Since 1975

Flip-Chip Bonders

The key to high precision

Who we are

Based in France, we are a world leading supplier of flip-chip bonders excelling in high-end, demanding applications.

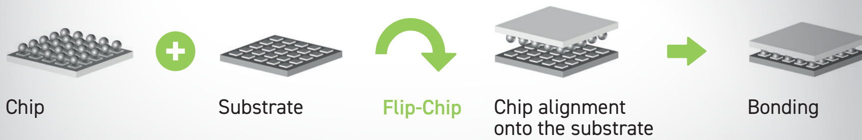
Since 1975, we have accompanied laboratories and industries, which look for a **high precision** and an important reliability in the assembly of their components. We accelerate their developments of the chips of future thanks to our **robust and precise flip-chip bonders**.

With flip-chip bonders installed worldwide, we are globally renowned for the high post-bond sub-micron accuracy and the high flexibility of our equipment.

Ranging from manual loading version to fully automated version, our systems cover a **wide range of applications** and offer the unique ability to handle both fragile and small components onto substrates and wafers up to 300 mm.

What is flip-chip bonding?

Flip-chip bonding is an interconnection technique to assemble a chip to a substrate.

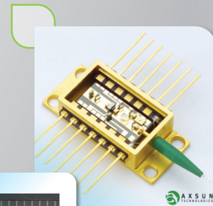


Adapted to most bonding processes for specific applications

Thermo-Compression UV-Curing
Reflow Hybrid Bonding Adhesive Joining
Thermo-Curing Thermo-Sonic

Lasers 3D IC
Optoelectronics MEMS MicroLEDs
IR imagers
Photonics Quantum Computing

Imagery taken with Attollo Engineering SWIR camera



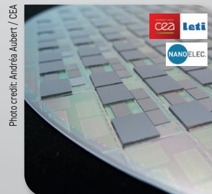
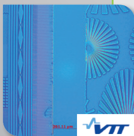


Photo credit: Andréa Aubert / CEA



SET FLIP-CHIP BONDERS

Education and R&D

ACCµRA M

- **± 3 µm** post-bond accuracy
- Manual

The **ACCµRA M** permits to align manually the components with a high level of precision.

Its motorized arm controls precisely the bonding force.

Combining and synchronizing automatically the force and the temperature, it guarantees a perfect quality and a high repeatability of your process.

ACCµRA100

- **± 0.5 µm** post-bond accuracy
- High force: 1-1000 N

The flexibility of the **ACCµRA100** makes it ideal for developing a wide range of applications.

Its motorized axes guarantee a high repeatability of your process.

It combines high precision, accessibility and cost-effectiveness.

ACCµRA OPTO

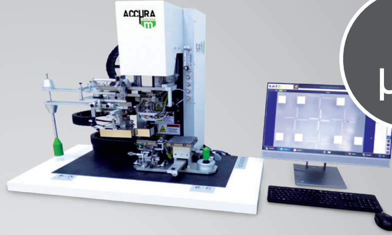
- **± 0.5 µm** post-bond accuracy
- Low force: 0.2-10 N

The **ACCµRA OPTO** is dedicated to optoelectronics and silicon photonics applications.

Its motorized axes guarantee a high repeatability of your process.

It combines high precision, accessibility and flexibility.

ACCURA
Flip-Chip Bonder
m



3 µm

0.5 µm

ACCURA
Flip-Chip Bonder
100

0.5 µm

ACCURA
Flip-Chip Bonder
OPTO

SET FLIP-CHIP BONDERS

R&D and Pilot Production

FC150 PLATINUM

- **± 0.7 µm** post-bond accuracy
- From manual to automatic
- From low to high force: 0.25-2000 N

The **FC150 PLATINUM** is the latest version of the historic machine of SET - the FC150, present in laboratories all over the world. It includes all the options and the 40-year knowledge of SET. Its accuracy has been highly improved.

The **FC150 PLATINUM** is a high accuracy and versatile flip-chip bonder.

It is designed for chip-to-chip (up to 100 mm) and chip-to-wafer (up to 200 mm) applications on the same open platform.

