine with our adjustable applicators or Mayer rods, and quickly coat wet films with high precision down to microns thick. Our stages can be used interchangeably, so you can upgrade your current automatic film applicator, bar coater, or doctor blade coater to include a vacuum stage.



	Glass Stage	Vacuum Stage
Material	Toughened glass	Anodized aluminium
Coating Area	400 mm x 230 mm	335 mm x 209 mm (vacuum area)
Stage Thickness	8 mm	15 mm
Vacuum Inlet	N/A	M5 thread to 4mm push fit

Vacuum Stage

Our vacuum stage holds delicate samples flat against the stage surface without shifting. You can define the shape and size of the vacuum bed through the inner chamber using a simple o-ring chord. This ensures that excess solution pushed off your samples is not drawn into the vacuum bed or sucked further into the pump causing unnecessary damage.

Glass Stage

Our entry level glass stage allows you to get coating immediately. Thick toughened glass provides a rigid, flat surface to mount your sample onto, ensuring consistent gap heights between your sample and your applicator. In addition, our glass stage comes with helpful grid markings for quick alignment of samples.

Interchangeable Design

All of our applicator stages are compatible with our automated thin film applicators, bar coater, and doctor blade systems. So, whether you want to upgrade your current system or you need a spare stage improve your workflow, our range of applicator stages will be perfect for you.

Resistant Materials

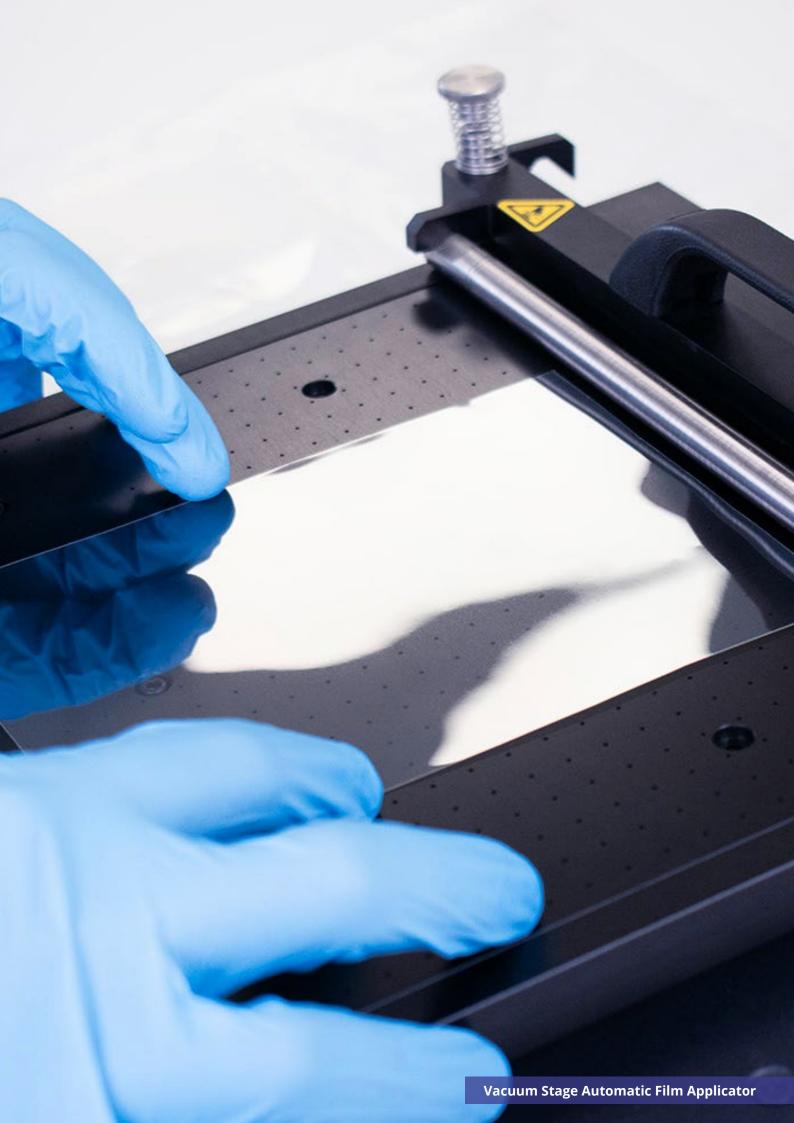
All the materials chosen for our stages provide a high degree of protection against a wide range of chemicals. No matter what you are processing, you can be confident that it will not damage your equipment

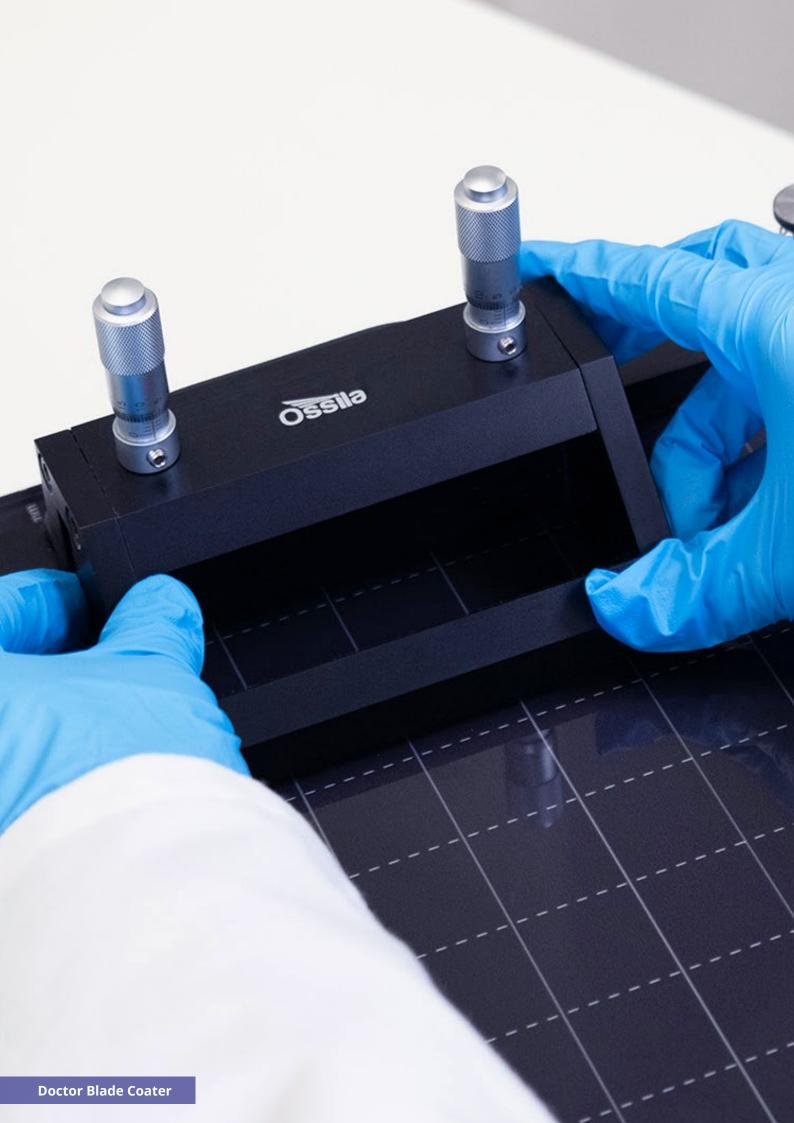


Thin Film Applicator Air Knife

Control the drying of films produced with our automated film applicator, bar coater, or doctor blade systems. The mounting bracket allows you to adjust the distance from your film and the angle of the air curtain for optimized drying conditions.

L3009F1





Doctor Blade Coater

L2009A1

Take control of essential coating parameters with our automatic doctor blade coater. Make micron-level adjustments to the gap height (up to 10 mm) for a range of coating thicknesses. Plus, the digital micrometer readout ensures ultimate accuracy as you optimize your coatings.

Featuring a travel distance of up to 290 mm, choose the right blade applicator width for your setup, with custom options available (from 50 mm to 200 mm).







Digital micrometer readouts



Uniform Thin Films

Over areas up to 200 mm



Quick Setup

Start coating straight away



High Chemical Resistance

Aluminium or steel applicator

Automatic Film Applicator

Stage Travel Length	290 mm (A4) (maximum)
Minimum Stage Speed	0.05 mm.s ⁻¹
Maximum Stage Speed	250 mm.s ⁻¹
Stage Speed Increments	0.01 mm.s ⁻¹
Maximum Coating Width	200 mm with largest applicator
Stage Type	8 mm toughened glass with printed grid lines
Power Supply	DC 24 V, 2 A, via 100 – 240 V 50/60 Hz power adapter
Dimensions (D x W x H)	360 mm x 280 mm x 190 mm (14.2" x 11" x 7.5")
Weight	6.45 kg

Digital Adjustable Film Applicator

Coating Widths	100 mm, 200 mm, and custom (50 mm – 200 mm)
Material	304 stainless steel
Gap Height	0 – 10 mm
Gauge Type	Digital
Gauge Resolution	1 μm
Gauge Accuracy	3 μm

Micron-Level Thickness Adjustment

The digital micrometer head provides high accuracy blade positioning. For improved reproducibility and efficiency, the blade is calibrated to the zero position of the micrometer gauge. Plus, the rounded tungsten carbide tip provides longevity for your system.

Spray Coater

L2009A1

Scale up efficiently with our new spray coating system, designed to help you optimize your parameters in preparation for large scale processes. With interchangeable heads and controllable gas inlet and solution pressure, you can achieve a wide range of spray patterns and droplet sizes. Control your coating speed with the motorized stage and the drying process with the heated surface.











Highly Optimizable

Change pressure, height, speed, and temperature

Coating Flexibility

Interchangeable spray heads and spray nozzles

Large Area Coating

Multi-head coverage over **200 mm** x **180 mm**

Quick Set Up

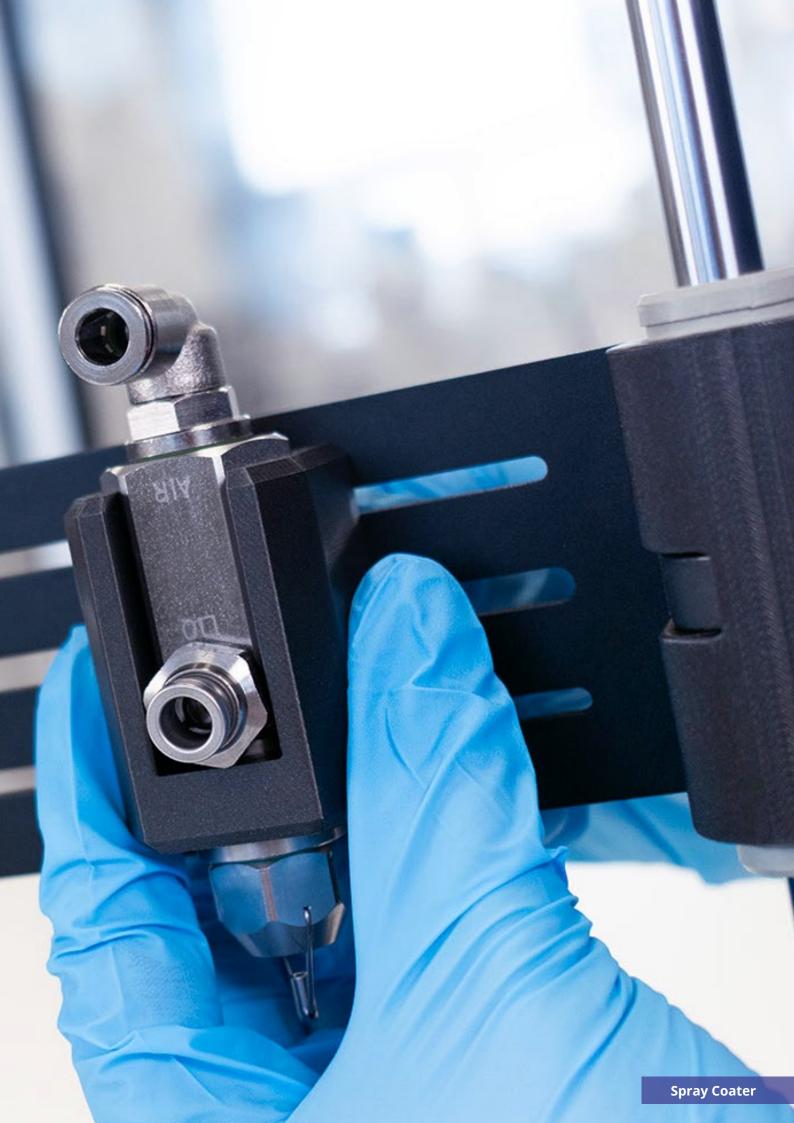
Start coating in minutes with simple set up and operation

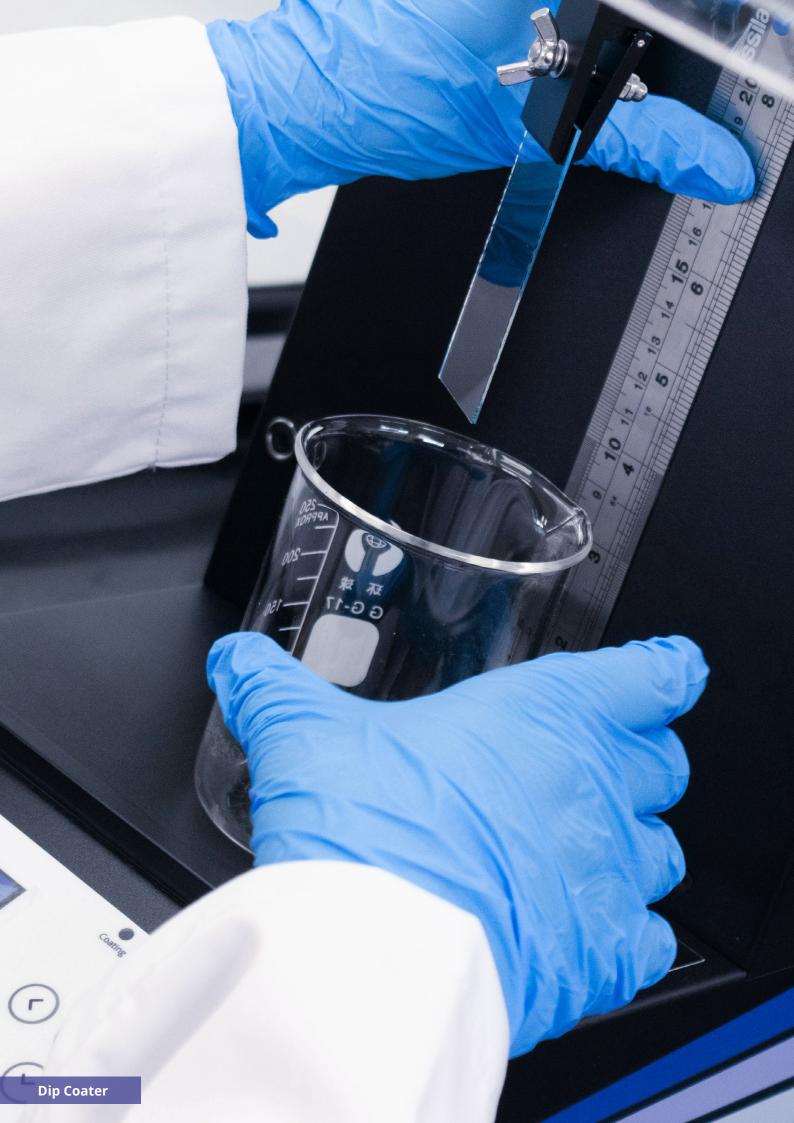
Spray Coater Specifications

Maximum Stage Travel	290 mm
Minimum Stage Speed	0.05 mm.s ⁻¹
Maximum Stage Speed	250 mm.s ⁻¹
Stage Speed Increments	0.01 mm.s ⁻¹
Heated Stage Material	Hard Anodized aluminium stage
Maximum Stage Temperature	100 °C
Heating Increments	1 °C
Air Pressure	0.15 to 7.0 Bar
Fluid Pressure	0.1 to 3.5 Bar
Maximum Sample Size	200 mm x 180 mm
Power Supply	DC 24 V, 5 A, via 100 – 240 V 50/60 Hz power adapter
Dimensions (D x W x H)	350 mm x 280 mm x 550 mm (14" x 11" x 22")
Weight	6.45 kg

Head Specifications

	Ultrasonic Spray Head	Gas Atomizing Spray Head
Spray Pattern	Cone	Cone or Fan
Spray Angle	80°	15° to 90° (Depending on Air Cap)
Droplet Size	18 µm	30 µm
Solution Mixing	External	Internal or External (Depending on Air Cap)
Solution Delivery	Syphon or Pressure Driven	
Inlets	G1/8 Liquid, G1/4 Gas	G1/4 Liquid, G1/4 Gas
Material	Stainless	Steel 316





Dip Coater

L2006A2

Designed by experienced materials scientists, easily achieve a range of coating thicknesses with our user-friendly system. The precision stage and motor help to consistently produce high-quality films.

