

EPIC Online Meeting about Optical Metrology for Industry  
October 9<sup>th</sup>, 2023



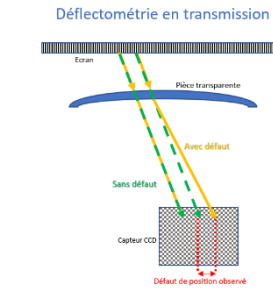
## **Optical Inspection based on phase shifting deflectometry**

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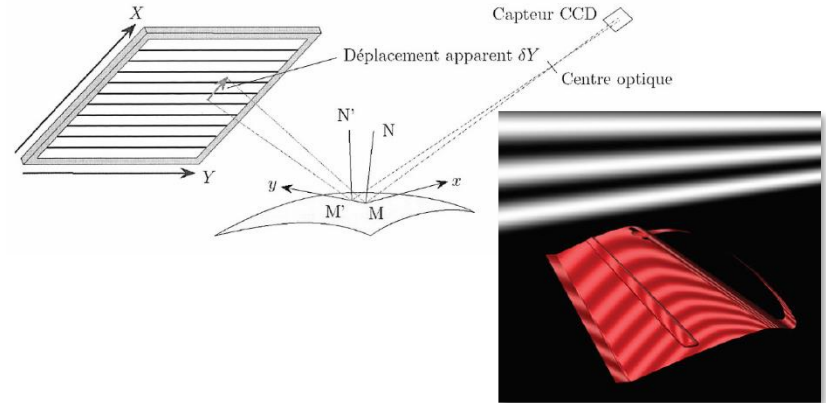
- V-Optics founded in 2018 (previous R&D expertise) 7 patents (3 news in progress)
- Small company (14 people, 5 members R&D – optics, image processing)
- Based in Illkirch-Graffenstaden (Strasbourg-France)
- Strong expertise on phase-shifting deflectometry
- Partner « zero-defects » in your control process

## Transmission



Light pattern (LCD screen) / Camera  
 Amplitude and deformation maps  
 Additional information (distortion maps)

## Reflection

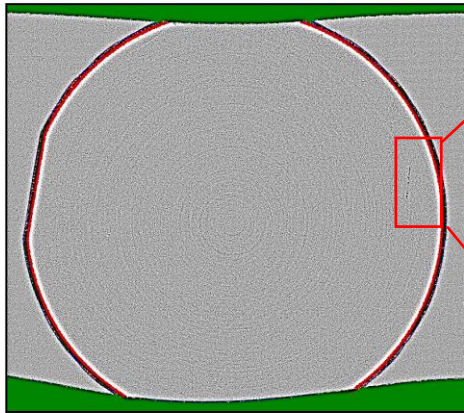


Reflective surfaces (gradient X, gradient Y, slope, altitude)  
 A robust algorithm for phase reconstruction

