

WICKON

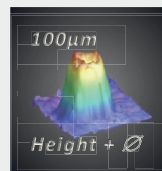
HIGHTECH

SPoT 3D SPI



Solder Paste optical Test!

Solder Paste Inspection with new and reliable technology.
Micro Paste Deposits are in reliable and fast process speed possible to be tested.



Made for micro-LEDs, micro BGAs, 0201m...

The technique is based on our patented technology to capture 3D images quickly and very stably. Each grabbed pixel from a line sensor has the third dimension included, this also given at moist pastes. Unlike other measurement procedures, data interpretation is not necessary.

Of course, an individually adapted system structure is possible to be created to

SPEED

Up to **350 [cm²/s]**
@12µm

Available Optical Resolutions:

1,8 / 6,4 / 7,5 / 10 / 12 [µm]

Repeatability ± 0,4 µm @ 6 Sigma

Other resolutions upon request.

CHARACTERISTIC

- High speed – up to 350 cm²/s with 12µm lateral optical resolution.
– up to 82 cm²/s with 6,4µm lateral optical resolution.
- Maximum accuracy – up to 0,7 µm (height resolution)
- Repeatability ± 0,7 µm @ 6 Sigma (lateral resolution 10µm)
- Innovative patented light technology, no missed paste deposits
- Intelligent algorithms preventing pseudo error occurrences
- **NEW: Inspection with double or triple inspection head.**

INSPECTION PERFORMANCE

resolution	speed*
1,8 µm	10 cm ² /s
6,4 µm	82 cm ² /s
10 µm	205 cm ² /s
12 µm	350 cm ² /s

* Inspection with one inspection head only.
Speeding up the process time is still possible and available at request.

System Models

- \ Inline – single and double track
- \ Offline
- \ Integration in existing system (e.g. handling system, printer, etc.)
- \ Semiconductor wafer
Wafers can be inspected up to 300mm diameter. Vacuum table will interact with the line robot.
- \ LEAN production cell

Options

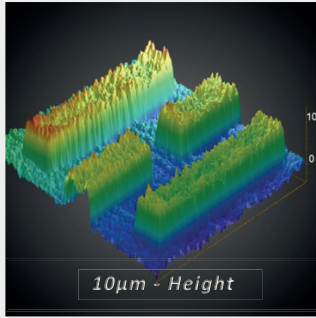
- \ Offline programming unit
- \ Good-bad functions
- \ Vacuum table
- \ Bar code reader
- \ Electrical width setup
- \ Flat/round Conv. belt drive
- \ Industry 4.0
- \ MES system communication
- \ CSV export

Lighting

- \ **3D lighting**
for detection of all paste deposits, e.g., from 15µm to 200µm height
- \ **Top light 2D** (with two wavelengths)
highlights structural information
- \ **Dark field lighting**
highlights relevant sub-areas
- \ **Diffuse light**
highlights relevant sub-areas
- \ **Transmission light**
Transparency of substrate

Test content I

- \ Not enough soldering paste
- \ Too much soldering paste
- \ Soldering paste missing
- \ Bridge / short circuit
- \ Smeared paste
- \ Dust / contamination
- \ Incorrect paste form



Test content II

- \ Volume
- \ Height
- \ Area
- \ X / Y-offset
- \ Layout analysis
- \ Rotation
- \ Incorrect form
- \ Coplanarity
- \ Area analysis
- \ Print shift

BASE SIZE

length	70 – 460 mm
Width	50 – 460 mm
Thickness	0,8 – 4 mm
Weight	up to 3 kg
component space	14 mm at the top, 60 mm at the bottom* *without middle support

SYSTEM CONFIGURATION

Transport height	850 mm – 950 mm ± 50 mm
Transport width	max. 460 mm
Interface	SMEMA, Siemens
Transfer direction	left to right, right to left, bidirectional
operating side	front
fixed rail	front

INSTALLATION EQUIPMENT

power supply	230 V / 115 V, 50 / 60 Hz, ± 10 %
Electrical network	L1 + N + PE
power input	2.2 kW
compressed air connection	6 bar
Air consumption	<12 NI/min

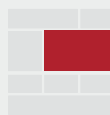
MACHINE DESCRIPTION

	2 or 3 segments
l x W x H	800 x 800 x 2000 mm
Netto weight	approx. 450 kg
color	RAL 9010 or at request
Noise level	< 62 dB



FAST

All sources are being checked – no loss of speed, with all details.



MODULAR

Our modular concept makes it possible to individually combine random options. We have it in our hands, we do software, optics and mechanical by ourselves. Customer wishes are welcome.



ACCURATE

Our promise of quality: accurate laboratory measurements, now available for your manufacturing process.