Set the immersion and withdrawal properties independently to create both constant and variable film thicknesses. Plus, you can coat different films without reconfiguring the system by saving up to **10 different programs**, each with **20 routines**.





Range of Speeds

(<u>†</u>)

Variable Withdrawal



Easy to Use



Quick-Release Clamp

From **0.01 mm/s** to **50 mm/s**

For gradient films

With integrated software

To improve workflow

Minimum Withdrawal Rate	0.05 mm.s ⁻¹
Maximum Withdrawal Rate	125 mm.s ⁻¹
Rate Reproducibility	±0.01% @ 1 mm.s ⁻¹ ; ± 0.1% @ 10 mm.s ⁻¹ ; ± 0.3% @ >50 mm.s ⁻¹
Maximum Travel Distance	175 mm
Maximum Number of Cycles	1,000 cycles
Maximum Timer Duration	99:59:59 (HH:MM:SS)
Integrated Software Features	Variable withdrawal speed, repeat cycles, crash detection
Programmes	20
Power Supply	DC 24 V
Product Dimensions (W x H x D)	200 mm x 350 mm (580 mm fully extended) x 300 mm (7.87" x 13.78" x 14.96")
Weight	3.6 kg

In-Built Safety

The crash detection system can detect when the substrate or arm crashes into the base of the coater or a beaker. To reduce the chance of damaging your samples or equipment, the motor stops automatically.

High-Precision Motor

We have developed a motor with a high degree of accuracy and reproducibility for a smooth motion profile. You can be sure that each time you coat your sample, you will get the same results.

Quick-Release Clamp

Streamline your experimental process with a system that tackles workflow issues. Quickly load and unload samples onto the dip coater arm with the quick-release clamp.

Variable Withdrawal

For high-quality gradient films, the speed of withdrawal can be varied across the substrate length. Customize your film charactistics and produce films suitable for a wide range of research applications.

UV Ozone Cleaner

L2002A3

Produce near-atomically clean surfaces without causing damage to your samples. A high-power UV light source generates ozone to break down and remove contamination from the surface of substrates and samples within minutes.

The large cleaning area provides plenty of space to clean multiple samples at once, microscope slides, or even petri dishes. An essential addition to any lab.





High-Intensity UV Lamp

Emission at **185 nm** and **254 nm**



Smart Safety Features

Including thermal cutoff



Large Cleaning Area

153 mm diameter



Lamp Replacement Service

Extend system lifetime

Dimensions (W x D x H)	210 mm x 310 mm x 228 mm
Cleaning Area	153 mm (6 inch) diameter circle
Maximum Sample Height	12 mm
Weight	5.25 kg

UV Light

Lamp Type	Low pressure mercury discharge lamp
Lamp Dimensions (L x D)	150 mm x 15 mm
Number of Lamps	4
Discharge Peaks	185 nm and 254 nm
Lamp Lifetime	T80 lifetime 2,000 hours

Sample Irradiance

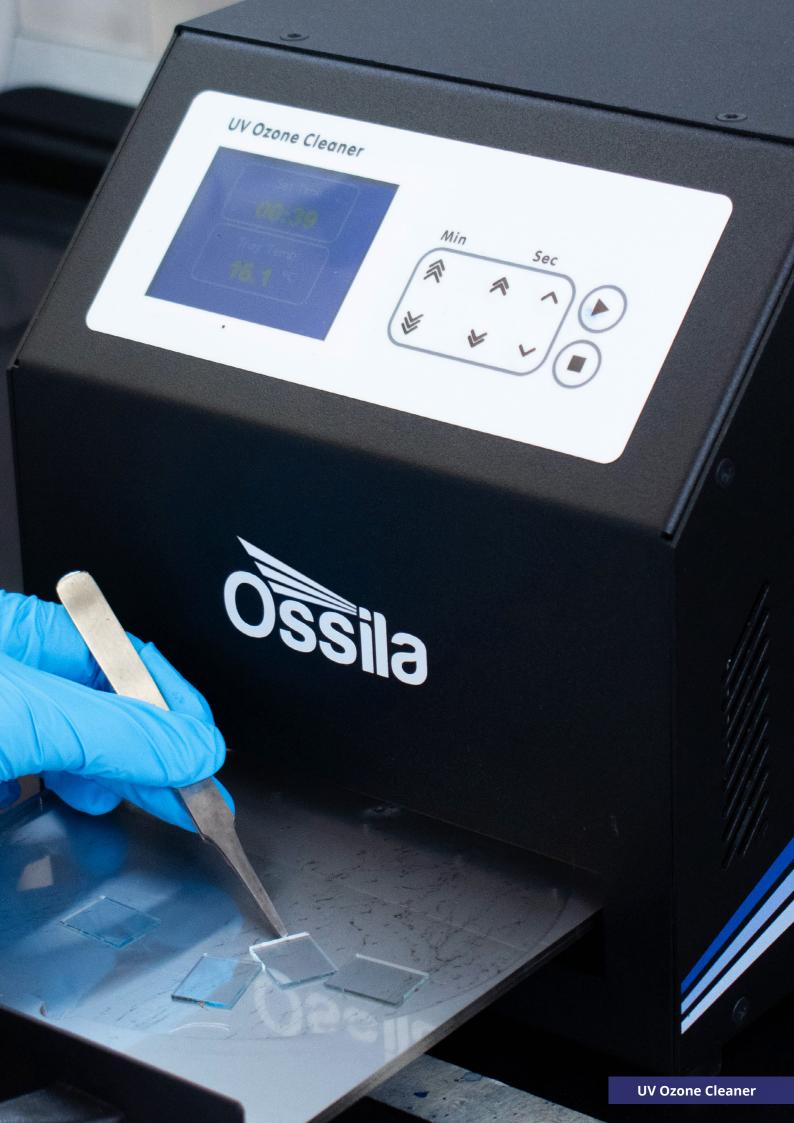
Sample UV Intensity	15 mW·cm ⁻² at 185 nm
Exposure Time	1 second to 60 minutes; digitally controlled

Equipment Safety Features

Drawer Interlock	Hardware interlock sensor
Temperature Regulation	Active lamp cooling - 53 CFM axial fan
Thermal Cutoff	Onboard temperature sensors for software cutoff

Lamp Replacement Service

Our UV ozone cleaner is fitted with a long-lasting lamp to provide thousands of hours of high-intensity light output. However, every UV lamp has a finite lifetime and lower bulb intensity means increased cleaning times. When the lamp reaches its lifetime, we can replace your bulbs, fully test all components, and safely dispose of the old bulbs—there's no need to purchase a new system.





Four-Point Probe

T2001A4

Easy and reliable characterization of your thin films with rapid sheet resistance, resistivity, and conductivity measurements. Achieve precise voltage readings ranging from 100 μV to 10 V and sheet resistance measurements spanning 100 $m\Omega/sq$ to 10 $M\Omega/sq$. The spacious stage area accommodates larger samples up to a 6-inch (152.4 mm) diameter.





Soft- or Sharp-Tipped Probes

Reliable measurements of many materials

4

Wide Current Range

From 1 μA to 200 mA



High-Accuracy Measurements

Eliminate voltage offsets



Micrometer Height Control

Achieve good electrical contact

Voltage Range	±100 μV – ±10 V
Current Range	±20 μA – ±200 mA (5 ranges)
Sheet Resistance Range	100 mΩ/square – 10 MΩ/square
Probe Spacing	1.27 mm
Rectangular Sample Size	5 mm (Long edge minimum) 152.4 mm (Short edge maximum)
Circular Sample Size Diameter	5 mm – 152.4 mm
Maximum Sample Thickness	8 mm
Dimensions (L x W x H)	240 mm x 145 mm x 150 mm

Sheet Resistance	SMU Accuracy*	Precision	Measured at Range
100 mΩ/square	±8%	±3%	200 mA
1 Ω/square	±2%	±0.5%	200 mA
10 Ω/square	±1%	±0.5%	200 mA
100 Ω/square	±1%	±0.05%	20 mA
1 kΩ/square	±1%	±0.03%	20 mA
10 kΩ/square	±1%	±0.02%	2000 μΑ
100 kΩ/square	±2%	±0.05%	200 μΑ
1 MΩ/square	±8%	±0.5%	20 μΑ
10 MΩ/square	±30%	±5%	20 μΑ

^{*} The probe head can introduce up to 4% additional measurement error.



Soft-Tipped Probe Head

Reduce the potential of damaging your delicate thin films. Our probes have rounded tips and a larger surface area with a radius of **0.24 mm**. The gold-plated probes are mounted on springs to allow them to retract into the probe head when making contact with the sample. This design spreads out the downward force and ensures that a uniform force of **60 grams** is applied to the sample.

P2010A2

Four-Point Probe Plus

T2001A5

For added convenience, take quick measurements and characterize your samples without connecting to a PC with the Ossila Four-Point Plus.

The integrated software is easily controlled by the LED screen and keypad to independently measure the sheet resistance and, after inputting the dimensions and thickness, the conductivity and resistivity of a sample. It also provides real-time display of both the current and voltage between the outer pins and the voltage between the inner pins. For more complex experiments, this model still includes free PC software so you can record your data.



Voltage Range	±100 µV – ±10 V
Current Range	±20 μA – ±200 mA (5 ranges)
Sheet Resistance Range*	100 mΩ/square – 10 MΩ/square
Probe Spacing	1.27 mm
Rectangular Sample Size	5 mm – 152.4 mm
Circular Sample Size Diameter	5 mm – 152.4 mm
Maximum Sample Thickness	8 mm
Dimensions (L x W x H)	240 mm x 145 mm x 150 mm

^{*}Detailed sheet resistance specifications included on page 39

Free Software

Control your four-point probe with our free, user-friendly Ossila Sheet Resistance Lite software. The software can calculate appropriate geometrical correction factors for the sample geometry and the resistivity and conductivity of the sample to allow for extensive, accurate electrical characterization of materials.



Soft- or Sharp-Tipped Probes

Reliable measurements of many materials



Wide Current Range

From 1 μA to 200 mA



High-Accuracy Measurements

Eliminate voltage offsets



Micrometer Height Control

Achieve good electrical contact

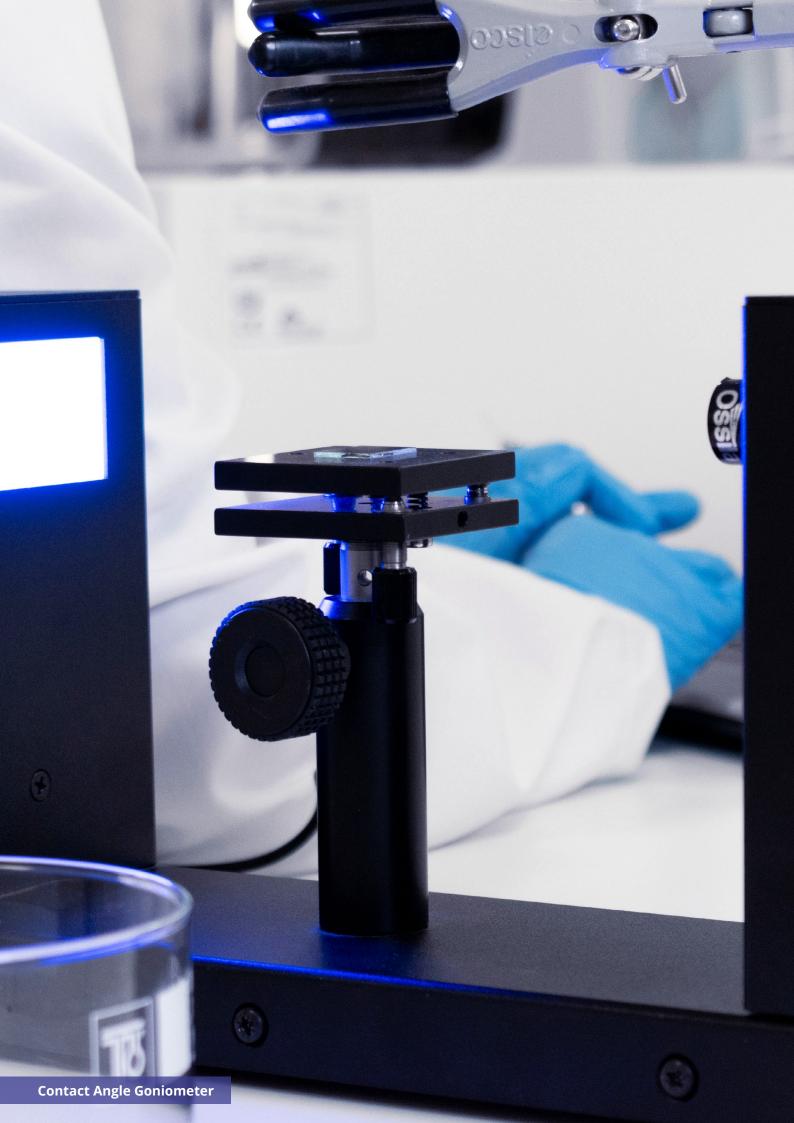


Sharp-Tipped Probe Head

Designed for materials with naturally forming oxide layers, like silicon. With a tip diameter of **0.08 mm**, the nickel-plated tungsten carbide tips can apply a maximum force of **197.43 gf** to pierce the insulating layer for reliable sample measurements.

P2010B2





Contact Angle Goniometer

L2004A1

Conduct contact angle and surface tension measurements with easy, accurate analysis. Assess the wettability of solutions on various substrates using intuitive PC software and HD recordings. With a measurement range of **5°** to **180°**, characterize high contact angles for water-resistant or protective coatings and low contact angles for creating highly uniform solutions.

The adaptable clamp system accommodates various syringe sizes and other droplet dispensing equipment. Included with the system is a **25 \muI** glass syringe with a removable blunt-tip needle.





Adjustable Sample Stage

For precise droplet deposition



High-Resolution Video

Analyze quality recordings



Accurate Edge Detection

With a powerful backlight



Rapid Image Capture

Study the wetting process

Specifications

Measurement Accuracy	±1°
Measurement Range	5° – 180°
Stage Area	50 mm x 50 mm
Maximum Sample Thickness	20 mm
Maximum Camera Resolution	1920 x 1080
Maximum Frame Rate	30 FPS
Dimensions (L x W x H)	320 mm x 95 mm x 165 mm

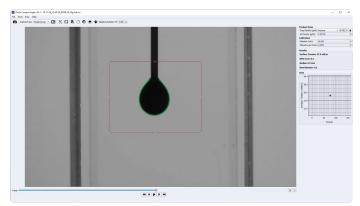
Syringe Specifications

Syringe Volume	25 μL
Needle Diameter	0.47 mm
Needle Length	51 mm
Tip Shape	Blunt

Software

The Contact Angle Goniometer comes complete with user-friendly measurement software for recording and analysis.

Capture and save high-resolution videos, then, measure the contact angle and surface tension of your recorded droplets. The software performs an edge detection algorithm on the droplet and uses an appropriate fitting technique to calculate its properties.



Probe Station

T2009B1, T2009C1, T2009D1

Get clean, reliable data without the high price or complexity of overengineered systems. Designed for small-scale electronics experiments, the Ossila Probe Station opens up simple and stable manual probing to facilitate the experiments you want. The vacuum-compatible chuck securely holds samples from **5 mm** to **150 mm**. Complete with integrated vibrational dampening, electrical isolation, **60 fps** USB camera and display screen, this probe station has everything you need to get up and running.

Our Probe Station accommodates up to eight micromanipulators, and with a standard optical breadboard base, you can attach additional components and customize the set up for more specific experiments.



