

MicroVision

UPH
>70K

Model 996M Tray to Tray



- Transfer of multiple units to 3D scanning on a magnetic linear slide to achieve high accuracy and repeatable result
- 3D inspection on the “FLY” with 50mm field of view
- No Rotary lenses or conversion kits are required for QFP, BGA or QFN packages
- Simple conversion within 1 minute using quick exchange multiple pickup heads
- Re-verification of Mark and Position of unit in tray after replacement
- Option include: - High Speed Dual Tape and Reel up to 14K UPH
- In-pocket Inspection with Auto Reject Replacement

BGA, QFP, CSP, TSOP, QFN INSPECTION

Inspection (Accuracy / Repeatability)

Measuring Principle	Unit (micron)
Ball Height	6.0
Coplanarity	6.0
Ball Diameter	6.0
Warpage	6.0
Ball Pitch	5.0
Ball Offset	5.0
Body Width & Height	8.0
Grid to Package Offset	8.0
Ball Quality	10%

QFP /

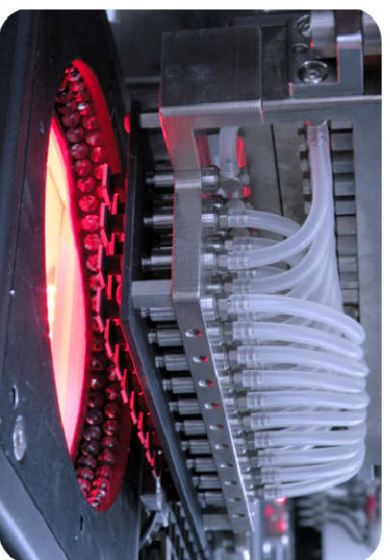
Measuring Principle	Unit (micron)
Coplanarity	6.0
Standoff	10.0
Lead Offset	6.0
Lead Skew	6.0
Lead Pitch	6.0
Lead Sweep	5.0
Lead Slant	5.0
Terminal Dimension	6.0
Lead Burr	6.0
Deviation	6.0
Foot Angle	0.75°

QFN

Measuring Principle	Unit (micron)
Pad Pitch	6.0
Pad Spacing	6.0
Pad Width & Height	6.0
Pad Offset	6.0
Body Width & Height	6.0
Parallelism	0.75°



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Mark Inspection:

Missing, incomplete or incorrect characters and logos, smeared, blurred, scratched, low contrast, angle, misaligned, reversed, double and additional mark.

Package Visual Inspection:

Scratches, Chip off, Void, Contamination 60x60 µm

Accuracy is measured on a golden unit device.
 Repeatability is measured on a real device at 3 sigma value distribution of all lead / ball-level deviations from the average value when performing statically repeated measurement on the same device.

Facilities Requirements

- Dimensions Tray : 1500 (W) X 1450 (D) X 1570 (H) mm
 Tape : 2580 (W) X 1450 (D) X 1570 (H) mm
- Weight : 1200 kg
- System Power : 220-240 Vac +/-10%, 50/60 Hz
 20Amps, Single Phase
- Compressed Air : 70-80 psi, 25 scfm
- Temperature : 5°C (41°F) to 40°C (104°F)

Speed (UPH)

Device	Size (mm)	Tray Matrix	Speed (Tray) M series	Speed (Tape) MS series
BGA 48	5 x 5	16 x 40	59,000	14,000
BGA 100	10 x 10	8 x 23	44,000	14,000
BGA 169	12 x 12	8 x 21	40,000	10,000
BGA 100	8 X 8	12 X 30	60,000	10,000
BGA 256	27 x 27	4 x 10	7,000	Nil
BGA 388	35 x 35	3 x 8	7,000	Nil
QFP 32	7 x 7	10 x 25	75,000	10,000
QFP 208	28 x 28	4 x 9	7,800	Nil
TSOP II 54	10 x 21	9 x 12	28,000	Nil
QFN 24	5 x 5	14 x 35	54,000	14,000
QFN 36	9 x 9	10 x 26	59,000	10,000

Advantage of Dual vs Single Taper with Jumbo Reel

Unproductive Time in TNR operation	Micovision 996MS 18,000 UPH cycle rate Average 14,000 UPH	Vxxx Model Tx 18,000 UPH cycle rate Average 14,000 UPH
Leader + Trailer + Take-up reel (1st)	6 minutes	6 minutes
Leader + Trailer + Take-up reel (2nd)	ZERO	6 minutes
Leader + Trailer + Take-up reel (3rd to 10th reels)	ZERO	48 minutes
Total unproductive time for 10 reels	6 minutes	60 minutes
Time requires to complete 10 reels (2500 units / reel)	2 hours	3 hours