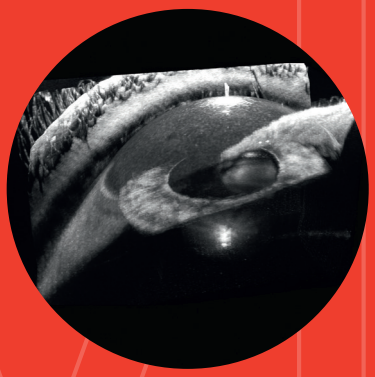
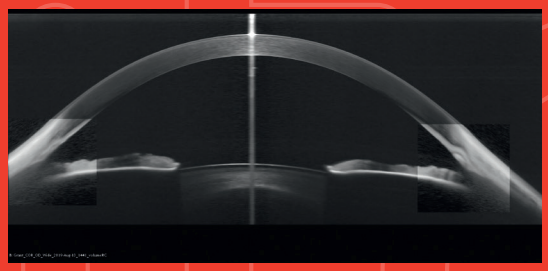
cylite HP-OCT

Whole-Eye Measurement & Imaging

- High-speed OCT
- Volumetric Imaging
- Full Optical Biometry
- Anterior & Posterior Corneal Topography





Anterior Segment OCT

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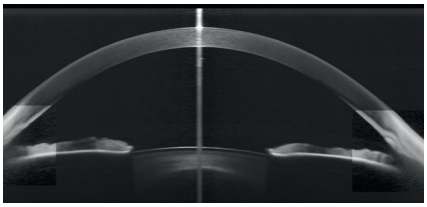
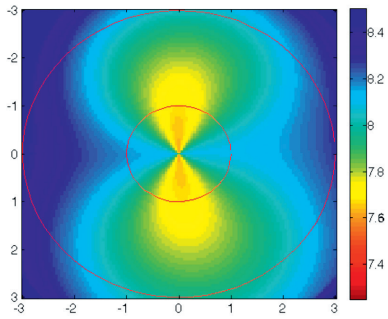
WHOLE-EYE MEASUREMENT & IMAGING

Cylite's patented Hyperparallel OCT™ (HP-OCT™) technology delivers high-speed volumetric imaging at industry leading scan rates (300,000 A-Scans per second) and enables accurate, motion-artefact-free measurements of all ocular surfaces, even in the presence of eye movement. Cylite's 4th Generation OCT instrument provides:

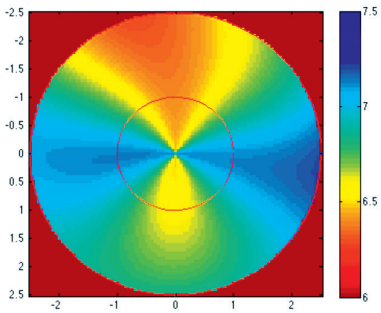


- Accurate anterior and posterior Corneal Topography (sclera to sclera)
- Optical Biometry (axial length, pachymetry, lens thickness and curvature)
- Full Anterior Chamber OCT Volumetric Imaging (cornea to posterior lens)
- Fully Automated Capture
- High Speed Retinal OCT Volumetric Imaging[1]
- High Resolution Corneal Imaging[2]

Hyperparallel OCT acquisition finally unlocks the ultimate power and precision of OCT for whole-eye measurements and state-of-the-art volume-registered imaging and segmentation.



Anterior Curvature



Posterior Curvature

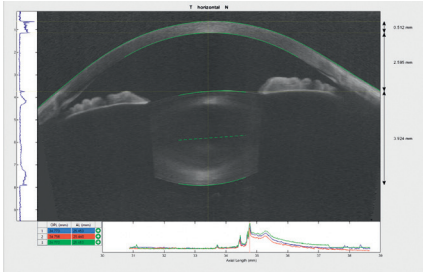
FOR THE CLINICIAN

Replace four different instruments with one versatile instrument. The fully automated volumetric acquisition reduces patient chair time and improves the reliability of results, ensuring you get all the information you need the first time. Accurate measurement of both anterior and posterior corneal surfaces eliminates the guesswork from IOL selection.