Base Station & Platens

Base	Aluminum optical breadboard, 25 mm hole spacing		
Vibration Isolation	Elastomeric vibration dampening mounts		
Natural Frequency	12 Hz		
Effective Vibration Isolation	>17 Hz		
Maximum Supported Load	880 N total		
Platen Material	Ferromagnetic stainless steel		
Platen Height	150 mm		
Platen Capacity	Up to 8 Ossila Micromanipulators		

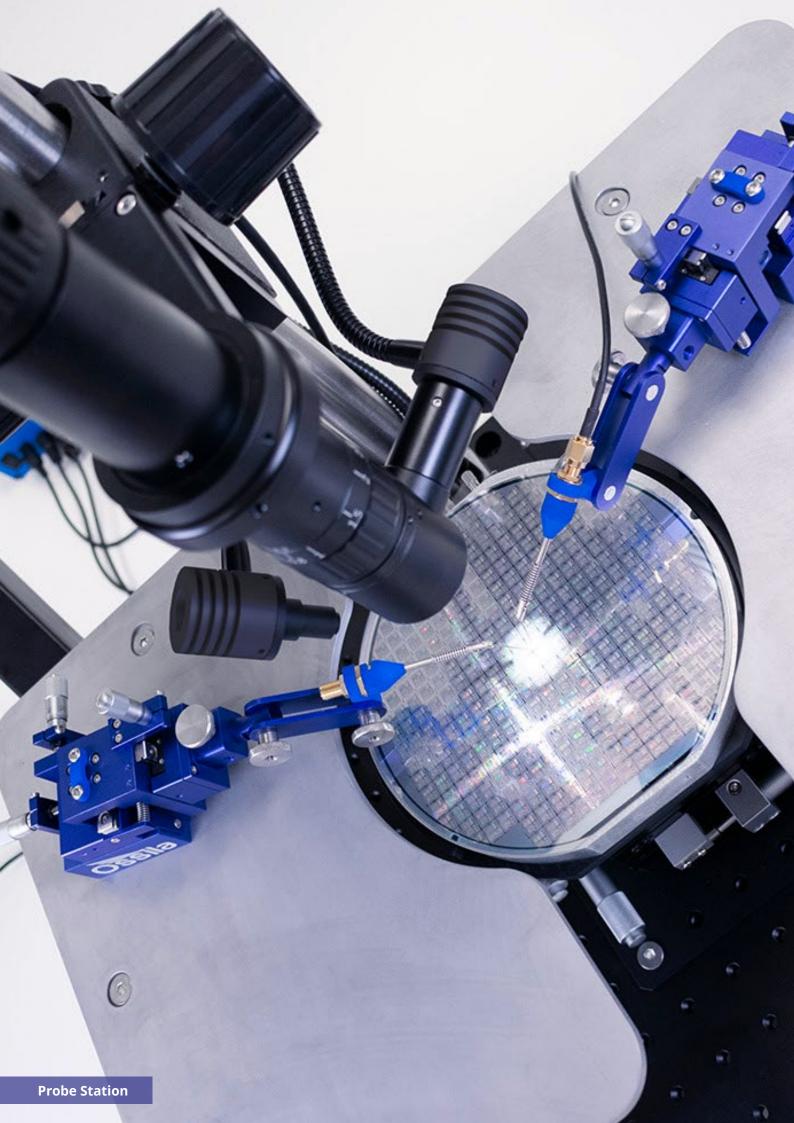
Chuck Stage

Stage Travel	25 mm (X, Y), 10 mm (Z), 360° (coarse rotation), 10° (fine rotation)		
Stage Resolution	0.01 mm (X, Y, Z), 0.1° (rotation)		
Substrate Size	150 mm diameter (Maximum), 5 mm diameter (Minimum)		
Chuck Diameter	155 mm		
Chuck Material	Aluminum		
Chuck Type	Vacuum (selectable zones)		
Chuck Isolation	>99 MΩ at 500 VDC		
Chuck Leakage Current	<75 pA at ± 75 VDC		
Vacuum Connection	Ø=6mm Push-In Tube, Female port		

Microscope

Microscope Type	Monocular Zoom Lens (0.6x – 5.0x optical zoom)		
Field of View	9.3 mm – 1.1 mm		
Working Distance	86 mm		
Camera Sensor	Sony IMX415 (4K, 1/2.8")		
Maximum Resolution	4.4 μm line spacing (228 lp/mm)		
Live Output	USB 3.0 & HDMI (up to 60 fps at full resolution)		
Camera Software Compliance	UVC-compliant for plug-and-play viewing with most 3rd party software		
Monitor	15.6" 1080p, on a positionable arm		
Total Magnification	37x - 309x		
Illumination	Adjustable LED (coaxial configuration)		





Probe Station



Microscope Camera

Providing simultaneous HDMI and USB 3.0 outputs, this camera streamlines your entire workflow. Project a perfectly smooth, zero-lag image onto a large monitor for delicate manual tasks, while at the same time capturing high-resolution images and video on your computer for analysis and documentation. A simple, powerful, and refreshingly open tool designed for the modern laboratory.

T2010A1



Differential Interface

Simplify the complex task of your connecting SMA-connectorized micromanipulator probes and BNC-connectorized source measure unit for differential measurements. Eliminate the need for custom wiring and messy, unreliable connections, save valuable research time, and ensure consistent, high-quality measurements with our differential interface.

T3007A1



Probe Tips

Our tungsten and beryllium copper alloy probe tips provide a reliable and precise solution for micromanipulator probing of semiconductors, components, and other microelectronic devices. Available in $\bf 5~\mu m$ or $\bf 20~\mu m$ tip diameters to suit your research needs, each set contains 10 individual probes.

T3008A1, T3008B1, T3008C1



Micromanipulator Sets

Make your small-scale experiments more reliable and your workflows more intuitive with the Ossila Micromanipulator. Confidently control manual positioning processes thanks to the precision linear bearings engineered to ensure smooth, repeatable motion with minimal backlash or drift. For the most sensitive experiments, you can achieve a positioning resolution as low as **2 µm** with the fine-pitch micrometer upgrade.

T2007A1-P, T2007B1-P

Probe Station



Platen Set

Create a stable foundation for your custom probe station with our high-stability platens. Made from durable ferritic stainless steel, these precision-brushed platforms offer excellent ferromagnetic properties to achieve an optimal balance of friction and smoothness while minimizing glare and slippage. When paired with Ossila Micromanipulators, the carefully calibrated magnetic coupling delivers exceptional holding force without compromising repositioning.

T2009B1



Triaxial Adapters

Connect your equipment effortlessly with our affordable triaxial adapters. These adapters make it easy to interface triaxial-connectorized instruments with BNC-based devices and cables while maintaining signal integrity, shielding, and safety. From device testing to low-current measurements, ensure precision connections in your sensitive measurements.

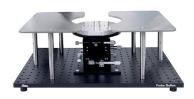
C2022A1, C2022B1, C2022C1, C2022D1



Universal Tool Clamp

Unlock the full potential of your Ossila Micromanipulator. This essential accessory transforms your system, enabling accurate manipulation of diverse tools beyond standard electrical probes. From fluid dispensing to optical alignment, it extends your experimental capabilities, bringing micron-level precision to new applications while enhancing your flexibility and compatibility. Effortlessly attach and precisely position tools or devices from **1 mm** to **13 mm** in diameter

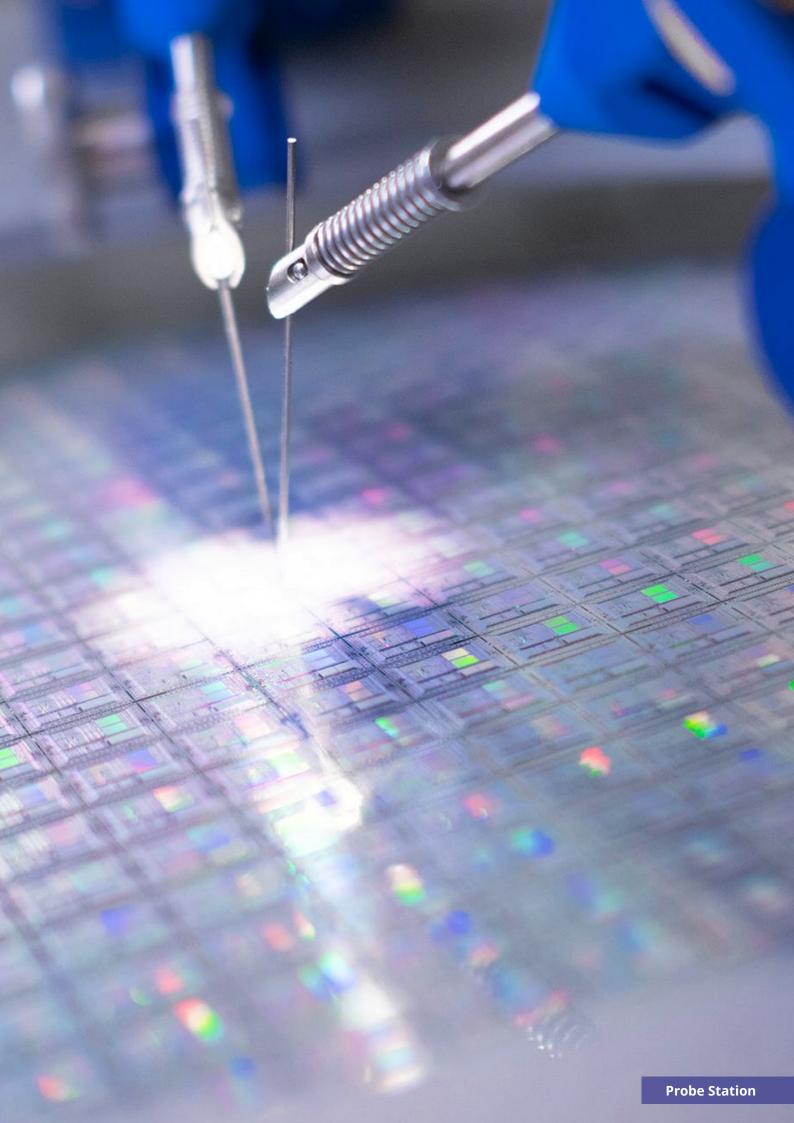
T2007C1

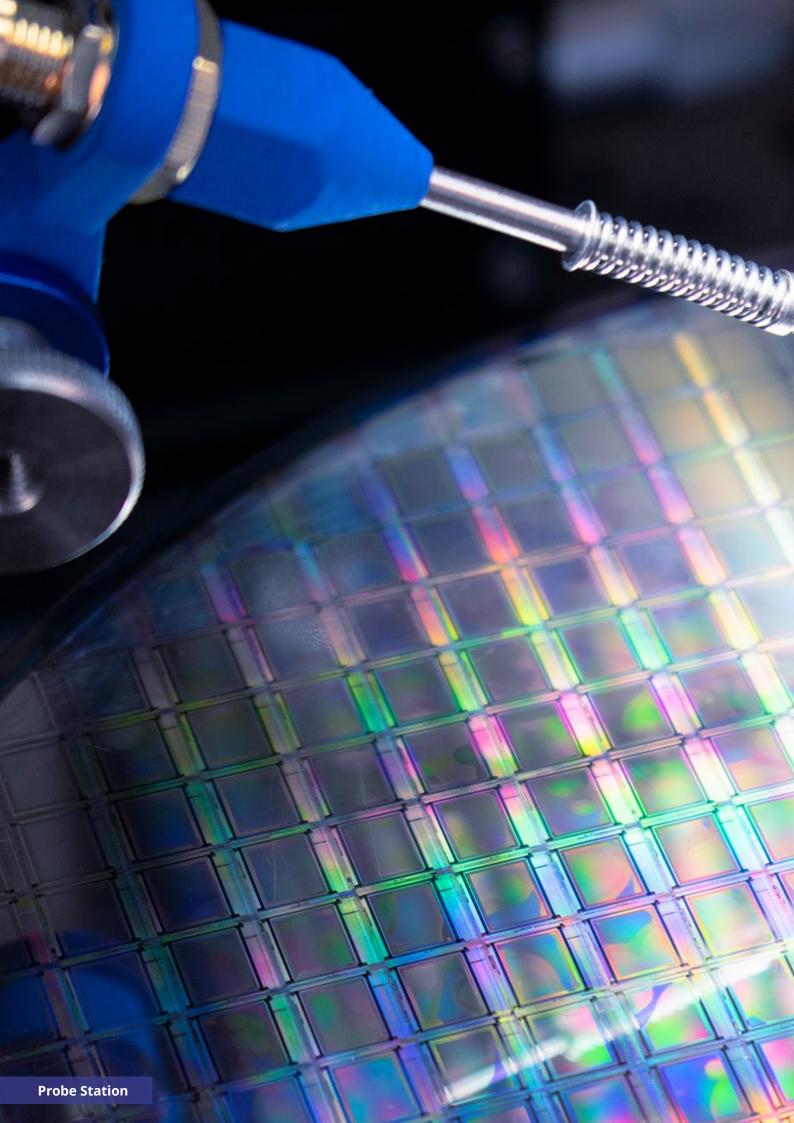


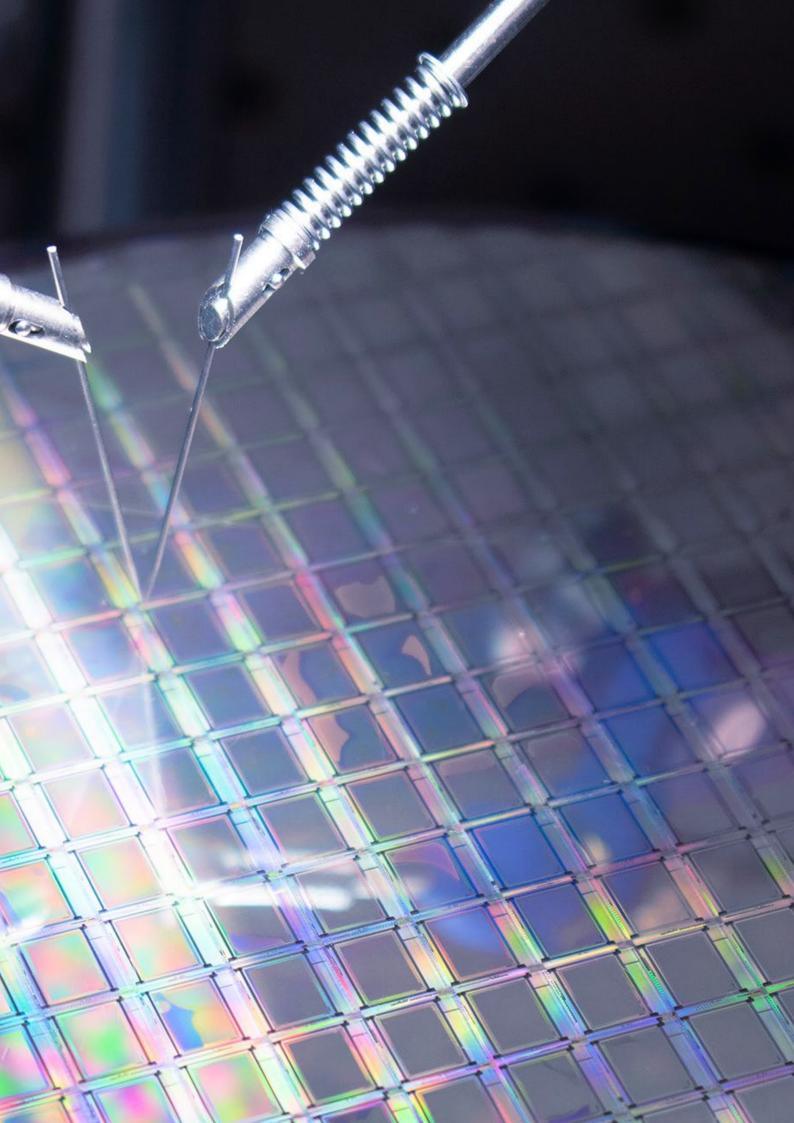
Probe Station Base

A stable foundation for your custom probe station setup. With the Ossila Probe Station Base, configure a low-noise, stable measurement environment for consistent, high-quality data collection. The vacuum-compatible chuck securely holds samples from **5 mm** to **150 mm**, while the spacious magnetic platens accommodate your measurement tools and the standard optical breadboard base makes it easy to integrate additional components to customize the system.

T2009A1







Micromanipulator

T2007A1, T2007B1

Make your small-scale experiments more reliable and your workflows more intuitive. Confidently control manual positioning processes thanks to the precision linear bearings engineered to ensure smooth, repeatable motion with minimal backlash or drift. Designed with comfort and focus at the forefront, you can easily position the probe without looking away from your microscope. Make intuitive probe adjustments along a **6.5 mm** graduated travel distance with micrometer heads which are aligned to each axis of motion.