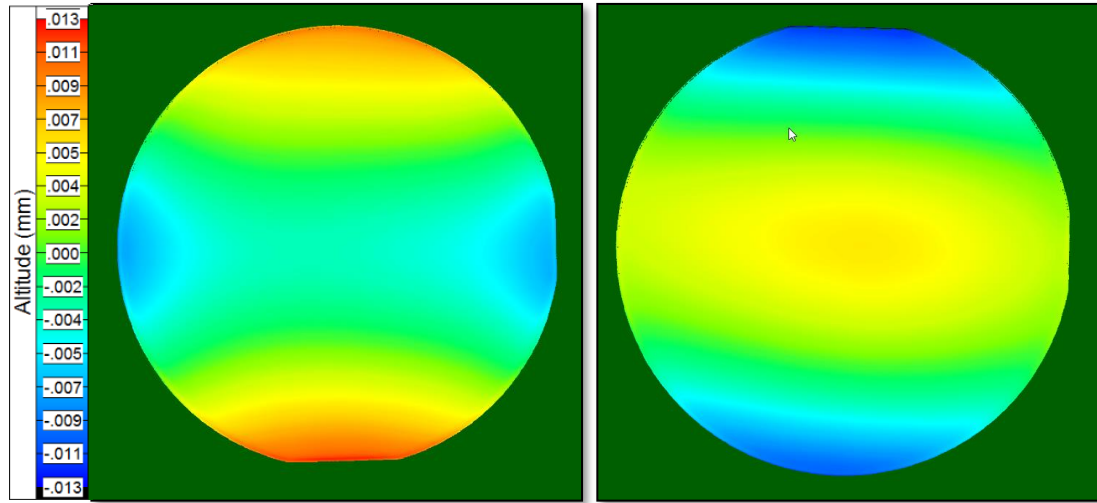
# SOME INDUSTRIAL APPLICATIONS



- Detection (defects : scratch, dig, inclusions, bubbles, lathe, others)
- Flatness measurement (Ø 2,5 cm à 10 cm)



Detection of scratches on a wafer (some microns) in a large FoV



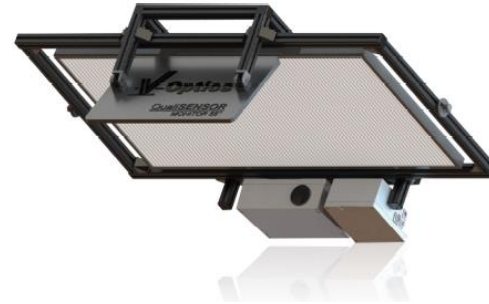
Flatness measurement

FoV = 180 mm x 150 mm

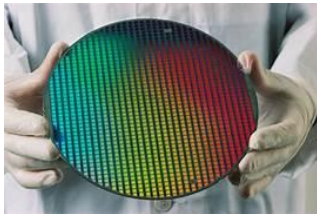


QualiSENSOR 100

FoV = 240 mm x 220 mm



QualiSENSOR 200



Flatness

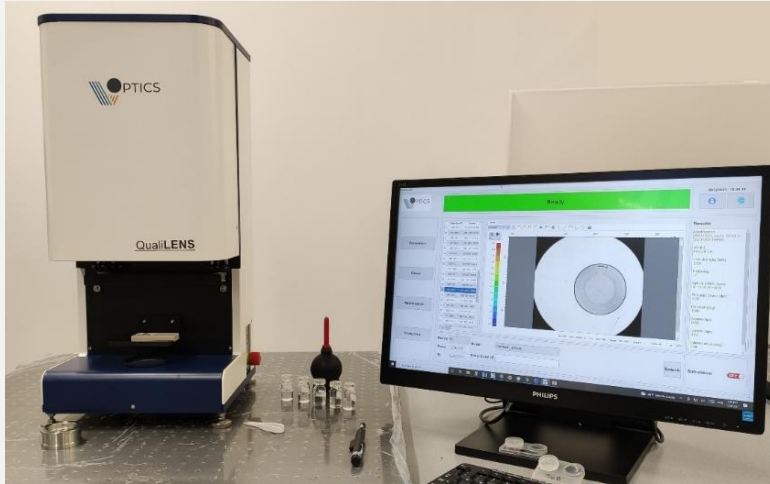


Orange peel, defects

Control of specular surfaces :

- Painting, texture and surface coatings
- Plastic and composite materials
- Paper, carton
- Mirror, glass, metals and ceramics





Quali-Lens – 100 ®

## EFFICIENCY

- Excellent R&r – no lens alignment
- Fast measurement

## USER FRIENDLY GUI

- Intuitive interface
- 2 working modes (Lab & Production)

## EVOLUTIVITY

- New advanced functionalities
- Customized developments
- Come meet us for details



**QualiLENS 150**

**IOL**  
*Batch*



**QualiLENS 100**

**Contact Lenses / IOL**  
*One flow*



**QualiLENS 300**

**Eye glasses**  
*One flow*



**V-OPTICS**, expertise for transparent and reflective materials



[www.v-optics.fr](http://www.v-optics.fr)