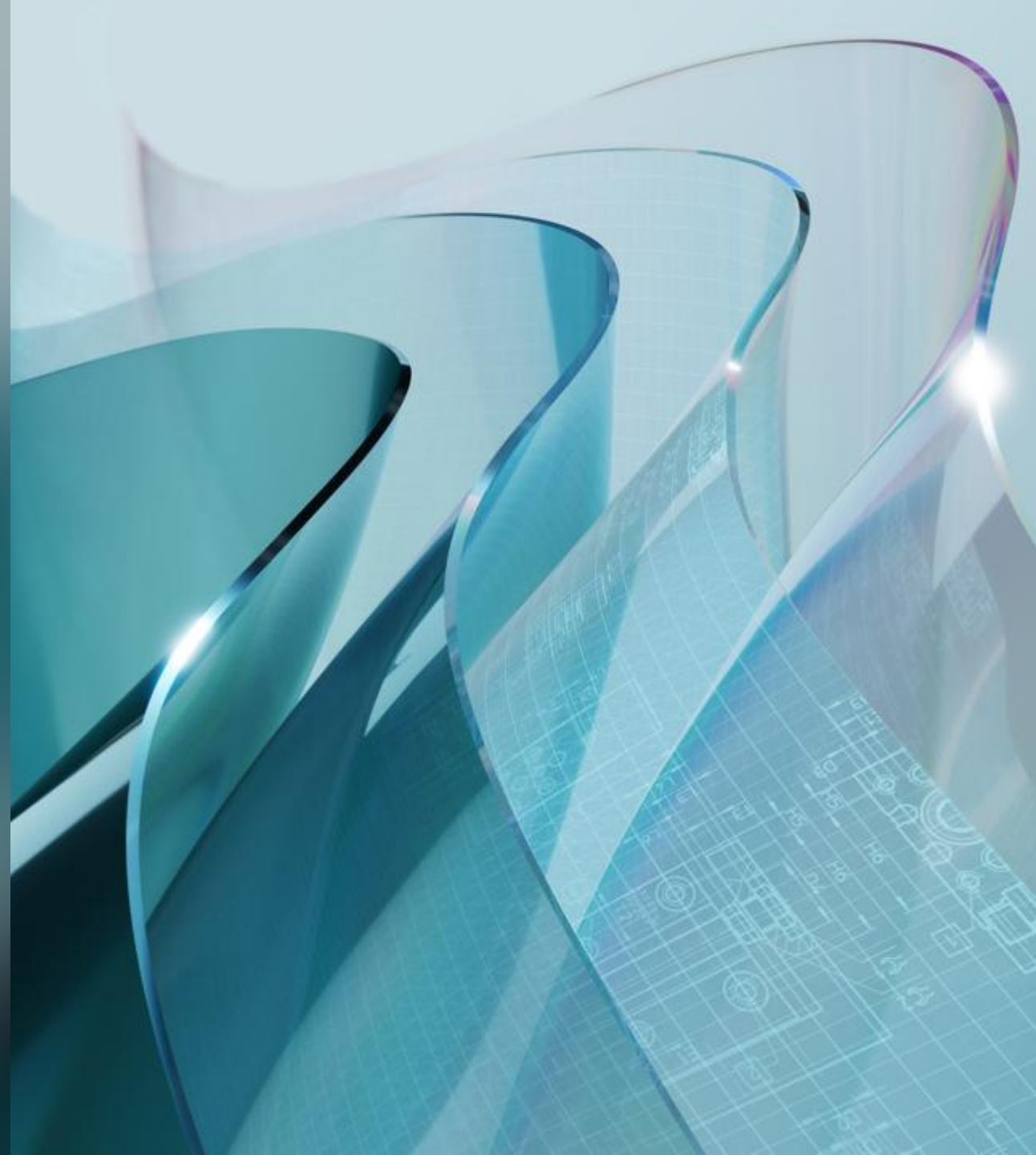


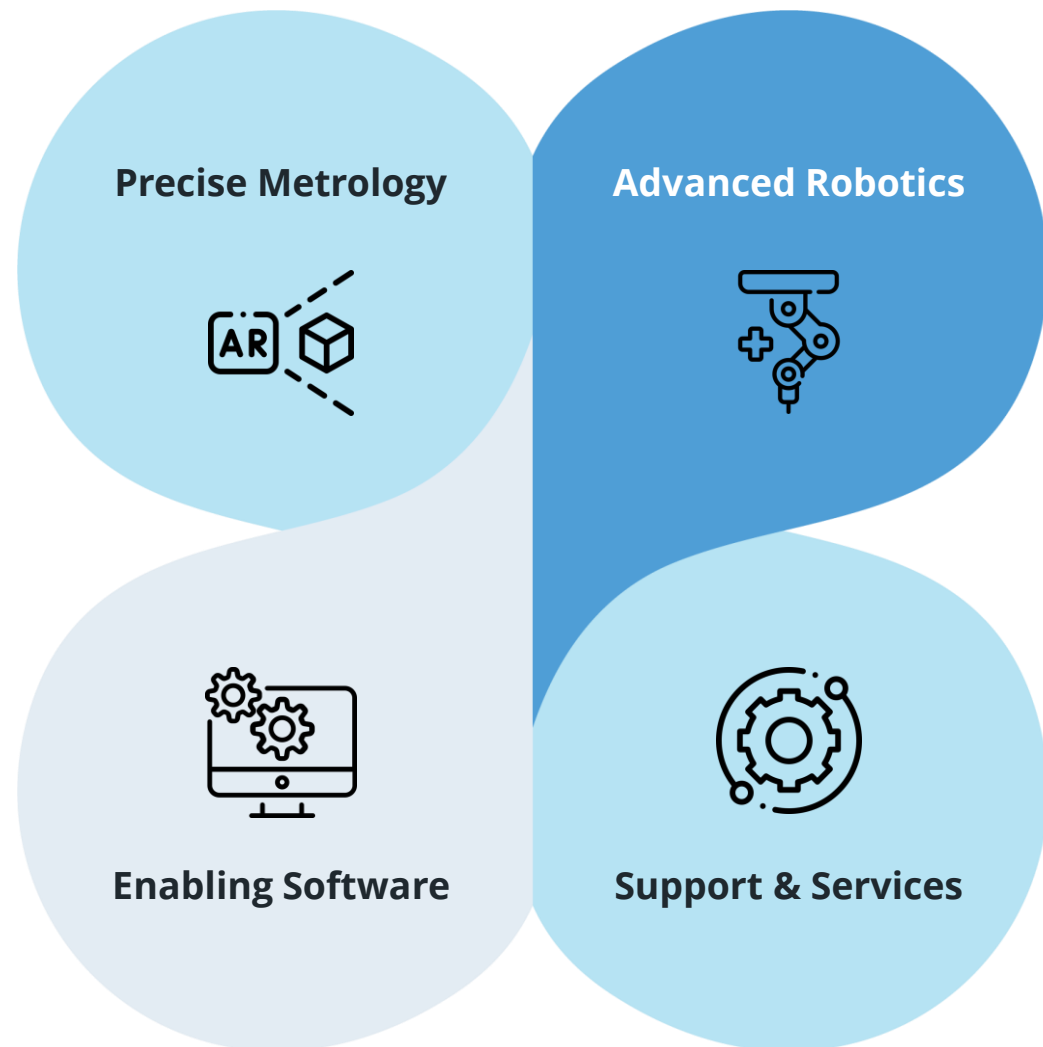
Introducing OptoColor RX

Enabling A Smarter Future

Oct 21, 2025
Ville Nummela



About OptoFidelity



20 years of outstanding R&D experience in Metrology, Imaging & Robotics

300+ employees globally

R&D in Finland,
production in China and Estonia

9000+ systems delivered to global brands and component manufacturers

OptoFidelity Story

The background of the slide is a photograph of a cityscape, likely Tampere, Finland. It features a river, several buildings, and a prominent tall brick chimney on the right side. The sky is blue with some clouds.