For the most sensitive experiments, achieve a positioning resolution as low as $2 \, \mu m$ with the fine-pitch model. To get you up and running, save when you buy a pair of right- and left-handed micromanipulators.



Micron-Level Precision

10 μm motion resolution



Intuitive Control

Adjust positioning without looking



Low Leakage Current

For semiconductor measurements



Compact Design

For busy probe stations

Motion

	T2007A1	T2007B1	
Drive Axes	X, Y, Z	X, Y, Z	
Drive Fine Movement	Micrometer Fine-pitch micromete		
Maximum Axis Travel	10 mm	10 mm	
Graded Axis Travel	6.5 mm 6.5 mm		
Micrometer Readout Resolution	10 μm	5 μm	
Micrometer Head Thread Pitch	50 threads per inch 100 threads per inch		
Smallest Achievable Motion	Approx. 4-8 μm	Approx. 2-4 μm	

Probe

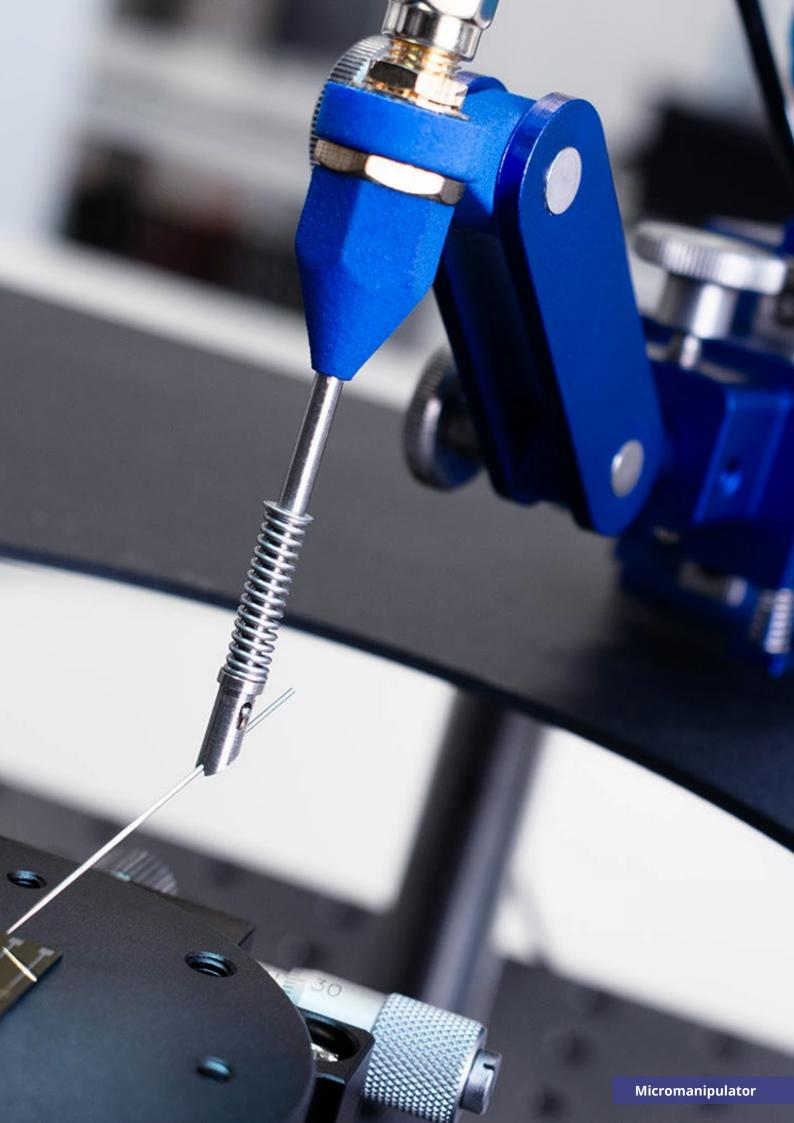
Probe Type	Tungsten, 20 µm tip diameter		
Probe Connection	SMA		
Probe Leakage Current	<100 pA at ± 75 VDC		
Probe Path Resistance	≤0.3 Ω		

Specifications

Base Type	Magnetic
Dimensions (L x W x H)	155 mm x 74 mm x 78 mm
Extended Dimensions (L x W x H)	231 mm x 77 mm x 84 mm
Weight	400 g

Precise and Reliable Construction

Each axis of motion incorporates a precision linear bearing and spring-loading for smooth, repeatable, and reliable motion without backlash. Our high-quality micrometers provide a reliable motion resolution of **10 \mum** or **5 \mum**.





Linear Stages

G2010E1, G2010F1, G2010B1

Make precise positioning simple with our range of stackable linear stages. Experience a seamless motion profile, quiet operation, and reduced vibrations with advanced motor control technology, and handle a wide range of applications with ease. The free software, with simple USB connectivity, lets you easily control the positioning and motion of multiple stages.



Every stage is tested according to the ISO 230-2:2014 standard with our traceable calibration system.



Repeatable Positioning

Accurate and precise



Built to Last

High-quality construction



Simple Motion Control

With free software



Stackable

For multi-axis motion

Travel Range Options	200 mm	100 mm	50 mm
Drive	C7 ball screw	C7 ball screw	C7 ball screw
Maximum Speed	15 mm/s	15 mm/s	15 mm/s
Maximum Horizontal Load	30 kg	10 kg	10 kg
Maximum Vertical Load	10 kg	3 kg	3 kg
Dimensions (L x W x H)	47 cm x 17 cm x 7 cm	33 cm x 13 cm x 7 cm	28 cm x 13 cm x 7 cm

Motion Specification

<40 μm
<20 µm
<40 μm
<10 µm
<10 µm
<20 µm
<40 μm
<30 µm
<30 μm
<40 μm
<30 μm
<30 µm

High-Precision Linear Stages



Maximize precision and reduce positioning errors in your experiments with micrometer-level positioning. Implement advanced motion control technology, with a seamless motion profile and reduced vibrations, in applications that require ultimate precision. The stackable design can combine two or three stages for multi-axis motion, while keeping operation and integration simple.



Every stage is tested according to the ISO 230-2:2014 standard with our traceable calibration system.

Travel Length	100 mm	200 mm
Drive	C5 ball screw	C5 ball screw
Maximum Speed	15 mm/s	15 mm/s
Maximum Horizontal Load	30 kg	30 kg
Maximum Vertical Load	10 kg	10 kg
Dimensions (L x W x H)	37 cm x 17 cm x 7 cm	47 cm x 17 cm x 7 cm

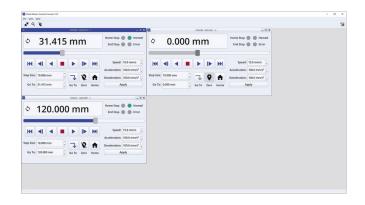
Motion Specification

Maximum Reversal Error	<20 μm
Mean Reversal Error	<10 µm
Bi-directional Repeatability	<20 μm
Forward Repeatability	<5 μm
Backward Repeatability	<5 μm
Mean Bi-directional Positioning Error	<20 μm
Bi-directional Positioning Error	<20 μm
Forward Positioning Error	<15 µm
Backward Positioning Error	<15 µm
Bi-directional Systematic Positioning Error	<20 μm
Forward Systematic Positioning Error	<15 µm
Backward Systematic Positioning Error	<15 µm

Software

The Ossila Motion Control Console is designed to be simple and intuitive. When using two or more linear stages, stacked or separately, you can control them all from the same window. With the software you can easily:

- Home your stage
- Move to absolute positions
- Move by relative distances
- Set the movement speed







Source Measure Unit

P2005A2

Designed for scientists and engineers working on the next generation of electronic devices. Measure the I-V characteristics of many devices including photovoltaics, LEDs and OLEDs, transistors, and more.

The Ossila Source Measure Unit contains four instruments on one board; two SMUs (voltage source, current sense) and two precision voltage sense channels. Plus, a general-purpose shutter/trigger enables it to control (or be controlled by) other instruments.









Five Independent Channels



Wide Current Range



Flexible and Scalable

Easy to control

Adaptable and fundamental

10 nA to 200 mA

Connect via USB or Ethernet

Channel Connectors	BNC
Dimensions (L x W x H)	185 mm x 125 mm x 55 mm

Current Specifications

Range	Accuracy	Precision	Resolution
±200 mA	±500 μA	10 μΑ	1 μΑ
±20 mA	±10 μA	1 μΑ	100 nA
±2 mA	±1 μA	100 nA	10 nA
±200 μA	±100 nA	10 nA	1 nA
±20 μA	±10 nA	1 nA	100 pA

Voltage Measure Specifications

Range	Accuracy	Precision	Resolution
±10 V	10 mV	50 μV	10 μV

Voltage Source Specifications

Range	Accuracy	Precision	Resolution
±10 V	10 mV	333 µV	170 μV

Choose Your Preferred Programming Language

The user-friendly design works with almost any programming language. Common compatible languages include Python, MATLAB, Java, C/C++, and more.

Flexible and Scalable Communication

Expand your experimental capabilities by connecting the source measure unit via USB, or use several units at the same time via Ethernet connection.

Also available for OEM use as a set of five fully functional SMU PCBs individually packaged in antistatic bags

LED Solar Simulator

G2009B1

A reliable LED light source for quick and easy testing of small-area solar cells. Excellent **AAA** spectral distribution over a **15 mm** diameter area and **ABA** classification over a **25 mm** diameter area (IEC 60904-9:2020 International Standard).

The LED lamp delivers a calibrated output optimized for the solar spectrum, with individual LED and total irradiance control via free software.





High Spectral Control

Control individual LED output



Long Lifetime

10,000+ operating hours



Short Warm-Up Time

Ready to use in seconds



Modular Design

Use with Ossila test systems

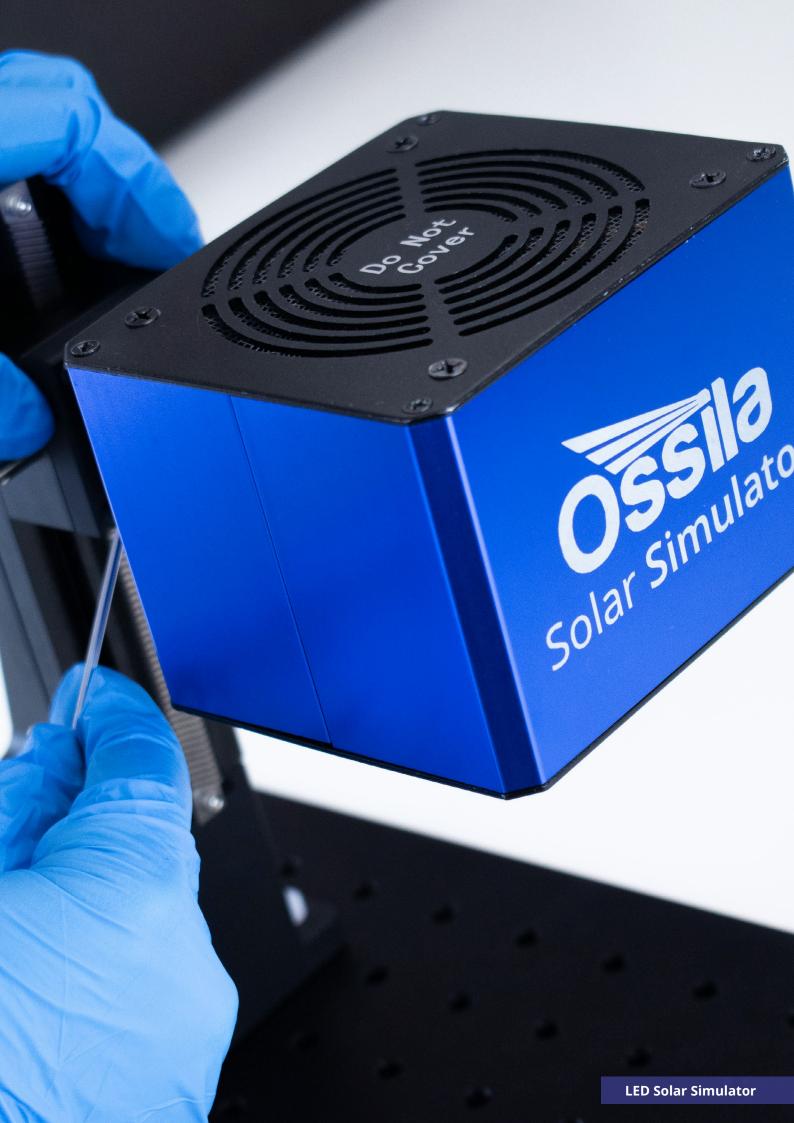
Classification (15 mm diameter area)	AAA
Туре	LED-Based, Steady State
Spectral Deviation	<70%
Spectral Coverage	>80%
Working Distance	8.5 cm
Irradiance (at working distance)	1,000 W/m ²
Maximum Lamp Time	10,000 hours
Head Dimensions (L x W x H)	10.5 cm x 9.0 cm x 8.0 cm
Weight	600 g

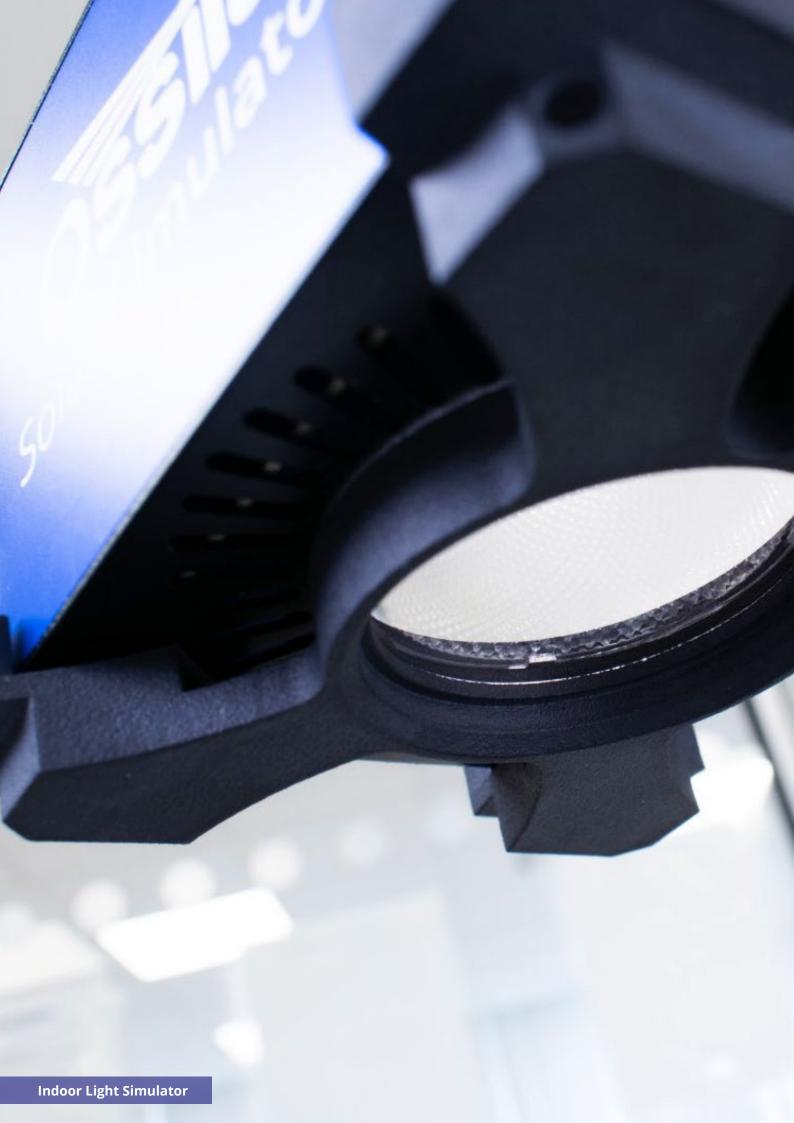
Classification Specifications

Spectral Match	A
Spatial Uniformity (over 15 mm diameter area)	A
Spatial Uniformity (over 25 mm diameter area)	В
Spatial Uniformity (over 32 mm diameter area)	С
Temporal Instability	A

Modular and Compatible

Compatible with Ossila solar cell testing systems, testing boards, and substrates for simple, high-quality solar cell testing, or easily integrated into your own system thanks to the modular design. With the optical breadboard, the Ossila LED Solar Simulator can be set up as a standalone system or fixed to larger optical benches.





