# PA200A-BR

**200 mm Semi-automatic Probe System with Blue Ray**

**DATA SHEET**

The PA200A-BR sets a new standard for high-speed accuracy.

The PA200A-BR's precision ensures smooth probe landing with safe, repeatable electrical contact. In combination with the unique Z-profiling function, even extreme variation in height, such as the case with warped wafers, can be compensated. This test approach reduces pad damage and easily allows devices to be bonded after testing, even with the thinnest of pads. At the same time, the systems's accuracy eliminates the need for a time-wasting probe mark inspection.

Cascade Microtech has teamed up with optical measurement expert, Instrument Systems, to develop the unique MultiDie™ testing technology, which can test up to 70,000 LEDs each hour on only one probe system. In one step, the PA200A-BR and the integrated, high-performance measurement equipment simultaneously contact and sequentially stimulate and measure a group of eight or sixteen LEDs. Our system of multiplexing allows you to test up to three times as many dies per hour than with any other probe system.

## FEATURES / BENEFITS

| | |
|---|---|
| High throughput | Up to 20 dies/s (70,000 dies/h) with MultiDie test technology |
| | Eight positioning steps per second without compromising accuracy |
| | Highest Z-axis resolution of any production prober |
| | Stable, Linux-based controller with optional TTL or GPIB interfaces |
| Modularity | Wafer handling robot can be docked onto prober |
| | Easy to integrate with ProberBench™ Operating Environment |
| | ShapeTracker for identifying fragment contours |
| | VisionModule™ available for automated testing processes |
| | Interfaces to all major analysis instrumentation, optics software and testers |
| Cost effectiveness | Smallest footprint |
| | Upgradeable in the field |
| | Low cost of ownership |
| | Fast return on investment |
| | Scales with your requirements |

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## SPECIFICATIONS*

| | | |
|---|---|---|
| **Chuck Stage** | | |
| | **X-Y Movement** | Closed-loop DC servo with linear encoder feedback |
| | Travel / Resolution | 205 mm x 205 mm / 1.0 µm |
| | Repeatability / Accuracy | ± 2.0 µm / ± 5.0 µm |
| | Minimum cycle time | 100 ms (300 µm step size, 150 µm separation), depending on index and chuck configuration |
| **Z Movement** | | DC servo with linear encoder feedback |
| | Travel / Resolution | 15 mm / 0.25 µm |
| | Repeatability | ± 1.0 µm |
| | **Theta Movement** | DC servo with linear encoder feedback |
| | Travel / Resolution | ± 6.0° / 0.0001° |
| **Utilities** | | |
| | Power | 115 / 230 V, 50 / 60 Hz, 600 W (maximum 1500 VA, depending on tool configuration) |
| | Vacuum | < 200 mbar abs., 8 mm |
| | Compressed air | 4 bar minimum., 8 mm |
| **Microscope** | | Fits to video and stereo microscopes |
| **ProbeHead Platen** | | Vacuum, magnetic or bolt interface |
| **Chucks** | | |
| | Standard | 100 mm or 200 mm; stainless steel, HF/OPTO surface |
| | Thermal | 200 mm; 25° C to 150° C (only PA200A BlueRay) |
| **Optional Accessories** | | |
| | BlueRay prober table | With optional shelf for measuring instrument, monitor and keyboard<br>Optional VIT701 with vibration isolation |
| | Wafer handling robot | One cassette for wafers from 50 mm to 100 mm or 75 mm to 200 mm, incl. scanner and prealigner, dockable on-site (only PA200A BlueRay) |
| | Electronics interfaces | TTL, GPIB |
| | Software | ProberBench CorePackage™ with WaferMap, VisionModule, VideoTracker™, Programmer Tools, ShapeTracker, Z-Profiling |
| | Laser distance measurement system | Measures distance between DUT and sensor |
| | CCD camera | B/W, Color |
| | Operating lamp | 3 color |
| | Light-tight enclosure | Local enclosure or SE1000 (not with loader module) |
| | Utility pumps | Vacuum, pressure, or combinations |

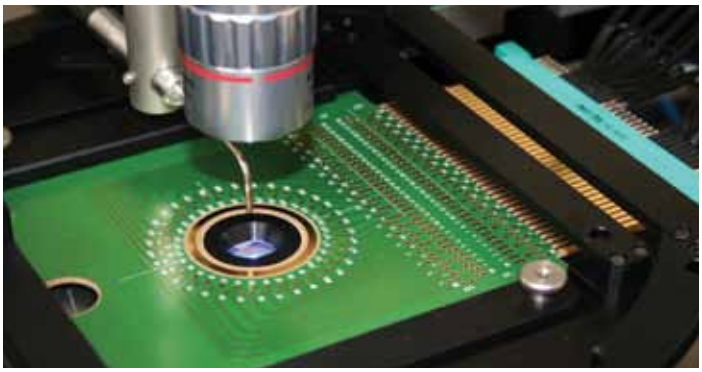
*Data, design and specification depend on individual process conditions and can vary according to equipment configurations. Not all specifications may be valid simultaneously.

## PHYSICAL DIMENSIONS

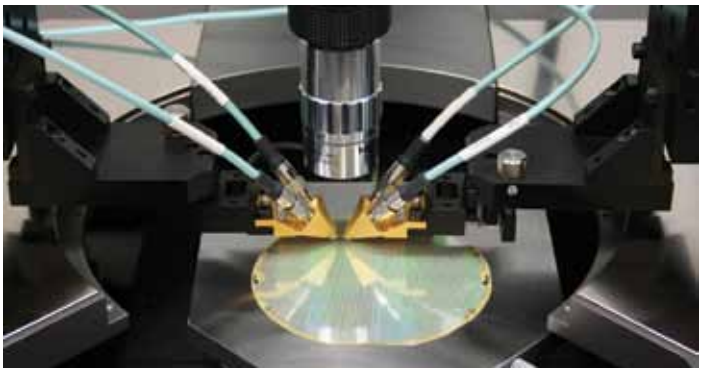
| | | |
|---|---|---|
| **Dimensions (WxDxH)** | | |
| | Mechanics | 700 mm x 800 mm x 650 (700) mm PA200 (PA200A) |
| | (with wafer handling robot) | 1150 mm x 880 mm x 1500 mm (including table) |
| | Electronics | 450 mm x 400 mm x 230 mm |
| | Joystick controller | 280 mm x 250 mm x 140 mm |
| **Weight** | | |
| | Mechanics / Electronics | 200 kg / 13 kg (520 kg complete including table and loader module) |

## APPLICATIONS

PA200A-BR equipped with optional wafer handling unit.



LED test application on BlueRay.



Multiport RF test on the BlueRay probe system.



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