



Making the connected world possible™



PALOMAR 3880-II

DIE BONDER

A solid investment for maximizing productivity from R&D to volume, automated bonding. All in one bonder.



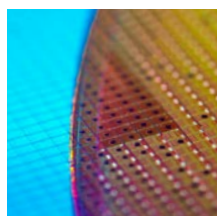
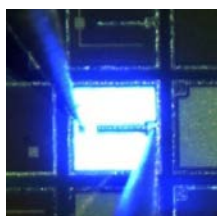
www.PalomarTechnologies.com



PALOMAR 3880-II

DIE BONDER

The new Palomar 3880-II die bonder is based on Palomar's proven die bonder design but includes options to even further maximize productivity, reduce programming time by up to 95% and improve the overall bonder productivity. The highly flexible Palomar 3880-II is ideally suited for a wide range of markets and applications.



NEW OFFLINE PROGRAMMING AND DATA IMPORT

Turn parts lists generated from CAD into bonder programs. Easily build or update complex programs with any previously defined program data.

VISIONPILOT® WITH VISION STANDARDIZATION™

Utilizes advanced geometric pattern matching technology to reliably and accurately locate parts that are randomly oriented or have greyscale variations. **NEW** Vision Standardization ensures consistency across systems and throughout the lifetime of the machine; reducing process maintenance and maximizing production.

BOND DATA MINER™

A comprehensive and centralized data management and analysis system that provides machine and process trend monitoring for increased yields and predictive maintenance.

- **NEW Automated Tool Changer**

Access to nearly unlimited tools. Automated tool changing process that complements the tool turret.

- **NEW High Force Tool**

Reach high levels of force while maintaining the same precision for low force operations.

- **NEW Heated Tool Option**

Localized heating with rapid, precise ramping through changeable tools.

- **Dynamic Axis Correction**

Maintains positional accuracy through active thermal compensation.

- **NEW Smart Tray Feeder**

Save space for high mix, highly complex environments for uninterrupted production.

- **Service Contract**

Achieve maximum ROI by adding a service contract complete with preventative maintenance visits.

- **Industry 4.0: SECS/GEM**

Engineered for Industry 4.0 communications using SEMI standard communication protocols for automation and tracking.

- **Automated Material Handling**

Reliable, continuous production with conveyors, heated conveyors, magazine handlers, die ejectors, tap and reel feeders and tray feeders.

- **NEW Contactless Height Measurement**

Precise confocal sensor for rapid height measurements of surfaces.

- **Large Work Area**

914.4 x 508.0 mm (36 x 20 inch) work envelope for a versatile automated die bonder capable of handling many different part types, presentation options, and application processes.

- **Look-Up Camera with PR system:**

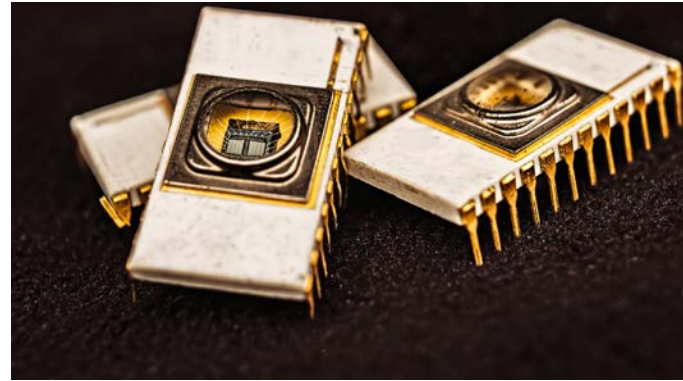
- Integrated Flip chip vision processing
- Automated tool monitoring
- Programmable on/off axis lighting
- Crisp, high magnification images

TYPICAL APPLICATIONS

- AOC- Active optical cable
- CMOS sensors
- HB/HP LED assembly
- Hybrid microcircuits
- MEMS / MOEMS
- Microwave modules
- Quantum computing
- RF packages
- Chip-on-board
- GaN/GaAs MMIC
- HPLD (high power laser diode)
- LiDAR
- Medical semiconductor & sensors
- Power electronics
- RF GaN 5G power amplifiers
- VCSEL, PD, DFB Laser, Lens Attach