Indoor Light Simulator

G2009B1-GA1

A compact system to easily replicate indoor illumination levels, the Ossila Indoor Light Simulator consists of a solar simulator and detachable indoor light simulation filter. This gives you the flexibility to switch between indoor PV and outdoor solar cell testing within your research.

Match the spectral output for testing indoor PV devices and achieve class ABSA illumination over a **20 mm** diameter area at two different illuminance levels. The filter enables the system to meet the specifications required for the IEC TS 62607-7-2:2023 international standard for testing photovoltaics in indoor conditions.











Indoor Light Filter

Long Lifetime

Minimal Warm-Up Time **No Explosion Risk**

Test indoor PV devices

10,000+ operating hours

Ready to use and measure

LED-based, steady state

Solar Simulator

Туре	LED-based, steady state	
Maximum Lamp Time	10,000 hours	
Head Dimensions (L x W x H)	10.5 cm x 9.0 cm x 8.0 cm	
Weight	600 g	

Indoor Light Filter

Illuminance Levels	1,000 lx, 200 lx
Spectral Coincidence	A
Spatial Non-Uniformity	B - 20 mm diameter
Temporal Stability	SA
Dimensions	14 cm x 12 cm x 2 cm
Weight	70 g

Why Use an Indoor Light Filter?

Transform your Ossila solar simulator into an indoor light simulator with our indoor light filter, which modifies its spectral output to match standard indoor lighting conditions as defined in IEC TS 62607-7-2:2023. This enables consistent, standardized testing of photovoltaic devices designed for indoor environments such as smart homes, offices, IoT systems, and retail spaces - where lighting levels and spectral characteristics differ significantly from outdoor sunlight. Reproducibly simulating these conditions is essential for accurately evaluating the performance of indoor photovoltaic devices.

Solar Cell Testing Kit (AUTOMATIC)

T2003B3-G2009A1

A complete system for the rapid characterization of solar cells, the I-V test system and solar simulator work seamlessly together. The Solar Simulator is calibrated to reliably and accurately mimic the solar spectrum or, for greater flexibility, each LED output can be controlled independently. Use the Solar Cell I-V Test System to easily and reliable perform I-V sweeps for device performance metrics, run lifetime measurements for degradation analysis, or use as a soaking system to precondition cells. Simply place the device and start testing.











Automated Pixel Switching

Integrated System

Reliable LED Lamp

Multiple Measurements

Simple and flexible

For unbeatable value

10,000+ operating hours

For full characterization

Classification (15 mm diameter area)	AAA
Туре	LED-Based, Steady State
Spectral Deviation	<70%
Spectral Coverage	>80%
Working Distance	8.5 cm
Irradiance (at working distance)	1,000 W/m ²
Maximum Lamp Time	10,000 hours
Head Dimensions (L x W x H)	10.5 cm x 9.0 cm x 8.0 cm
Weight	600 g

Current Measure Specifications

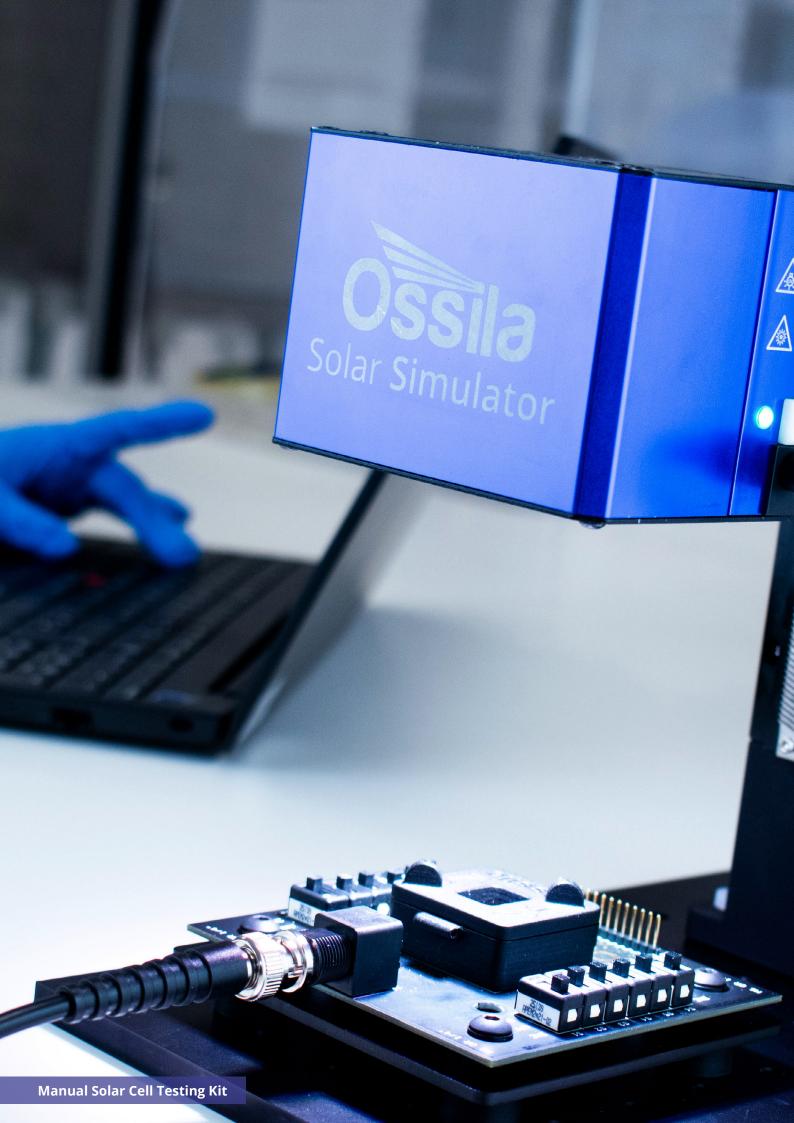
Range	Accuracy	Precision	Resolution
±200 mA	±500 μA	10 μΑ	1 μΑ
±20 mA	±10 μA	1 μΑ	100 nA
±2 mA	±1 μA	100 nA	10 nA
±200 μA	±100 nA	10 nA	1 nA
±20 μA	±10 nA	1 nA	100 pA

Free Software

With the PC software you can customize the output of the solar simulator by choosing the overall power level or by controlling each LED individually to tailor the current-voltage measurements to your experiment.

- Current-voltage measurements between -10 V and 10 V
- Voltage increments as low as 170 μV
- Custom settle times between applying voltage and measuring current
- Consecutive measurements in forwards and backward directions to measure hysteresis





Solar Cell Testing Kit (MANUAL)

T2002B2-G2009A1

The manual system includes an LED-based solar simulator head, adjustable z-stage and optical breadboard, our dual-output source measure unit, and electrical test board. This setup offers maximum flexibility as it allows you to use the source measure unit and solar simulator independently as well as together.

The fully programmable SMU and controllable power levels of the solar simulator make for unlimited experimental options. Use our easy-to-use software for rapid results or take control and design your own experiments.







For flexible

measurements



Bundle Discount

For unbeatable

value

--

Reliable LED Lamp

10,000+ operating hours



Multiple Measurements

For full characterization

Classification (over 15 mm diameter area)	AAA
Туре	LED-Based, Steady State
Spectral Deviation	<70%
Spectral Coverage	>80%
Working Distance	8.5 cm
Irradiance (at working distance)	1,000 W/m ²
Maximum Lamp Time	10,000 hours
Head Dimensions (L x W x H)	10.5 cm x 9.0 cm x 8.0 cm
Weight	600 g

Current Measure Specifications

Range	Accuracy	Precision	Resolution
±200 mA	±500 μA	10 μΑ	1 μΑ
±20 mA	±10 μA	1 μΑ	100 nA
±2 mA	±1 μA	100 nA	10 nA
±200 μA	±100 nA	10 nA	1 nA
±20 μA	±10 nA	1 nA	100 pA

Why Pick The Manual Solar Cell Testing Kit?

The manual version of the Ossila Solar Cell Testing Kit is a more flexible solution for photovoltaic device characterization. Its test board features manual switching for individual pixels, with each switch configurable to source or ground, allowing greater compatibility with a wide range of solar cell designs and contact patterns. The included source measure unit is a vital piece of laboratory equipment in its own right, suitable for a broad range of electrical measurements beyond solar cell testing, making this kit a modular and versatile choice for research environments where budget and flexibility are important.

LED Measurement System

T2005E3

Perform rapid current-voltage-luminance characterization of LEDs with ease. Integrated light sensors provide accurate measurements of illuminance, luminance, and white count. Streamline device testing with automatic current and power efficiency calculations. Additionally, evaluate LED performance over extended periods for long-term analysis.



The system is compatible with all Ossila substrate systems, making it easy to fabricate and test your LED devices.

4

Rapid Characterization

With intuitive software

Wide Measurement Range

-10 V to +10 V and ±10 nA to ±200 mA



Measure Device Stability

Over an extended period of time



Free Software

For customized measurements

Wavelength Range	400 nm – 750 nm	
Dimensions (L x W x H)	300 mm x 151 mm x 50 mm	
Substrate Size	20 mm x 15 mm (0.79" x 0.59") 25 mm x 25 mm (0.98" x 0.98")	
Substrate Compatibility	T2005B - S211 (20 x 15 mm, PV and OLED) T2005E - S2006 (25 mm Square, PV and OLED)	

Current Specifications

Range	Accuracy	Precision	Resolution
±200 mA	±500 μA	10 μΑ	1 μΑ
±20 mA	±10 μA	1 μΑ	100 nA
±2 mA	±1 μA	100 nA	10 nA
±200 μA	±100 nA	10 nA	1 nA
±20 μA	±10 nA	1 nA	100 pA

Voltage Specifications

Range	Accuracy	Precision	Resolution
±10 V	±10 mV	333 µV	170 µV

Intuitive Software

Plug in the system, install the PC software, and you're ready to go. The LED Measurement System has been designed by research scientists to address the frustrations associated with measuring and characterizing LEDs. The intuitive interface and clean design make the system simple and easy-to-use: create and save settings profiles for repeat measurements, plot your data in real time, and export the results as a CSV file. All of the measurements can be fully customized so that you can tailor the software to your experiments.





Solar Cell I-V Test System

T2003E3

Take control of your solar cell measurements with reliable characterization of photovoltaic devices. Measure the current-voltage curve of a solar cell and automatically calculate key device properties. Plus, use automated periodic I-V measurements or current-stabilized measurements to track the stability of your devices.



Choose from manual or automated pixel switching depending on your research needs.



Measure Device Stability

Over an extended period of time



Calculates Device Properties

With a range of measurements



Useful Voltage & Current Range

-10 V to +10 V and ±10 nA to ±200 mA



Free Software

For customized measurements

Current Measure

Range	Accuracy	Precision	Resolution
±200 mA	±500 μA	10 μΑ	1 μΑ
±20 mA	±10 μA	1 μΑ	100 nA
±2 mA	±1 μA	100 nA	10 nA
±200 μA	±100 nA	10 nA	1 nA
±20 μA	±10 nA	1 nA	100 pA

Voltage Source

Range	Accuracy	Precision	Resolution
±10 V	±10 mV	333 µV	170 μV

Voltage Measure

Range	Accuracy	Precision	Resolution
±10 V	10 mV	50 μV	10 μV



Riser Boards

User-swappable riser boards for the Ossila Solar Cell I-V Test System and LED Measurement System. Changing the riser board allows for different substrate designs to be used on the same measurement system.

P2009G2

Riser & Test Boards

Patterned ITO	Dimensions	Riser Board	Test Board
S211	20 x15 x 1.1 mm	P2009B2	P2008A1
S241	75 x 25x 1.1 mm	P2009F2	P2012A1
S251	75 x 25 x 1.1 mm	P2009F2	P2012A1
S2006C1	25 x 25 x 1.1 mm	P2009E2	P2011A1

Unpatterned ITO	Dimensions	Riser Board	Test Board
S111	20 x15 x 1.1 mm	P2009G2	P2008B1
S281	75 x 25 x 1.1 mm	P2009G2	-
S2006B1	25 x 25 x 1.1 mm	P2009G2	P2008B1

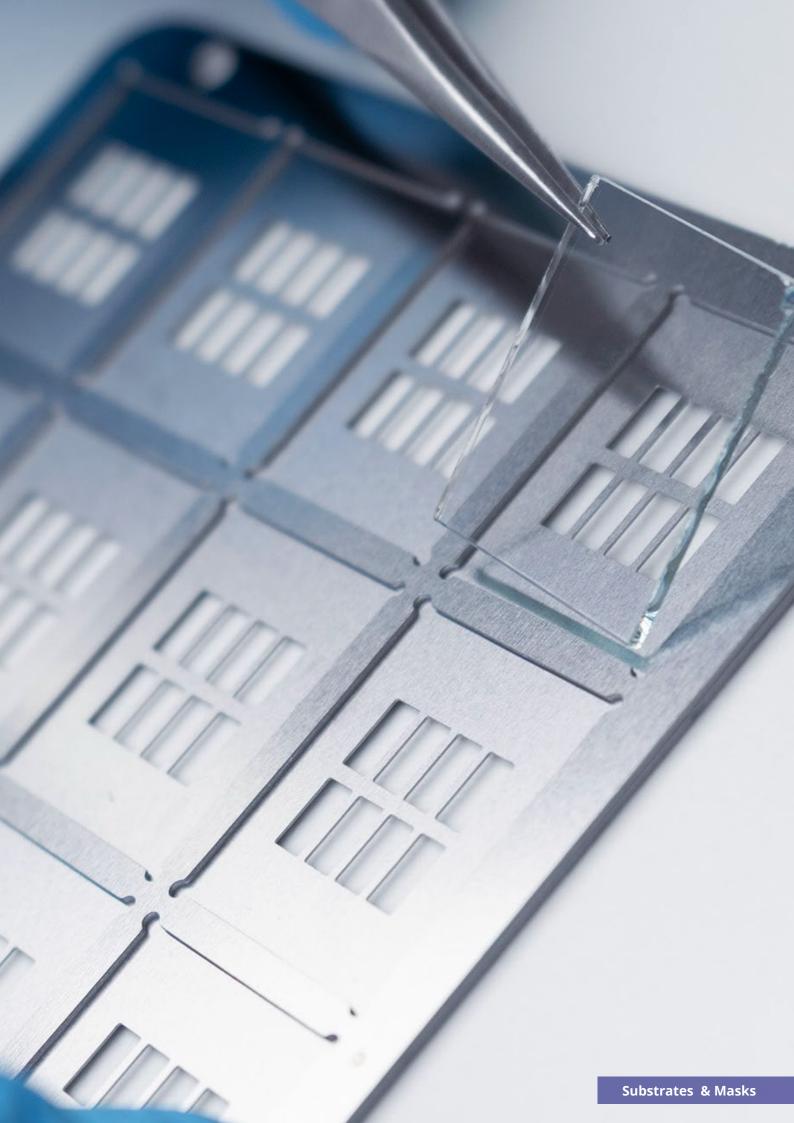
Quartz	Dimensions	Riser Board	Test Board
S151	20 x 15 x 1.1 mm	P2009G2	P2008B1
S261	75 x 25 x 1.1 mm	P2009G2	-
S2006A1	25 x 25 x 1.1 mm	P2009G2	P2008B1

OFET	Dimensions	Riser Board	Test Board
S161	20 x 15 x 1.1 mm	-	P2013A1
S162	20 x 15 x 1.1 mm	-	P2013A1
S271	75 x 25 x 1.1 mm	-	-

Patterned FTO	Dimensions	Coating	Riser Board	Test Board
S212	20 x 15 x 1.6 mm	Ossila (6-9 Ω/Square)	P2009B2	P2008A1
S2008C1	25 x 25 x 1.6 mm	Ossila (6-9 Ω/Square)	P2009E2	P2011A1

Unpatterned FTO	Dimensions	Coating	Riser Board	Test Board
S2010A1 / B1	20 x 15 x 2.2 mm	Ossila (7-10 & 10-15 Ω/Square)	P2009G2	P2008B1
S2001S1	25 x 25 x 2.2 mm	TEC 8 (6-9 Ω/Square)	P2009G2	P2008B1
S2002S1	25 x 25 x 1.0 mm	TEC 10 (11-13 Ω/Square)	P2009G2	P2008B1
S303	20 x 15 x 3.2 mm	TEC 10 (11-13 Ω/Square)	P2009G2	P2008B1
S2003S1	25 x 25 x 3.2 mm	TEC 10 (11-13 Ω/Square)	P2009G2	P2008B1
S304	20 x 15 x 2.2 mm	TEC 15 (12-14 Ω/Square)	P2009G2	P2008B1
S2004S1	25 x 25 x 2.1 mm	TEC 15 (12-14 Ω/Square)	P2009G2	P2008B1
S2009B1	20 x 15 x 1.0 mm	Ossila (10-15 Ω/Square)	P2009G2	P2008B1

FET	Dimensions	Coating	Riser Board	Test Board
S146	20 x 15 x 0.7 mm	300 nm oxide	-	P2013A1/P2014A1
S148	20 x 15 x 0.7 mm	90 nm oxide	-	P2013A1/P2014A1
S403A1	20 x 15 x 0.7 mm	Pre-fabricated platinum 2-10 µm	-	P2014A1
S403A2	20 x 15 x 0.7 mm	Pre-fabricated platinum 4-10 µm	-	P2014A1





USB Spectrometer

G2001A1

A compact optical spectrometer for UV-Vis-NIR spectroscopy measurements. With a range of 320 nm to 1050 nm and spectral resolution of **2.5 nm**, study a wide range of samples including photovoltaic, solar cell, OLED, biological, and 2D materials.