Thanks to many features, it covers a large range of applications from low to high forces.

FC300

- **± 0.3 µm** post-bond accuracy
- Automatic
- High force: 0.9-4000 N

Dedicated to very fine pitches (< 10 µm), the **FC300** is designed for chip-to-chip (up to 100 mm) and chip-to-wafer (up to 300 mm) applications.

It combines very high force and high temperature with very high accuracy on large samples, all of them at the same time.

NEW

0.7 µm

FC 150
PLATINUM
Flip-Chip Bonder

0.3 µm

FC 300
Flip-Chip Bonder

SET FLIP-CHIP BONDERS

Production

ACCµRA *Plus*

- **± 0.5 µm @ 3 σ** post-bond accuracy
- Chip-to-chip and chip-to-wafer
- Full automatic

The **ACCµRA** ***Plus*** is dedicated for production, offering high accuracy and short cycle time for different processes as reflow and thermocompression processes.

NEO HB

- **± 0.5 µm @ 3 σ** post-bond accuracy
- Chip-to-wafer
- High throughput
- Stand alone or full automatic
- ISO 3 cleanliness level

The **NEO HB** is suitable for hybrid bonding.

It combines high precision and short cycle time.

NEO W

- **± 1 µm @ 3 σ** post-bond accuracy
- Chip-to-wafer
- High throughput
- Stand alone or full automatic

The **NEO W** is suitable for thermocompression and reflow bonding processes.

It combines high precision and short cycle time.

0.5 µm
@ 3 σ
ACCµRA
Flip-Chip Bonder
Plus

0.5 µm
@ 3 σ
NEO HB
NEO W

AND ALSO...

LDP150

- High force press
- For very high-end applications
- Up to 100,000 N

The **LDP150** presses pre-assembled components at room temperature.

It maintains the initial alignment and parallelism obtained thanks to the **FC150** or **FC300** Flip-Chip Bonders.

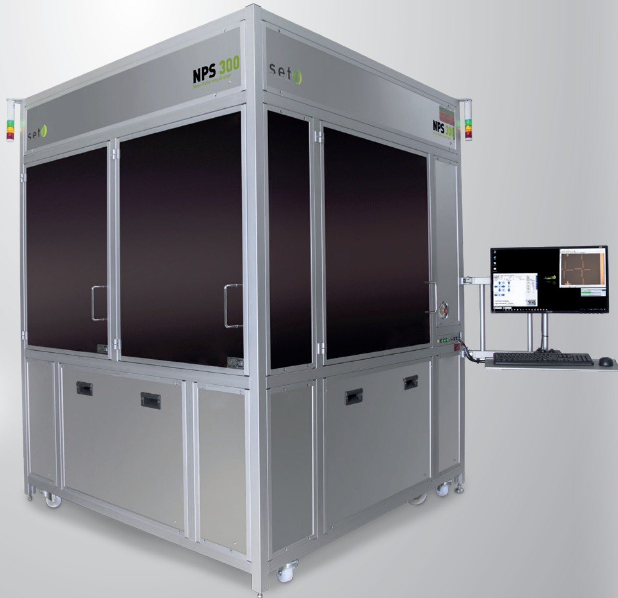
NPS300

- Stepper **± 0.5 µm** for Nano-Imprinting
- Advanced R&D and Pilote line oriented
- High force

Optimized for replication of nanostructures, the **NPS300** is the first ever tool able to combine Hot Embossing and UV-NIL on a same platform.

Its flexible architecture offers an excellent process reproducibility and a unique ability to pattern large areas, in a sequential step and repeat mode on wafers up to 300 mm.

LDP 150
Large Device Press



NPS 300
Nano-Patterning Stepper

SAS
CLIENT
OPTO

WORLDWIDE CUSTOMER SUPPORT

You know your products. We know our equipment. Let's work together.

Field service

- Specialists from SET
- Local support
- Remote support

Training centers

- User training
- Vision tool training
- Maintenance training

Demo centers

- Customized process development
- Application tests
- Pilot line

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