2005

Founded in
Tampere, Finland

Test systems for phones,
touch displays

2015

Expansion to US, China

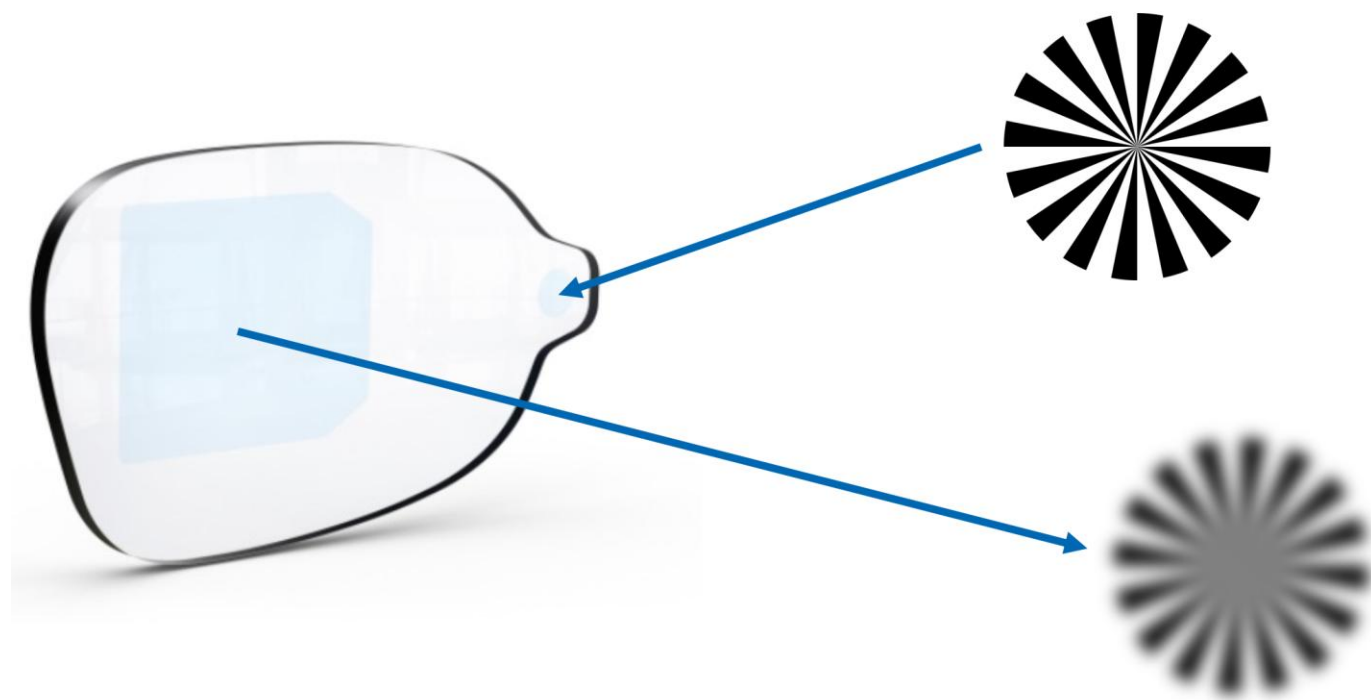
Introduced BUDDY, our
first XR product

2020

Focus on XR testing

First waveguide IQ tester,
now WG-IQ

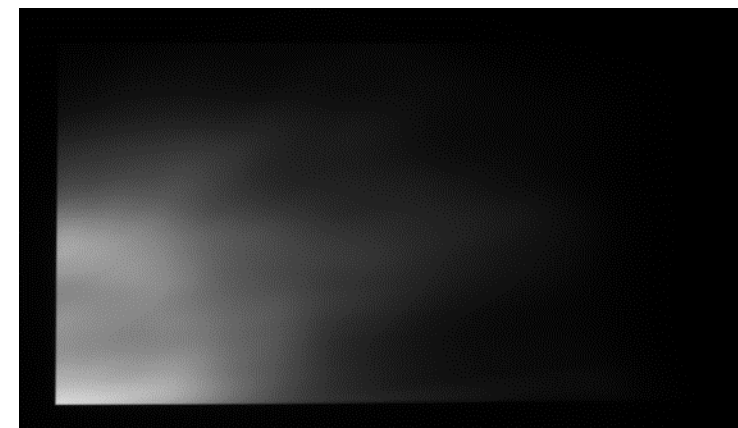
The Challenge in Waveguide Displays



Expectation



Worst Case Reality



Waveguide IQ testers



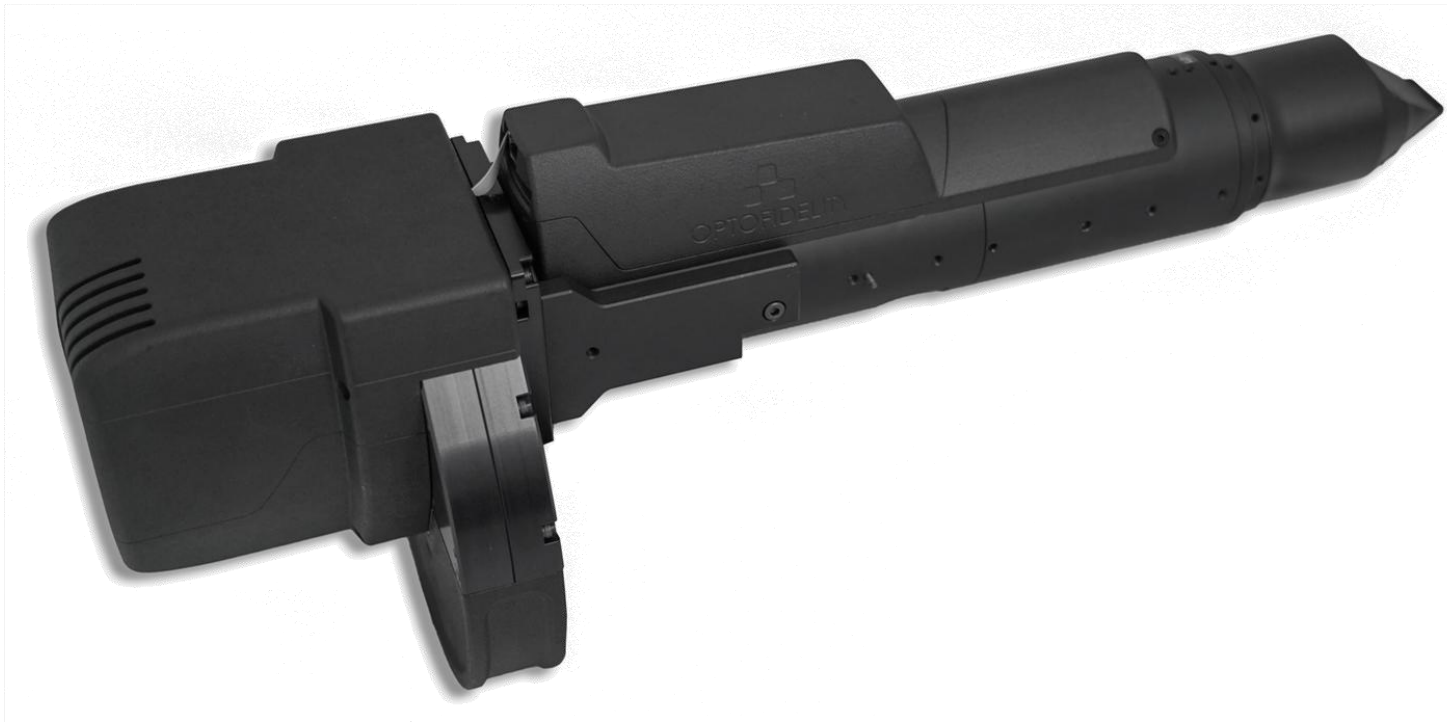
WG-IQ



Production IQ

OptoColor family

- Heart of IQ the tester
- Standard, grayscale and RX version



Standard Analyses

Radiance Uniformity

Efficiency

Checkerboard Contrast

FOV

MTF (slanted or crosshair)

Luminance

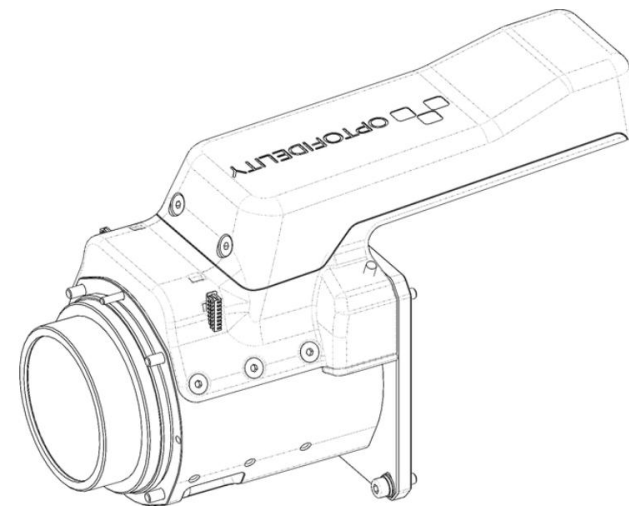
Luminance Uniformity

Colour Uniformity

Chromaticity

OptoColor RX

- Standard OptoColor + dial-in **astigmatism**

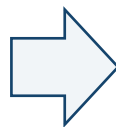


RX module

Motivation

Driver

- Miniaturization



Motivation

Driver

- Miniaturization
- Ophthalmic correction
 - Myopia, hyperopia, astigmatism



Motivation

Driver

- Miniaturization
- Ophthalmic correction
 - Myopia, hyperopia, astigmatism



Solution

- Integrate waveguide + prescription lens



Motivation

Driver

- Miniaturization
- Ophthalmic correction
 - Myopia, hyperopia, astigmatism



Solution

- Integrate waveguide + prescription lens
- Testing?



OptoColor RX

- Dial-in the lens prescription, measure normally

Compensation range (with virtual image at 1m)

Focus	-6 to +4 dpt (customizable)
Astigmatism	+/- 4 dpt

Key specifications

FOV	52.7° x 52.7°, 74.9° diagonal
Sensor	2.5 μm , 67 MP
Angular resolution	156.2 px/°, 0.0064 °/px

Standard goodies

Virtual pupil, telecentric, f-theta design, low distortion, straight or folded tip, fully calibrated

THANK YOU!

WWW.OPTOFIDELITY.COM