Use in free-running mode or seamlessly integrate with other systems via the external trigger input. The rolling integration mode offers dynamic control over the integration time, suitable for a range of optical measurements.





Powerful Electronics

High-speed 16-bit, 500 kSPS ADC



USB-C Powered

Power with your computer or laptop



Free Software

And free software updates



Dynamic Spectral Range

> UV-A to near infrared

Wavelength Range	320 nm – 1050 nm
Grating Blaze Wavelength	500 nm
Resolution (FWHM)	2.5 nm
Optical Input	SMA 905 fiber or free space
Entrance Slit Width	25 μm
Dark Noise	<50 counts
Signal-to-Noise Ratio	>500:1
Stray Light	<0.2%
Detector Type (Pixels)	CCD (1600)
Analog-to-Digital Converter	16-bit, 500 kSPS
Connection Type	USB-C
Communication Protocol	Serial-over-USB
Data Transfer Speed	Up to 100 FPS (PC dependant)
Dimensions (L x W x H)	78 mm x 78 mm x 38 mm
Weight	150 g

Fast Acquisition Speeds

A powerful Arm Cortex M4 processor works with a high-speed 16-bit, 500 kSPS, analog-to-digital converter. Our system can transfer over 100 frames-per-second to the host computer when running in internal trigger mode. Plus, a six port I/O expansion header allows for easy integration with other 5V equipment.

Internal and External Trigger Modes

Use in free-running mode, or integrate with other systems using the external trigger input. The rolling integration mode lets you control the integration time dynamically. With an output to synchronize acquisition with an external shutter plus two general purpose outputs, it features six I/O ports in total, including a ground port.

USB Spectrometer Components



LED Light Sources

Available in a range of wavelengths from **375 nm** – **980 nm**. These USB-C powered LED devices are designed to be used with our range of optical spectroscopy equipment. Available individually or in a full set for a reduced price.

G2008B1



UV Light Sources

A range of wavelengths from **365 nm** – **405 nm** for optical excitation in visible fluorescence spectroscopy measurements. Use them in a free space setup, attach them to a transmission holder, or connect them with an optical fiber.

G2008A1



Infared Light Sources

High-power LED light sources available in a range of wavelengths from **700 nm** – **980 nm** for IR spectroscopy experiments. Can be bolted to any standard metric/imperial optical table or optical breadboard plate.

G2012A1



Broadband White Light Source

A USB-C powered LED device that outputs light over the wavelength range of **360 nm** – **900 nm**. Ultraviolet and blue LEDs are combined on a single die, and coated with phosphors with emission extending into the near infrared.

G2002A1





USB Spectrometer Components



Optical Filters

Isolate regions of the electromagnetic spectrum with longpass and shortpass filters in a range of wavelengths from **400 nm** to **900 nm**. Our filters have >90% transmission and are OD4 in the suppressed region. Available individually or as part of a set.

G2101A1



Transmission Sample Holder *

Hold rigid samples or flexible films in free-space or fiber-coupled spectroscopy setups. The two-port holder is designed for optical transmission or absorption measurements, while the four-port holder can also be used for reflectivity and photoluminescence measurements.

G2004A1



Cuvette Holder *

Compatible with standard **10 mm** path length cuvettes for optical transmission, absorption, or fluorescence measurements. Two removable plugs at 90 degrees to the optical axis allow for fluorescence excitation. Use in free-space or fiber-coupled spectroscopy setups.

G2003A1



Optical Mirror

A silver mirror with protective SiO₂ coating which can be used as a reflectivity reference sample for visible light.

S2007A1

USB Spectrometer Components



Optical Fiber *

Implement fiber-coupled arrangements in your optical spectroscopy measurements. The **400 \mu m** core, multimode optical fiber has a steel-armored sleeve and protective endcaps. Available in 1 meter lengths for versatility in your experiments.

G2005A1



Optical Breadboard Plate *

An anodized aluminum optical breadboard plate, compatible with the range of Ossila spectroscopy equipment. Measuring **150 mm** x **300 mm**, the metric plate has 55 M6 tapped holes on a **25 mm** spaced grid and four additional **6 mm** untapped corner holes for fixing to a larger surface.

G2007A1



Quartz Cuvettes *

A range of UV and IR quartz cuvettes for spectrophotometric setups to measure the optical properties of solvents and solutes. Reduce waste and improve measurements with small volumes from **0.35 ml** to **3.5 ml** and short path lengths from **1 mm** to **10 mm**.

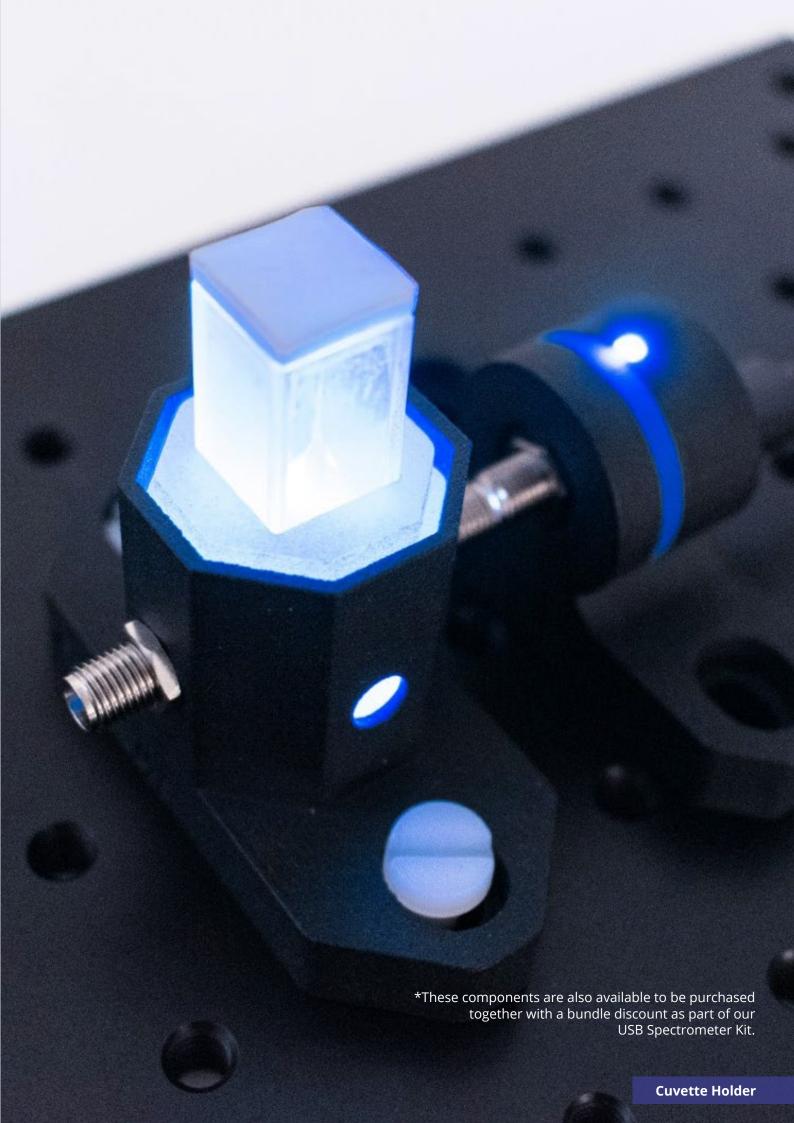
C2003P1

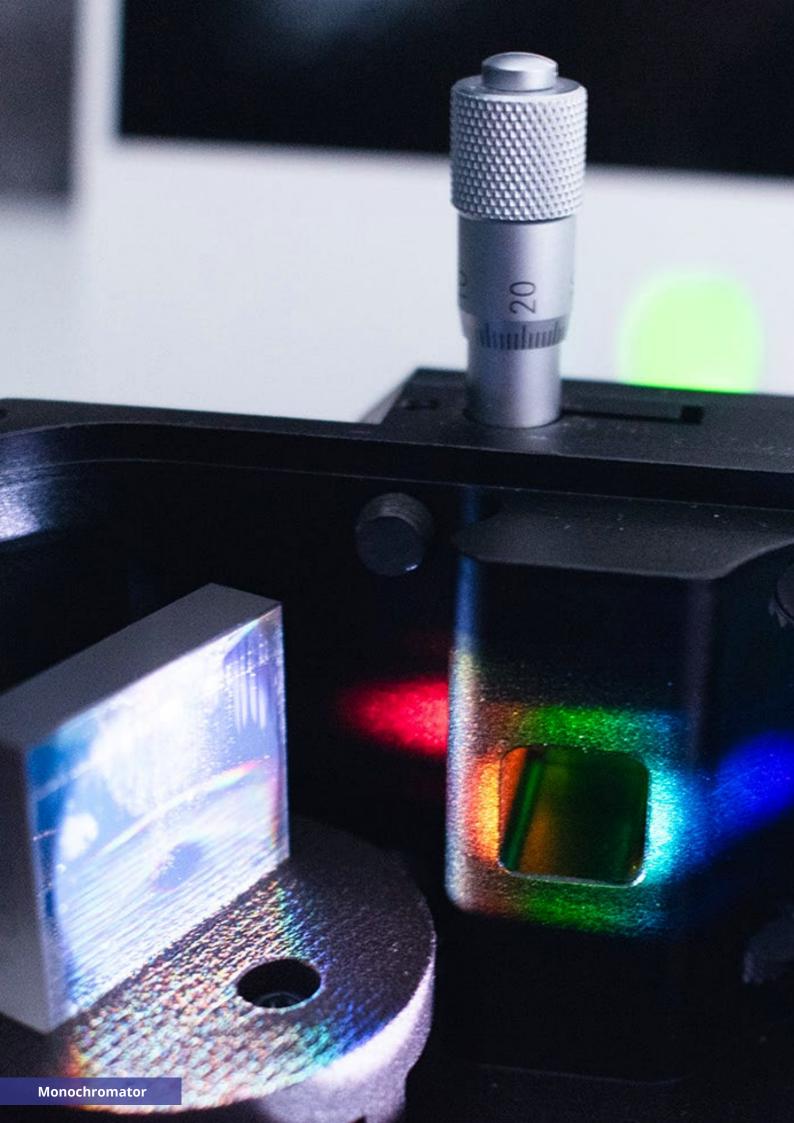


Spectrometer Case *

Protect your Ossila USB Spectrometer with a flexible rubber case. Secure your spectrometer for controlled measurement conditions with mounting points for standard imperial or metric optical tables and breadboards.

G2006A1





Monochromator

G3001A1

Easily integrate the compact and reliable Ossila Monochromator into many optical setups to increase the versatility of your spectroscopy measurements. Choose a specific excitation wavelength for fluorescence measurements, isolate and measure specific emission signals, or simply improve the sensitivity and accuracy of absorbance measurements with just the touch of a button.

Select specific wavelengths between **380 – 1000 nm** with **<1 nm** accuracy, or quickly measure across this spectral range with scanning rates of up to **1000 nm/s**. Whatever your experimental needs, use the Ossila Monochromator to step up your optical spectroscopy measurements.





Compact Size

High-Speed Scanning



Easy to Use



High Resolution

Fits into any experimental setup

For fast data acquisition

With innovative free software

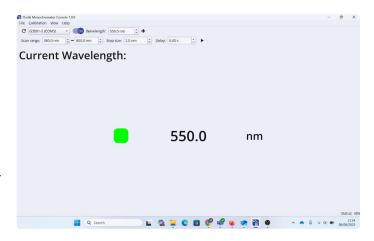
With Czerny-Turner configuration

Wavelength Range	380 nm – 1000 nm
Wavelength Accuracy	<1 nm
Wavelength Repeatability	<0.1 nm
f Number	f/4
Configuration	Crossed Czerny-Turner
Slit Type	Manual
Possible Slit Sizes	50 μm – 6 mm x 10 mm (W x H)
Dimensions	110 mm x 110 mm x 75 mm

Software

The Ossila Monochromator can be controlled using the Monochromator Console offering plug-and-play functionality.

Simply plug in, and use the compatible software to select specific wavelengths or scan through a desired wavelength range. Alternatively, the system can be controlled with serial commands, for integration into your specific optical systems.



Fluorescence Spectroscopy



LED Light Source

Reliable and consistent light for your spectroscopy experiments. The Ossila LED Broadband Light Source uses a range of powerful LEDs to create a broad spectrum ranging from **380 – 1000 nm**. The Ossila LED UV Light Source (coming soon) uses a UV LED to deliver a consistent, bright UV light at **305 nm**, suitable for fluorescence measurements.

G2005A1



Adjustable Slit

Optimize the resolution and sensitivity of your monochromator or spectroscopy set up with the Ossila Adjustable Slit. This device has a variable slit width range between $50~\mu m$ and 6~mm with up to $10~\mu m$ resolution. The slit height is set at 10~mm, but the width can be easily adjusted using trusted micrometer gauges. There is a one-to-one correlation between the gauge reading and slit width.

G2007A1

Expanding Fluorescence Spectroscopy

Our fluorescence spectroscopy range is expanding. Get higher resolution, accuracy, and consistency in all your spectroscopy measurements with the Ossila Spectrofluorometer and Spectrophotometer systems, coming early 2026. Contact us to learn how our products in development can enhance your experiments or register your early interest.





Fast Scan, Low Noise Spectra



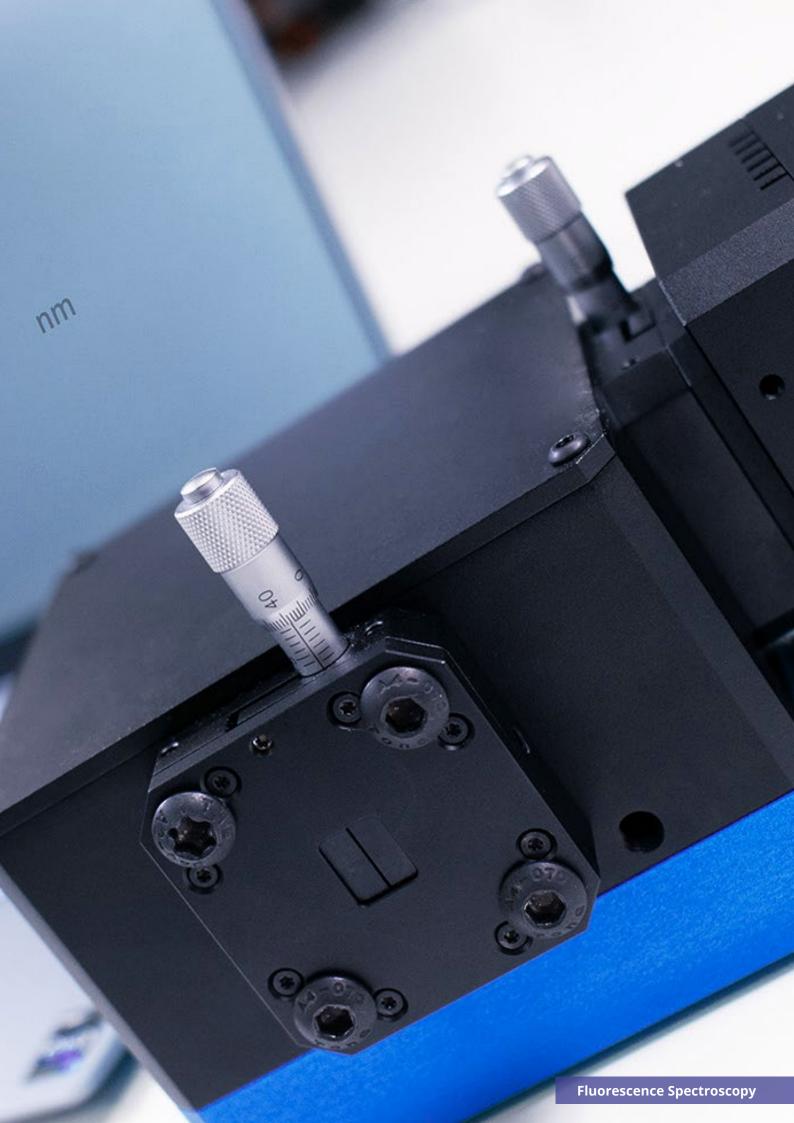
Free Software & Updates



Easy to Intergrate into Your Lab



Modular Designs





Potentiostat

T2006B1

A powerful electrochemical measurement device for performing cyclic voltammetry, linear sweep voltammetry, open circuit potential, and controlled potential electrolysis. Conduct accurate and precise research with an applied potential accuracy and resolution of ± 10 mV and $333 \,\mu V$ respectively, and a current measurement resolution of $5 \, nA$.

