SITA

Black light inspection – digitalised, objective and fully documented

Available from September/October 2026

SITA FluoSpection Qube

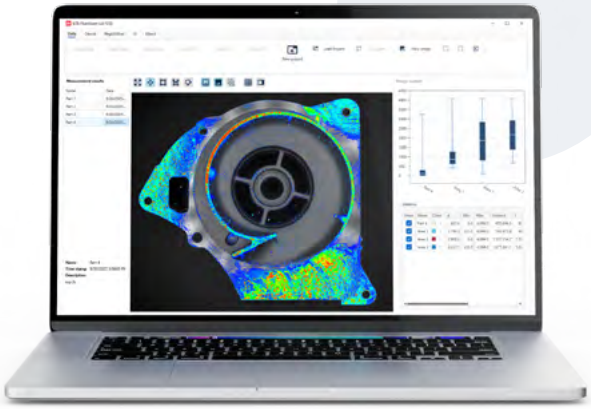
Prototype of the new product line SITA FluoSpection to control cleanliness

The inspection system SITA FluoSpection Qube offers an easy and fast cleanliness control of parts for filmic contamination by photographs under UV lighting:

- Simple, flexible handling without exposure to UV radiation and optimal measurement conditions due to the practical design of the measurement system
- Easy access to the measuring chamber via a lift door, height-adjustable measuring table and automated positioning of the measuring system
- Control, operation and data evaluation via PC software
- High-resolution, multi-stage processed and normalised images of the test object with color visualisation of the distribution of contamination levels
- Evaluation of measured values for the total area as well as for any partial or functional areas and checking against limit values
- Comparison of multiple parts, component or functional areas with one another

Application Examples

- **Full-surface cleanliness inspection prior to cleanliness-critical processes** such as bonding, coating, welding, hardening and wire bonding, for the evaluation of filmic contaminants such as oils, greases, metalworking fluids or release agents, with direct visualisation of their distribution
- **Evaluation of complex and large-area components** through high-resolution imaging of the entire inspection surface – even in the presence of locally varying contamination
- **Selective analysis of functional areas** such as sealing, bonding or contact surfaces through flexible evaluation of defined sub-areas within the overall image
- **Monitoring and optimisation of cleaning processes** through full-surface comparison of contamination states and targeted identification of inhomogeneous cleaning results
- **Quality assurance in sensitive applications** such as electronics manufacturing, medical technology, or vacuum technology through detailed and documentable surface images as well as the evaluation of measured values and their statistical distribution for objective assessment of component cleanliness



Technical description

Device (HxWxD)	83 x 65 x 70 cm^3
Measuring table	350 x 350 mm^2 Height adjustable for optimum measuring distance, interchangeable inserts or holders for parts mounting applicable
Max. size of test parts	300 x 300 x 300 mm^3 Expandable with accessory options for larger components
Testing area	300 x 300 mm^2, by measuring at several positions and stitching to complete part

Automated positioning of the measuring unit and distance adjustment

Fluorescence measuring system

- Calibrated measurement and image area 100 x 100 mm^2, standard pixel resolution 50 μm
- System calibration for normalised fluorescence measurement in RFU
- Powerful data processing algorithms

Lighting

- UV LED area flood light, 100 W, 365 nm with UV filter (>20 mW/cm^2), calibrated
- With integrated white light ring illumination

Camera

- HD industrial camera, 5 MP, objective with high light transmission, UV blocker/bandpass Filter 460 nm, calibrated
- High sensitivity by exposure times of up to 10 sec and further increase with reduced resolution

Design: augensturm | 102040 / Version 2.0

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