

# ACCURA

Flip-Chip Bonder  
**OPTO**



## Optoelectronics and Silicon Photonics, High Accuracy Flip-Chip Bonder 0.5 $\mu\text{m}$

The **ACCURA OPTO** is a flip-chip bonder that allows  $\pm 0.5 \mu\text{m}$  accuracy. It is dedicated to low force and reflow processes. Motorized axes guarantee a high repeatability of your process.

The **ACCURA OPTO** combines high precision, flexibility and accessibility. It is the perfect equipment for optoelectronics and silicon photonics applications.

### Applications

- Laser diode, laser bar
- VCSEL, photo diode
- LED
- Prisms, lenses, mirrors
- Micro assembly
- Flip-chip bonding, die bonding
- Chip-to-chip, chip-to-substrate bonding

### Highlights

- **Accuracy\***  $\pm 0.5 \mu\text{m}$
- **Low bonding force**
- **Confining gas**
- **Easy to use and very flexible**
- **Quick set-up of new applications**
- **Small footprint** and compact design

\*depending on configuration and application.



## User benefits

- Open platform associated to an intuitive interface results in a quick set-up for new applications
- Closed loop systems providing a high repeatability in operations
- High precision, accurate control of low forces and user-friendly interface for multiple applications and processes

## Main bonding processes

- Flip-chip bonding
- Die bonding
- Pick & Place
- Thermocompression
- Reflow
- UV curing
- Gold/Tin, Indium, Copper/Tin

## Specifications

Machine	
Footprint:	955 x 1110 mm
Height:	800 mm
Weight:	~450 kg

Component size	
Chip (Upper die)	0.2 x 0.2 - 22 x 22 mm
Substrate (Lower die)	0.2 x 0.2 - 100 x 100 mm
Total thickness	0.03 to 8 mm

Bonding arm	
Accuracy*	± 0.5 µm
Z resolution	0.01 µm
Force	0.2 up to 10 N

Alignment stage	
XY stage	Resolution 0.015 µm
Theta travel	± 5°, resolution 1 µrad

Data, design and specifications depend on individual process conditions and can vary according to equipment configurations. Not all specifications may be valid simultaneously. Illustrations, photos and specifications in this datasheet are not legally binding. Specifications are subject to change without prior notice.

\*depending on configuration and application.

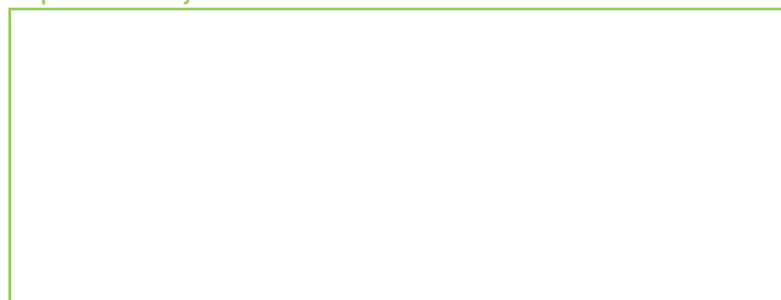
Bonding heads	
Room temperature	Sq. 22 mm
Heating	Sq. 22 mm, 400°C
UV	80 mW / cm <sup>2</sup> @ 365 nm

Substrate chuck	
Room temperature	Sq. 50 or 100 mm
Heating	Sq. 22, 50 or 100 mm, 400°C

Optics	
Digital camera resolution	2 sight cameras 0.37 µm/pixel
Field of view	900 x 700 µm
Automatic alignment	Optional

Options	
Dispenser	Ionisers bars
UV Curing system	Flux or dipping station
Face up station	Frame with elastomeric insulator
Process recording	Automatic alignment

### Represented by:



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