

CoboTop – Advanced Automation for AR/VR Testing

- » Achieves precise measurements with TOP 300 accuracy and automated CoboSense workflows.
- » Automates testing to save time and reduce costs.
- » Ensures consistent and high-quality results.
- » Future-ready Technology: Supports advanced, automated production for AR/VR innovation.



01 \\ Cobot-Based Solution for AR/VR Testing

Instrument Systems offers advanced sensors and solutions tailored for Near Eye Display (NED) and headset measurements in AR/VR applications. Key products include the **TOP 300 AR/VR/MR** Optical Probe and **LumiTop AR/VR** Imaging Light Measurement Device, both

designed for precise luminance and spectral radiance analysis to ensure superior performance.

For advanced tasks like eye-box scans or eye-gaze measurements, these sensors can be paired with additional mechanical equipment.

High-precision goniometer solutions, such as the **DMS 803**, further expand measurement capabilities across a wide range of AR/VR applications.

Product portfolio for AR/VR Testing



TOP 300 AR/VR/MR optical probe for radiance and luminance measurements



LumiTop AR/VR imaging light measurement device



DMS display measurement system – all-in-one solution for goniometric display characterization

When flexibility is essential, cobot-based goniometer systems offer an innovative alternative. With enhanced degrees of freedom and a larger working area, these solutions provide versatility for complex testing scenarios.

A standout in this category is the CoboTop, a cobot-based system developed in collaboration with Konica Minolta's CoboSense technology. Integrated with the TOP 300, the CoboTop automates inspection workflows, repetitive tasks and testing procedures,

delivering exceptional precision and efficiency. By combining the accuracy of the TOP 300 with CoboSense's automated capabilities, manufacturers can achieve unparalleled quality control, reduce costs, and streamline production processes.

This innovative approach empowers the AR/VR industry with scalable, automated solutions designed to meet the demands of a rapidly evolving market.



CoboTop integrates the TOP 300, CoboSense and CAS 140D for precise, automated AR/VR testing.

02 \\ Technical Specifications

TOP 300	
Optical properties	
Entrance pupil diameter (Others upon request)	2.5 mm / 3.0 mm / 3.6 mm / 4.5 mm (One entrance pupil can be configured)
Focus distance (Others upon request)	1000 mm / 1333 mm / 1500 mm (One focus distance can be configured)
Optical probe Field of View	±1.2°
View finder Field of View	±3.5°
Fiber length	Approx. 3 m
Bending radius fiber	200 mm
View finder resolution (H x W)	2592 px x 1944 px
Nominal resolution	5 MP
Type view finder	Mono
Environmental properties	
Operation temperature	+15 °C to +35 °C
Mechanical properties	
Dimensions (D x H x W)	255 mm x 80 mm x 40 mm
Weight	Optical probe without fiber: 690 g Optical probe with fiber: 1350 g
Mounting	4 x M3 thread (depth 9 mm) (60 mm x 20 mm pattern) 2 x dia. 3 H7 (depth 6 mm)
Electrical properties	
Power consumption	Via USB (1.4 W)
Connector type	USB 3.0 A
Protection class	Class III
Cable length	Approx. 1.1 m
Interface	
Interface protocol	USB vision
CoboTop	
Mechanical properties	
Angular repeatability	±0.1°
Pose repeatability	±0.05°

Instrument Systems is continually working on the further development of its products. Technical changes, errors and misprints do not justify claims for damages. For all other purposes, our Terms and Conditions of Business shall be applicable.

VIDEO



Scan to watch the video:
"Characterizing near-eye displays in AR/VR headsets with Top 300 and CAS 140D".



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