

SWIFT 3D

Full 3D Optical Extensometer

Optimized for Mark Recognition

All you need to do is to place it a foot away from the UTM axis
The rest is automated



MEASURE



POSITION



MARK

► Ready out of the Box

Pre-calibrated, method included,
HW license key inside the device.

► Simple Workflow

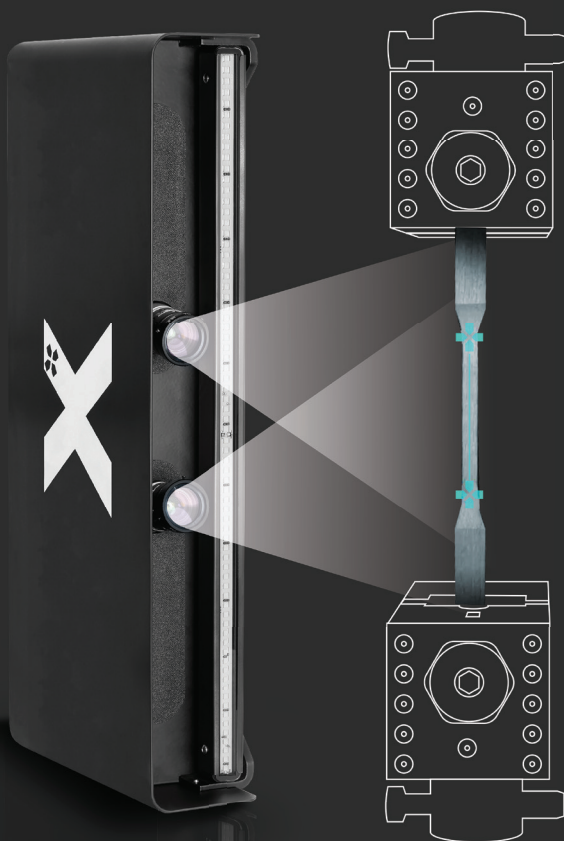
Just position the device, mark the
specimen and start the **measurement**.

► Smart & Precise

Automatic AI-based probe detection,
biaxial ready, instant start-up,
3D compensation for tilt and out-of-plane
motion.

► Made for Real Testing

Polarized lighting, digital/analog
outputs, fully compatible with climatic
chambers and testing systems.



Xact Gauge (Marking Stencil) with a 50 mm
Gauge Length Points

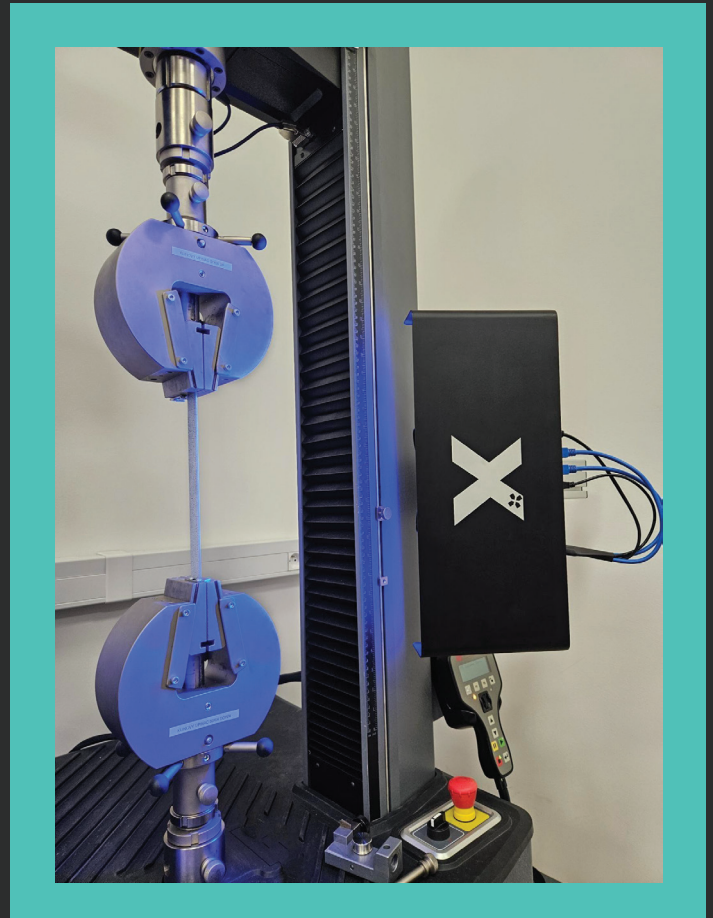
DEMONSTRATIVE MEASUREMENT: Uniaxial Tensile Test

Device Specifications

- Field of View: 280 mm
- Resolution: 2 x 6.3 MPx
- Sampling Rate: 150 Hz
- Working Distance: 310 mm
- Accuracy Class: ISO 9513 Class 0.5/ASTM B-1
- Alpha DIC SW Module: **Swift 3D** (Line Probe, Full 3D, AI Detection)

Test Set-up

At the start of the measurement, **AI-based specimen detection** is initiated and a **Line Probe** is automatically positioned over the **pre-made markers**. No specimen details are required, since the gauge length (75 mm) is derived from the markers and thickness (3 mm) is obtained from the **3D stereoscopic view**. The LED bar uses **blue cross-polarized illumination**, ensuring steady marker visibility.



Device Installation on the
UTM

Results Visualization

The values of strain and stress, with stress being computed from the force measured by the UTM, are then evaluated to acquire the material model of the examined specimen. This analysis provides the characterization of the specimen's mechanical response. Owing to the capabilities of Swift 3D, the process is both robust and straightforward to perform, enabling reliable data acquisition and simplifying the overall procedure.



Strain and Stress Measurement Analysis