

Precise In-Line Inspection of Wire Bonds

The S6053BO-V system from Viscom features the highest precision in automated optical wire bond inspection. With individually configurable transport options, ceramic substrates of different characteristics and sizes are reliably inspected.

Wire bonds and SMD assembly are inspected together. High-resolution cameras capture all bond sites and wires. The Viscom inspection software is designed for maximum inspection depth and accuracy. Wire path, dies and component position are only a part of the inspection. It makes no difference whether the bonds are of copper, aluminum or gold, or whether ribbon or thick or thin wires are involved. Even wire dimensions of 17 µm are reliably inspected. The system also detects damaged and misplaced components.

Inspection programs can be created and optimized off-line on a Viscom programming station. This is supported by image material from a previously captured video base. The standard library contains inspection patterns for die, ball-wedge, wedge-wedge and security bonds. The inspection scope can be individually extended. In conjunction with a high-power Viscom SPC evaluation, numerous conclusions regarding the process can be made.

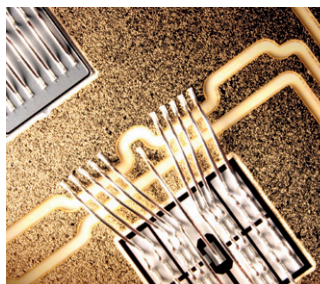
**High-end solution for
in-line inspection**

**Individually configurable
transport**

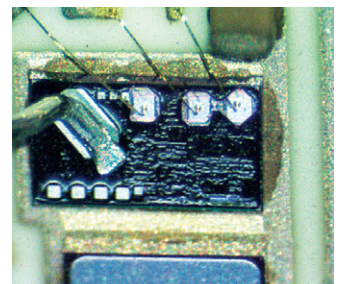
**Compatible with all
Viscom bond camera modules**

**Extremely high accuracy
and inspection depth**

**Remote diagnosis, hotline
and on-site service**



Defect detection on multiwire connections



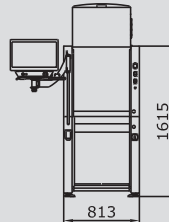
Inspection of different wire diameters

Bond

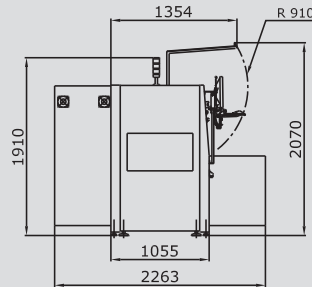
Technical Specifications



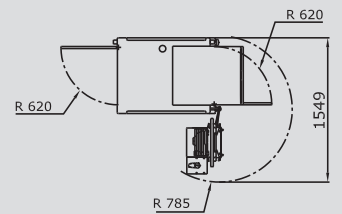
Front view



Side view



Top view



Dimensions in mm*

| | | S6053BO-V | | |
|--------------------|------------------------------------|---|---|--|
| | Transport system | Single track | Double track | Dual shuttle |
| | Inspection concept | Single inspection | | |
| Inspection scope | Bond | Ball bond, wedge bond, wire, die/SMD, ribbon | | |
| Camera technology | Standard configuration XM Bond HR* | | | |
| | Number of modules per machine | 1 | | |
| | Number of cameras | 1 | | |
| | Pixel size | 4.5 µm/pixel | | |
| Software | User interface | Viscom EasyPro | | |
| | SPC | Viscom SPC (statistical process control), open interface (optional) | | |
| | Verification station | Viscom HARAN | | |
| | Remote diagnosis | Viscom SRC (software remote control) (optional) | | |
| | Programming station | Viscom PST34 (optional) | | |
| System computer | Operating system | Windows® | | |
| | Processor | Intel® Core™ i7 | | |
| Substrate handling | Max. substrate size | 280 mm x 300 mm (11" x 11.8") (L x W) | 280 mm x 130 mm (11" x 5.1") (L x W) | 210 mm x 130 mm (8.3" x 5.1") (L x W) |
| | Transport clearance | 860 - 1180 mm ± 20 mm (33.9" - 46.5" ± 0.8") | | |
| | Substrate clamping | Vacuum or mechanical clamping | | |
| | Upper transport clearance | Up to 35 mm (1.4") | | |
| Inspection speed | | > 1000 wire bond connections/min., depending on inspection object characteristics | | |
| Other system data | Positioning/handling unit | Synchronous linear motors | | |
| | Interfaces | SMEMA, SV70, customer-specific | | |
| | Power requirements | 400 V (other voltages on request), 3P/N/PE, 8 A, 4 - 6 bar working pressure | | |
| | System dimensions | 813 - 1000 mm x 1615 mm x 1055 mm (32" - 39.4" x 63.6" x 41.5") (W x H x D) | | |
| | Weight | 800 kg (1764 lbs) | | |

*Other camera technologies and substrate sizes on request