STAGES & HANDLING	SOFTWARE	ACCESSORIES
• Waffle/Gel Pak Stages • Pulsed Heat System for Eutectic Attach • Steady State Stages • Wafer Die Eject System • Tape Feeders • Tray Feeders • Inline Conveyor • Hotrail Handler • High-Capacity Magazine Handlers • Custom Tooling	• Look-up Camera Vision Referencing • VisionPilot® with Vision Standardization™ • Remote Machine Control • X-Y Scrub • ID Tracking • Bond Data Miner™ (BDM) • Post Placement Accuracy Check • Offline Programming	• 90/180 Degree Flipper • Time/Pressure Dispense Kit • Epoxy Auger Pump • Jet Dispensing Kit • Microdot • UV Stage • Flood Cure UV station • Tool Changer • High Force Tool • Slide Fluxer • Epoxy stamping station • UV Bondhead • Force Calibration Load Cell • Heated Tool Option



PERFORMANCE AND SPECIFICATIONS	
Cycle Placement Rate	1,200 Placements/Hour
Pick-And-Place Force	Capability: 5 - 5,000 grams*
Ranges	Z axis > 2" Theta = >400 degrees
Placement Accuracy	<5µm (0.000196 inch), 3σ
Repeatability	Placement Repeatability: 3.5µm, 3σ Planar Repeatability: 0.00361 degree, 3σ
Tool Turret with Auto Tool Changers	Unlimited tools that work in tandem with the tool turret with 0.25 sec / tool change with tool turret
Work Area	914.4 x 508.0 mm (36 x 20 inch) work envelope

*Certain modification options may apply

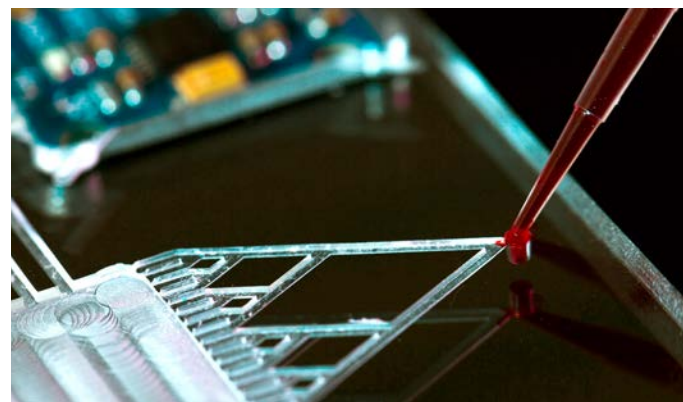


MOTION SYSTEM	PATTERN RECOGNITION
Resolution: X/Y axis = 0.1µm • Z = 0.1µm • Theta = 0.00023 degree	Vision System: Cognex® Series 8500 VisionPilot™: +/- 180° From Taught Angle
Control system: Linear Motor/Encoder (X/Y), Rotary Motors (Z/Theta)	Objective Lenses: Two look down lenses (high/low magnification) One fixed look up lens. Variable magnifications available



HARDWARE AND FACILITY REQUIREMENTS	
Power	230 VAC, 50/60 Hz, 10A, single phase
Vacuum	85 kPa (-25 inHg)
Air at Bonder Inlet	CDA: 60 psig, 4 SCFM
Dimensions	Footprint: 1,560 x 1,510 mm (61.4 x 59.5 inch). Height: 1,770 mm (69.7 inch) with hood closed. 2,334 mm (91.9 inch) with hood open.
Weight	1,134 kg (2,500 lbs)
Flooring	102 mm (4") concrete pad continuous slab

Technical Specifications are subject to change.





Making the connected world possible™

Making the connected world possible by delivering a Total Process Solution™ for advanced photonic and microelectronic device assembly processes utilized in today's smart, connected devices. With a focus on flexibility, speed, and accuracy, Palomar's Total Process Solution includes die bonders, wire and wedge bonders, vacuum reflow systems, along with Innovation Centers for outsourced manufacturing and assembly, and Customer Support services, that together deliver improved production quality and yield, reduced assembly times, and rapid ROI.

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