Clinical applications include:

- IOL and Refractive surgical planning
- Pre-surgical screening for retinal and corneal conditions
- Scleral and Corneal RGP contact lens fitting
- Orthokeratology lens fitting and evaluation
- Monitoring of axial length progression for myopia control
- Angle closure glaucoma screening (virtual gonioscopy)

HP-OCT reliably provides all the measurements needed for modern IOL formulas and enables a clear path to fully-analytical refractive prediction through raytracing and optical simulation. Combining refractive analysis capabilities with clinical assessment of the anterior and posterior segments make this the must-have instrument in any modern practice.



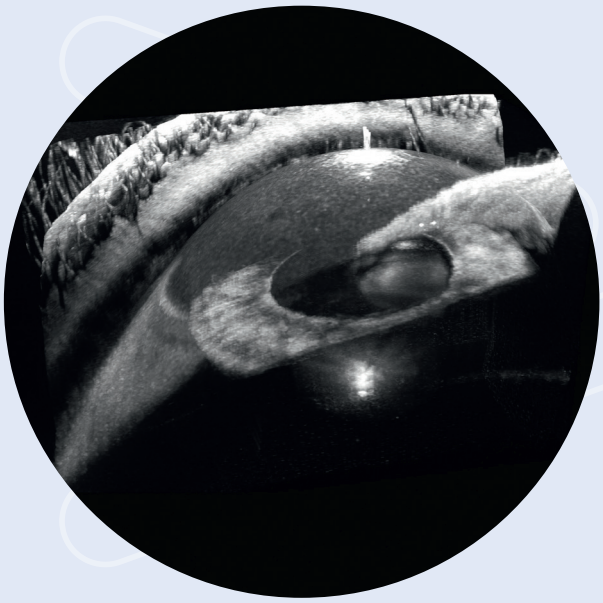
FOR THE RESEARCHER

HP-OCT is the ideal instrument for ophthalmic researchers providing a range of capabilities in a single instrument. The automated acquisition is perfect for large scale studies as it eliminates operator variability and ensures consistent results. Potential research applications include:

- Presbyopia and lens accommodation studies
- Longitudinal studies of axial length, retinal shape and myopia progression
- Volumetric retinal and choroidal research
- Corneal biomechanics and elastography[2,3]
- Tear Film Dynamics[2,3]

Reproducible quantitative measurements are the foundation of any research program and HP-OCT excels where other approaches struggle, as it ensures the relative registration of every A-Scan on the eye.

Disease progression can now be reliably assessed through volumetric registration over successive measurements. Retinal shape measurement, previously requiring MRI, can be used to monitor eye development and myopia progression. These are just a few of the exciting capabilities of this innovative technology which is set to transform the field.



cylite HP-OCT

1 With Optional Retinal Imaging Lens
2 With Optional High-Resolution Imaging Lens
3 Pending Software release 2.0

cylite HP-OCT

SPECIFICATIONS

Acquisition Rate	300,000 A-Scans per Second
Axial Imaging Resolution[1]	9.4 µm
Lateral Imaging Resolution	
Anterior Imaging Lens (Standard)	33 µm
Retinal Imaging Lens[3]	19 µm
High Resolution Imaging Lens[3]	11 µm
Imaging Volume	
Anterior Imaging Lens[2]	Width: 16.6 mm Height: 9.5 – 14 mm Depth: 11 mm (17 mm extended)
Retinal Imaging Lens[1,3]	Width: 8.4 mm Height: 4.8 – 8.4 mm Depth: 8.3 mm
High Resolution Imaging Lens[2,3]	Width: 5.5 mm Height: 3.2 mm Depth: 11 mm
Operating Distance	
Anterior Lens	66 mm
Retinal Lens	32 mm
High Res Corneal Lens	29 mm
In-vivo Repeatability	
Corneal Curvature (SimK)	< 18 µm (0.1 D)
Axial Length	< 25 µm
Corneal Thickness	< 3 µm
Corneal Height	< 2 µm
Anterior Chamber Depth	< 25 µm
Lens Thickness	< 50 µm
Fixation Target	Internal (focusable) and External
Light Source	Superluminescent Diode (840 nm)
Power Source	100-240 V 50-60 Hz
Dimensions	Width: 370 mm Depth: 540 mm Height: 530 mm

1 Measured in Tissue
2 Measured in Air
3 Optional Lens attachment

Provisional specifications subject to variation. Not yet approved for clinical sales in the USA or other jurisdictions pending FDA and other regulatory certifications.

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