



# MIR-OCT

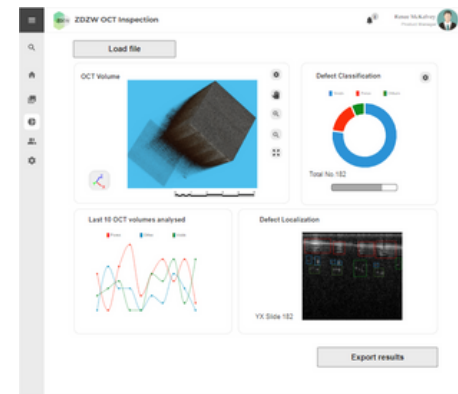
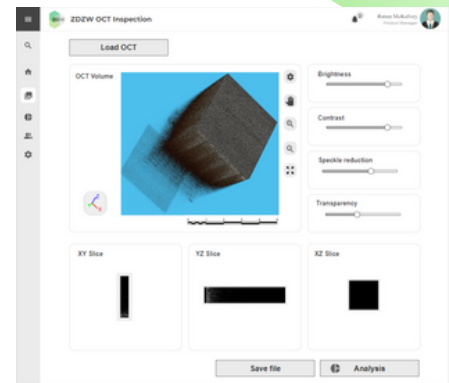
**Real-time, non-contact, and non-destructive inspection of ceramic parts with ultra-high-resolution images, significantly reducing defect-related delays and energy waste**

## SOLUTION DESCRIPTION

An **in-line, non-contact, and non-destructive optical sub-surface inspection technology** is a tool that helps Companies making additive ceramic manufacturing equipment and Companies requiring sub-surface inspection of coatings to enhances productivity and reduces energy consumption.

By implementing this technology, companies can significantly enhance productivity of zero-defect components and reduce energy consumption, as compared to if only traditional microscope-based post-manufacturing inspection was used.

**It allows for real-time fault detection, streamlining the manufacturing process and minimizing waste.**



## MAIN BENEFITS

**The applicability of MIR-OCT is sample dependent, requiring a combination of relatively low optical loss and scattering.**

- ▶ Fast, efficient, reliable and not dependent on an operator for defect detection and an algorithm for part quality inspection
- ▶ Optical fault detection and minimisation of delays in delivery of zero-defect products to the customer
- ▶ Easy optimization of manufacturing parameters and reducing energy/manufacturing waste
- ▶ Information can be forwarded to the operator in real time



## SUCCESS STORIES

OCT at visible (400-800nm) and near-infrared wavelengths (1100-1500nm) is very successful in ophthalmology, e.g., for scanning the retina for glaucoma and in dermatology for scanning for skin cancer.

NORBLIS MIR-OCT system successfully takes the OCT to mid-infrared wavelengths that are suitable for inspection of highly scattering materials, such as ceramics and coatings, while maintaining ultra-high depth resolution and real-time frame rates. **The MIR-OCT scanner has already successfully provided imaging through 20+ layers of ceramics printed by Lithoz and demonstrated that it is able to detect defects at all stages of the printing process.** The images are of such high quality that that a high-profile publication is being written up based on them. See also the early demonstration

### PRODUCT OWNERS

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