Available with an electrochemical cell and set of electrodes to kickstart your research.



4





Powerful Electronics

Wide Current Range Small Lab Footprint **Free Software**

Output potentials up to **7.5 V**

From **±20 µA** to **±200 mA**

Only **12.5 cm** x **17.5 cm** Simple and intuitive

Potential Range	±7.5 V
Potential Compliance	±10 V
Applied Potential Accuracy	±10 mV offset
Applied Potential Resolution	333 μV
Maximum Current	±200 mA
Current Ranges	±20 μA to ±200 mA (5 ranges)
Current Measurement Accuracy	±20 nA offset (at 20 μA range)
Current Measurement Resolution	5 nA (at 20 μA range)
Communication	USB-B
Overall Dimensions (W x H x D)	125 mm x 55 mm x 175 mm (4.91" x 2.17" x 6.89")
Weight	600 g (1.32 lb)

Wide Potential and Current Range

To allow for a wide range of material characterization, the Ossila Potentiostat is capable of outputting potentials of up to **7.5 V** and can measure currents over five ranges from $\pm 20 \, \mu A$ to $\pm 200 \, mA$.

Range of Electrochemical Measurements

The Ossila Potentiostat is powerful and low price, capable of performing cyclic voltammetry, linear sweep voltammetry, open circuit potential, and controlled potential electrolysis measurements.

Proven Ouality

Our experience building measurement devices paired with the free Ossila Electrochemistry software provides an easy-to-use platform for testing and characterizing materials. With internal circuitry based on our highly popular source measure unit and an aluminium outer case, the potentiostat is both reliable and durable.

Compact and Light

At only **12.5 cm x 17.5 cm**, the small footprint makes it completely lab-proof and glove box friendly (we use it extensively in our own lab to electrochemically characterize our range of materials). Our potentiostat fits easily inside the main chamber of a lab glove box for measuring air or moisture sensitive materials.

Electrochemistry





Designed for two or three electrode photoelectric effect studies. Available in **50 ml** or **100 ml** volumes.

C2017A1



PTFE Photoelectrochemical Cell

Designed for two or three electrode photoelectric effect studies. Available in **50 ml** or **100 ml** volumes. PTFE body for increased chemical resistance.

C2017C1



H-Type Photoelectrochemical Cell with Optical Window

Hold two different solutions with a membrane to prevent mixing. Two coupled half cells with a **50 ml** volume each.

C2017F1



Glass Photoelectrochemical Cell with Water Bath

With a built-in water bath, this cell is ideal for experiments that require variable temperatures or stable temperature control.

C2017E1

Cell Type	Volume
Glass Photoelectrochemical Cell	50 ml
Glass Photoelectrochemical Cell	100 ml
DTFF Dhata alastra shamisal Calls	50 ml
PTFE Photoelectrochemical Cells	100 ml
H-Type Photoelectrochemical Cell with Optical Window	50 ml (100 ml across both)
Glass Photoelectrochemical Cell with Water Bath	100 ml











Standard Electrochemical Cells

Our high quality **50 ml** glass electrochemical cell for a range of applications. Features a screw-fit PTFE lid, three electrode holes, and two gas holes to allow for degassing. Available in multipacks or as a kit with eletrodes.

Electrochemical Cell with Water Bath

Our high quality glass **100 ml** electrochemical cells with built-in water bath feature three electrode feedthroughs and separate inlets and outlets for both gas (for degassing) and the water bath.

H-Type Electrochemical Cells

Sealed electrochemical cell for use with a replaceable membrane (not included), consisting of two coupled half cells. Available in **15 ml**, **25 ml**, **50 ml**, or **100 ml** volumes.

C2012A1 C2012G1 C2012E1

Electrochemical Cells

	Gas Inlet Degassing the system	Water Bath Temperature Control	Luggin Capillary Minimize potential drop	H-type Separation Separate reaction environments
Standard Electrochemical Cell	⊘			
Electrochemical Cell with Water Bath	⊘	⊘	⊘	
Electrochemical Cell with Luggin Capillary	⊘		⊘	
H-Type Electrochemical Cells	⊘		⊘	⊘
H-Type Electrochemical Cell with Water Bath	⊘	⊘	⊘	⊘

Cell Type	Volume
Standard Electrochemical Cell	50 ml
Electrochemical Cell with Water Bath	100 ml
Electrochemical Cell with Luggin Capillary	50 ml
H-Type Electrochemical Cells	50 ml
	15 ml
	25 ml
	100 ml
H-Type Electrochemical Cell with Water Bath	25 ml (50 ml across both)







Working Electrodes

High temperature resistance, hardness, low density, and low electrical resistance.

C2013A1 | C2013F1 | C2013N1

Reference Electrodes

Aqueous and non-aqueous reference electrodes for cyclic voltammetry and electrolyes and other electrochemical studies.

C2015A1 | C2015B1

Counter Electrodes

Auxiliary/counter electrodes for use in three-electrode systems, featuring high resistence to oxidation, solvents, and acids.

C2014A1

PTFE Working Electrodes

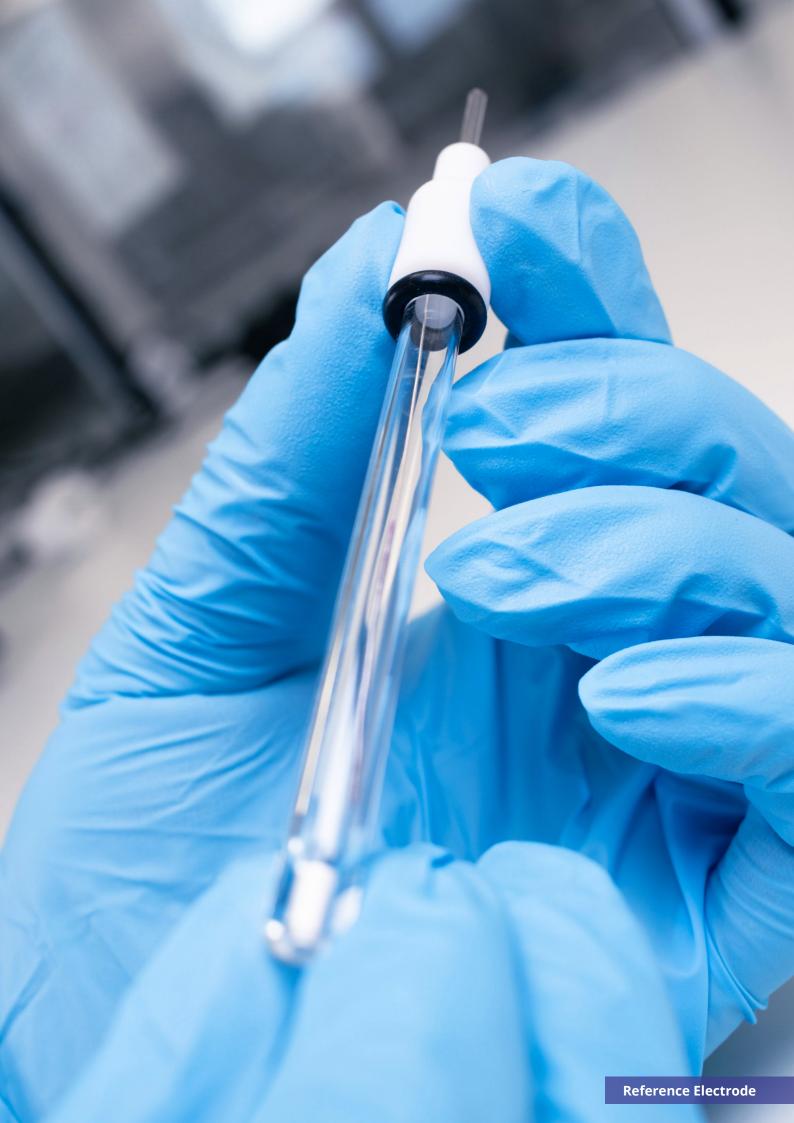
Electrode Type	Size
	1 mm
Distinction Disa Floretra de	2 mm
Platinum Disc Electrode	3 mm
	4 mm
Classy Carbon Flastrodo	3 mm
Glassy Carbon Electrode	4 mm
Platinum Plate Electrode	10 mm x 10 mm x 0.1 mm (plate dimension)
Platinum Plate Electrode Holder	10 mm x 15 mm (plate dimension)
Gold Disc Electrode	2 mm (disc size)
	2 mm
Graphite Electrode	3 mm
	4 mm
L Shanad Classy Carbon Flostrada	3 mm
L-Shaped Glassy Carbon Electrode	4 mm

PEEK Working Electrodes

Electrode Type	Size
Platinum Disc Electrode	2 mm
Classy Carbon Flostrodo	3 mm
Glassy Carbon Electrode	4 mm
Platinum Plate Electrode Holder	5 mm x 5 mm (plate dimension)
Gold Disc Electrode	2 mm

Reference Electrodes

Electrode Type	Туре
Ag/AgCl Reference Electrode	Aqueous
Ag/Ag+ Reference Electrodes	Non-aqueous





Electrode Polishing Kit

C2018A1

Electrodes can be maintained by rinsing them with water or acetonitrile, or a good wipe with a solvent wet tissue to remove any dust or organic residues absorbed into the electrode. However, if rinsing and wiping is insufficient to clean the surface of the electrode, then you can use the Ossila EPK-3 Electrode Polishing Kit. This kit offers you the best polishing for your electrodes to restore them to their prime condition for reproducibility.





Nylon polishing cloth, Ø72 mm

1 μm alumina powder should be used with a black nylon polishing cloth



Micro-polishing cloth, Ø72 mm

0.05 μm and **0.3 μm** alumina powder should be used with a coffee colored micro-polishing cloth



1200 grit sandpaper, Ø72 mm

The kit comes with 5 × 1200 grit sandpaper (grey in color), **Ø72 mm**

The back side of both the nylon and the micro-polishing cloths are adhesive so they can be securely attached to the surface of the acrylic base. Please ensure you clean and dry the acrylic surface and remove the protective cover on the back side of the cloth before applying it to the acrylic surface.

Kit Includes:

- 5 × 1200 grit sandpaper (grey in color), **Ø72 mm**
- 5 × nylon polishing cloth (black in color), **Ø72 mm**
- 5 × micro-polishing cloth (coffee in color), **Ø72 mm**
- 2 × acrylic plate base
- 1 × 15 g **1.0 μm** alumina polishing powder
- 1 × 15 g **0.3 μm** alumina polishing powder
- 1 × 15 g **0.05 μm** alumina polishing powder
- 3 × spoon

What alumina polishing powder diameter should I use?

In general, **0.05 \mu m** alumina polishing powder is the most frequently used size for disc electrodes to remove any residue from the electrode. However, if scratches are present on the surface of the electrode, we recommend that you use the alumina polishing powders of **1.0 \mu m**, **0.3 \mu m**, and **0.05 \mu m** in succession. We also advise that you use a 1200 grit sandpaper (grey in color) polishing treatment before using the alumina polishing powders if there are any.

Laminar Flow Hood

L2008A1

A benchtop system to create clean, uniform air flow in sensitive experiments. Smart air sensors monitor air quality and pressure to operate the motor at an optimal speed, alert you to upcoming filter changes, and warn you if the air flow changes. The **H13-grade HEPA filter** captures over 99.99% of all airborne particulates to achieve **ISO Class 5** conditions.

The system is fully equipped with a pre-filter, HEPA filter, stainless steel tray, and UV lighting.









Uniform Air Flow

Interchangeable Design

UV Lighting

Environmental Sensors

510 m³hour⁻¹ with pressure sensors

Vertical or horizontal setup

For a clean work surface

Continuous feedback

Motor

Motor Type	Single speed AC blower
Maximum Flow Rate	510 m³.hour¹
Noise	75 dB

High-Efficiency Particulate Air Filter

Filter Grade	99.99% (H13) particle filtration
Pore Size	0.3 μm
Depth	50 mm
ISO Classification	ISO Class 5

Particle Sensor

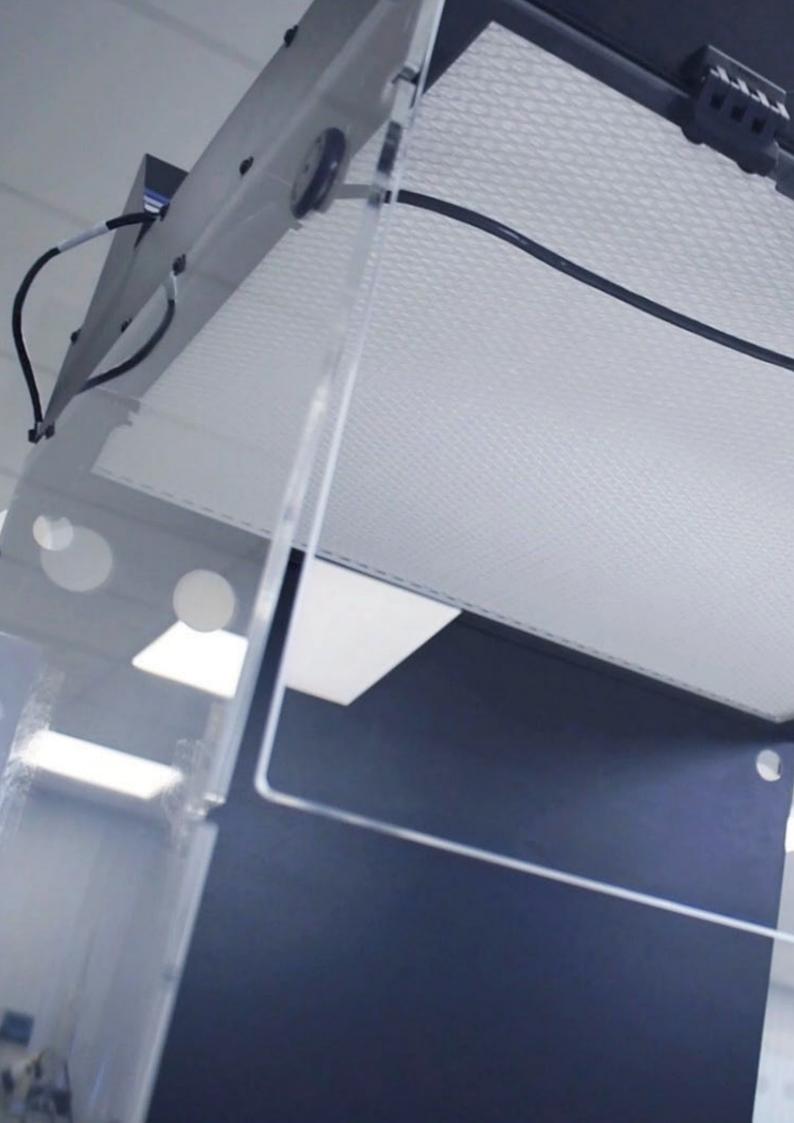
Sensor Type	Light scattering discrete airborne particulate counter
Count Range	0 particles.m ⁻³ to 100,000 particles.m ⁻³
Count Accuracy	±10%
Particle Size Bins	0.3 μm – 1 μm 1 μm – 2.5 μm 2.5 μm – 5 μm 5 μm – 10 μm

Differential Pressure Sensor

Sensor Type	MEMS barometric pressure sensor
Pressure Range	30,000 Pa – 120,000 Pa
Accuracy	±6 Pa
Resolution	±0.2 Pa

	Vertical Orientation	Horizontal Orientation
Internal Area	590 mm x 630 mm (23.2" x 24.8") 590 mm x 630 mm (23.2	
Internal Height	570 mm (22.4")	580 mm (22.83")
Weight	24 kg	25.85 kg







Microbalance

L2010M1

Measure small quantities with a weight resolution of $10 \mu g$ up to 31 g and 0.1 mg resolution at higher weights. Implement a wide range of measurement options in experiments requiring precise stoichiometry.

Choose between a maximum weight capacity of **120 g** or **220 g** and select a system with internal or external calibration to suit your research needs.







6

High Weight Resolution



RS232 Connectivity



In-House Certification

As low as **2.5 seconds**

Measure very small weights

For data output

For accurate measurements

Weight Capacity	Up to 31 g	Up to 120 g / 210 g
Weight Resolution	10 µg	1 mg
Repeatability	±0.05 mg	±0.1 mg
Linearity	±0.05 mg	±0.1 mg
Stabilization Time	15 seconds	2.5 seconds

System

Warm-up Time	30 - 60 minutes	
Pan Diameter	90 mm	
Power	12V DC, 2.0 A	
Power Supply Input Voltage Range	100 – 230 V, 50/60 Hz, 50 VA	
Operating Temperature	10 °C – 30 °C (50°F – 86°F)	
Operating Humidity	Up to 85% RH (non-condensing)	
Overall Dimensions (W x H x D)	305 mm x 295 mm x 475 mm (12" x 11.6" x 18.7")	

Measurement Mode

Normal Weighing	Units: milligram, grams, pounds, ounces, carat	
Parts Counting	Reference quantities: 10, 20, 50, 100, 1,000	
Percentage Determination	Set reference weight	
Density Measurement	Solid density, liquid density, gold density	
Weight Checking	Set reference weight	





Analytical Balance

L2010A1

A high-accuracy balance capable of measuring quantities as low as $100 \ \mu g$. Choose measurement capacities as high as $220 \ g$ and either internal calibration or external calibration based upon your needs.

All our analytical balances come with data output via RS232 interface which can be either used for data logging or for a direct connection to a printer.





Fast Stabilization

Faster measurement of sample weights



High Weight Resolution

Measure small sample weights with confidence



Many Weighing Modes

Weight, parts count, density, and many more modes



Two-Year Warranty

Covered by the Ossila Warranty

Minimum Weight Capacity	10 mg
Weight Resolution	0.1 mg
Repeatability	±0.2 mg
Linearity	±0.2 mg
Stabilization Time	8 seconds
Warm-up Time	30 - 60 minutes
Pan Diameter	80 mm
Power Supply Input Voltage Range	DC9V 2.2A/ AC 110-220V 50Hz
Operating Temperature/ Humidity	17.5 °C to 22.5 °C (63.5°F to 72.5°F)
Overall Dimensions (W x H x D)	305 mm x 295 mm x 475 mm (12" x 11.6" x 18.7")

Measurement Mode

Normal Weighing Units: milligram, grams, ounces, carat	
Parts Counting Reference quantities: 10, 20, 50, 100, 1,000	
Percentage Determination	Set reference weight
Weight Checking	Set reference weight

In-House Certification

All of our balances come with a test certificate that verifies their performance across the full range using traceable class E1 weights from **1 mg** to **100 g**. This ensures that the values you measure are accurate.

Micropipettes

C2001B4, C2001B3

Improve reproducibility in your experiments with a wide range of fixed and variable volume micropipettes for accurate and precise solution preparation. With volumes as low as $0.2~\mu l$ all the way up to 10~m l, each micropipette is pre-calibrated and tested, and comes with a calibration key for maintenance.

Available individually to suit your experimental needs or in a range of sets to prevent solution cross-contamination and streamline your workflow.





Fixed or Variable Volumes

For different applications



Easy to Use

Efficient solution preparation



Wide Volume Range

0.2 μl to **10 ml**



Pipette Tips Included

Prevent crosscontamination

Variable Volume Micropipettes

Volume Range	Accuracy	Repeatability
0.2 – 2 μΙ	±15.0 – 1.5%	≤8.0 – 1.0%
1 – 10 µl	±3.0 – 1.2%	≤1.5 − 0.5%
2 – 20 µl	±6.0 – 1.2%	≤2.0 - 0.4%
5 – 50 μl	±2.0 – 1.0%	≤1.5 − 0.5%
10 – 100 μl	±3.0 – 0.8%	≤1.0 - 0.2%
20 – 200 μl	±2.0 – 0.8%	≤0.6 - 0.2%
100 – 1000 µl	±1.8 – 0.8%	≤0.4 - 0.2%
0.5 – 5 ml	±2.5 – 0.7%	±0.4 – 0.2%
1 – 10 ml	±3.0 – 0.7%	≤0.8 - 0.2%

Fixed Volume Micropipettes

Volume Range	Accuracy	Repeatability
5 μΙ	±1.5%	≤0.6%
10 μΙ	±1.0	≤0.4%
20 μΙ	±1.0%	≤0.3%
25 μΙ	±1.0%	≤0.3%
50 μΙ	±0.8%	≤0.2%
100 μΙ	±0.8%	≤0.2%
200 μΙ	±0.8%	≤0.2%
500 μl	±0.8%	±0.2%
1000 μΙ	±0.8%	≤0.2%





Precision Tweezers

Handle samples and substrates effectively, safely, and securely. Available with a narrow point or wide tip. Acid safe.

C122, C121



Glass Vials

Suitable for the storage of solvents, solutions, and samples. Available in **2 ml**, **4 ml**, **20 ml**, and **40 ml** sizes.

C2005A1, C2005A2, C2005A3, C2005A4 C2005C1, C2005C2, C2005C3, C2005C1



Precision Spatulas

Solvent- and acid-resistant stainless steel spatulas for weighing out small volumes of materials.

C161, C162



Norm-Ject Disposable Luer Lock Syringes

Solvent-resistant, disposable syringes for solution preparation and filtration. Available to purchase in different sizes from **1 ml** to **50 ml**.

C110, C111, C112, C113, C114, C115, C116



Syringe Filters

High-quality syringe filters to offer testing reliability. Pack of 100 high-quality syringe filters available in five materials and in pore sizes from $0.1~\mu m$ to $1~\mu m$.

C101, C2008S1, C2009S1, C2006S1, C2007S1



Pipette Tips

Prevent solution cross-contamination with pipette tips in volumes from $0.1~\mu l$ to 10~ml. Compatible with Ossila micropipettes.

C2002V1, C2002V2, C2002V3, C2002V4



Cleanroom Swabs

High-precision micro swabs for fine cleaning, and standard swabs for general cleaning. Made and packaged in a **Class 10000** cleanroom.

C202, C201



Vial Racks

Vial racks for storing and handling your solutions safely and securely in your lab. Three options designed for **2 ml**, **4 ml**, or **20/40 ml** vial sizes. Made from polypropylene, giving added protection against a wide range of different solvents. **2 ml** and **4 ml** vials come with alphanumerical numbering of the holes - helping you keep track of what solutions you have within the rack.

C2005R1, C2005R2, C2005R3

Materials

Our full range of materials includes:

Chemistry Building Blocks

- Fluorinated Building Blocks
- Heterocyclic Building Blocks
- Non-Heterocyclic Building Blocks

Monomers

- Boronates
- Organotin Compounds
- · Dibromo Monomers
- Carbaldehydes
- · Diamines & Dianhydrides

Porous Organic Frameworks

- MOF Ligands
- · COF Ligands

Fullerenes & NFAs

- Fullerene Acceptors
- Non-Fullerene Acceptors

Low Dimensional Materials

- 2D Materials
- · Nanodots & Quantum Dots
- Carbon Nanotubes

Battery Materials

- · Cathode Active Materials
- · Anode Active Materials

Optoelectronic Materials

- Liquid Crystals
- · Photonic & Optical Materials

Organic Conductors

- PEDOT:PSS & PEDOT Polymer Blends
- Semiconducting Molecules
- Cathode Interlayer Materials
- Green Energy Materials

DSSC Dyes & Electrolytes

OLED Materials

- Host Materials
- · Dopant Materials
- Charge Transport Layers
- TADF Materials
- · High Purity Sublimed Materials

Perovskite Materials

- Perovskite Inks
- Perovskite Precursors
- Perovskite Interface Materials

Semiconducting Polymers

- Luminosyn™ Polymers
- Interface Polymers
- OFET & OLED Polymers
- OPV Polymers

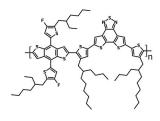
Inorganic Electronic Materials

- Metal Oxides
- · Advanced Ceramic Materials

Luminosyn™ Polymers

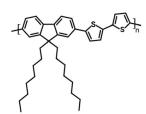


The Luminosyn™ range by Ossila offers high-purity, batch-specific polymer semiconductor materials. Our collection provides researchers with consistent materials to ensure reliability between experiments.



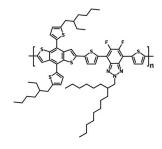
D18

Narrow bandgap copolymer with high hole mobility



F8T2

Popular, high-purity material for organic electronics



J52

Highly efficient NFA polymer solar cells



Substrates, Masks & Boards Compatibility

Patterned ITO	Evaporation Mask	Aperture Masks	Riser Board	Test Board
	E501	E521		P2008A1
	E502	E522		
S211	E503	E521	DOOODO	
3211	E504	-	P2009B2	
	E531	E521		
	E632	-		
S241	E601	-	P2009F2	P2012A1
	E602			
S251	E611	-	P2009F2	P2012A1
	E2001A1	E2002A1		
S2006C1	E2001B1	E2002A1		
	E2003A1	E2002B1	P2009E2	P2011A1
	E2003B1	E2002B1		
	E2004A1	E2002A1, E2002B1		

Unpatterned ITO	Evaporation Mask	Aperture Masks	Riser Board	Test Board
	E501	E521		
	E502	E522		
S111	E503	E521	P2009B2,	P2008A1, P2008B1
3111	E504	-	P2009G2	
	E531	E521		
	E632	-		
	E601		D000050	
S281	E602	-	P2009F2, P2009G2	P2012A1
	E611		1 200302	
	E2001A1	E2002A1		
S2006B1	E2001B1	E2002A1		
	E2003A1	E2002B1	P2009E2, P2009G2	P2008A1, P2011A1
	E2003B1	E2002B1	1 200302	12011741
	E2004A1	E2002A1, E2002B1		

Quartz	Evaporation Mask	Aperture Masks	Riser Board	Test Board
	E501	E521		P2008A1, P2008B1
	E502	E522		
C1 F1	E503	E521	P2009B2,	
S151	E504	-	P2009G2	
	E531	E521		
	E632	-		
S261	-	-	P2009G2	-
	E2001A1	E2002A1	P2009E2, P2009G2	P2008A1, P2011A1
S2006A1	E2001B1	E2002A1		
	E2003A1	E2002B1		
	E2003B1	E2002B1		
	E2004A1	E2002A1, E2002B1		

Patterned FTO	Evaporation Mask	Aperture Masks	Riser Board	Test Board
S212	E501	E521	P2009B2	P2008A1
	E502	E522		
	E503	E521		
	E504	-		
	E531	E521		
	E632	-		
S2008C1	E2001A1	E2002A1	P2009E2 P2	P2011A1
	E2001B1	E2002A1		
	E2003A1	E2002B1		
	E2003B1	E2002B1		
	E2004A1	E2002A1, E2002B1		

Unpatterned FTO	Evaporation Mask	Aperture Masks	Riser Board	Test Board
S303, S304, S2009B1, S2010A1, S2010B1	E501	E521	P2009B2, P2009G2	P2008A1, P2008B1
	E502	E522		
	E503	E521		
	E504	-		
	E531	E521		
	E632	-		
S2004S1, S2003S1, S2001S1, S2002S1	E2001A1	E2002A1	P2009E2, P2009G2	P2008A1, P2011A1
	E2001B1	E2002A1		
	E2003A1	E2002B1		
	E2003B1	E2002B1		
	E2004A1	E2002A1, E2002B1		

Low Density FET	Evaporation Mask	Aperture Masks	Riser Board	Test Board
S146, S148	E281	-	-	P2013A1
	E291			
	E292			
	E307			
	E309			
	E305			

High Density FET	Evaporation Mask	Aperture Masks	Riser Board	Test Board
S146, S148	E312			
	E321			
	E322			
	E323			P2013A1/P2014A1
	E338	-	-	P2013A1/P2014A1
	E3310			
	E336			
	E337			
S403A1, S403A2	E312			D2014A1
	E338	-	-	P2014A1

ITO FET	Evaporation Mask	Aperture Masks	Riser Board	Test Board
S161, S162	E271	-	-	- P2013A1
	E309	-	-	
S271	-	-	-	-



Deposition Masks 20 mm x 15 mm PV/LED

Multi Electrode Mask SKU: E501



Deposition Masks 20 mm x 15 mm PV/LED

Single Electrode Mask SKU: E502



Deposition Masks 20 mm x 15 mm PV/LED

Multi Electrode / Busbar Mask SKU: E503



Deposition Masks 20 mm x 15 mm PV/LED

Busbar Electrode Mask SKU: E504



Deposition Masks 20 mm x 15 mm PV/LED

Active Material Mask SKU: E531



Deposition Masks 20 mm x 15 mm PV/LED

TCO Pattern Mask SKU: E632



Deposition Masks 75 mm x 25 mm PV/LED

12 Pixel Electrode Mask SKU: E601



Deposition Masks 75 mm x 25 mm PV/LED

24 Pixel Electrode Mask SKU: E602



Deposition Masks 75 mm x 25 mm PV/LED

Scale-Up Mask SKU: E611



Deposition Masks 25 mm x 25 mm PV/LED

Multi Electrode Mask with or without busbar SKU: E2001A1, E2001B1



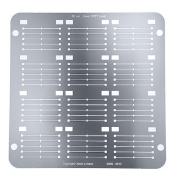
Deposition Masks 25 mm x 25 mm PV/LED

Single Electrode Mask with or without busbar SKU: E2003A1, E2003B1



Deposition Masks 25 mm x 25 mm PV/LED

Active Area Mask SKU: E2004A1



Source-Drain Deposition Mask

Low Density SKU: E291, E292



Evaporation Stack for OFETs

Low Density SKU: E281



Gate Deposition Mask

Low Density SKU: E305



FET Active Area Deposition Mask

Low Density SKU: E307



Insulator Deposition Mask

Low Density SKU: E309



Gate Deposition Mask

ITO OFETS SKU: E271



Evaporation Stack for OFETs

High Density SKU: E312



Source-Drain Deposition Mask, High Density

30 Micron SKU: E321



Source-Drain Deposition Mask, High Density

Variable SKU: E322



Source-Drain Deposition Mask, High Density

50 Micron interdigitated SKU: E323



FET Active Area Deposition Mask, High Density

Linear Channel SKU: E338



FET Active Area Deposition Mask, High Density

Interdigitated Channel SKU: E339



Insulator Deposition Mask

High Density SKU: E3310



Gate Deposition Masks, High Density

Linear Channel SKU: E336



Gate Deposition Masks, High Density

Intergrated Channel SKU: E337



Measurement Aperture Mask

20 mm x 15 mm, 8 pixel SKU: E521



Measurement Aperture Mask

20 mm x 15 mm, 1 Pixel SKU: E522



Multi Electrode Measurement Aperture Mask

25 mm Square SKU: E2002A1



Measurement Aperture Mask

25 mm, Single Electrode Mask SKU: E2002B1



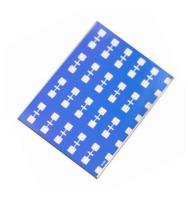
ITO Glass Substrates, 20 mm x 15 mm OFET & Sensing

Pre-Patterned ITO Substrates SKU: S161, S162



ITO Glass Substrates, 75 mm x 25 mm OFET & Sensing

Scale up, Pixelated & Module SKU: S271, S241, S251



Platinum OFET Test Chips, High Density

2 - 4 micron Variable SKU: S403A1, S403A2



ITO/FTO Glass Substrate

20 mm x 15 mm, PV & OLED SKU: S211, S212



ITO/FTO Glass Substrate

25 mm Square PV & OLED SKU: S2006C1, S2008C1

How to Order

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We offer net 30-day payment terms for offline orders as standard, but you can request a proforma invoice if you would like to pay upfront. Payment is also available by credit card or by bank transfer, in select currencies.

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