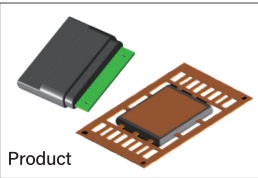


Service Flow

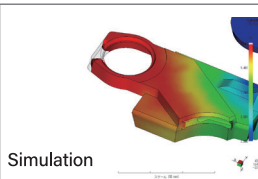
Consultation

Please feel free to contact us by e-mail, phone, or via our website. We would like to know various requests about new and existing products.



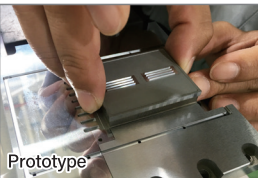
Technical proposal and prototyping

Based on the know-how we accumulated over many years, we propose the suitable process to meet customer's needs and challenges. We can conduct rapid prototyping at our laboratories around the world.



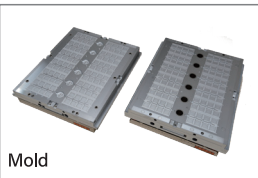
Evaluation and verification

We conduct various evaluations on the completed prototype and make improvements. We brush up the product specification for mass production based on feedback obtained through evaluations and verification.



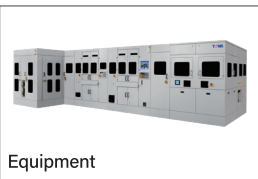
Proposal of mold and equipment

For mass production, we propose optimum mold and equipment. After discussing price and specification, we receive a formal order and then start to design and manufacture the mold or equipment.



Delivery and installation

We ask customer to confirm at our production base if the product can be manufactured according to the specification. After that, we deliver and install the completed mold and equipment at customer's factory.



Bring new products to the market

Please contact us about prototyping other than semiconductor, EMS, and anything else!

Laboratory network for rapid prototyping and evaluation

We have established 9 laboratories around the world to provide rapid prototyping support near semiconductor manufacturer's development bases. We make efforts for new product development together with customer through prototyping and evaluations to realize mass production quickly.



SEMICONDUCTOR EQUIPMENT
PRODUCT LINE-UP



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E-mail : towa_indiateam@towajapan.co.jp



Website



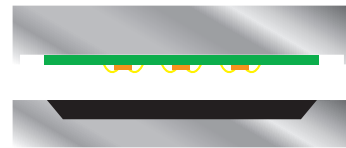
Contact



Technology

Compression Molding

Comp.
Information ▶



Compression Mold

Compression molding is the molding method that compresses and cures granular or liquid resin within the cavity with less resin flow.

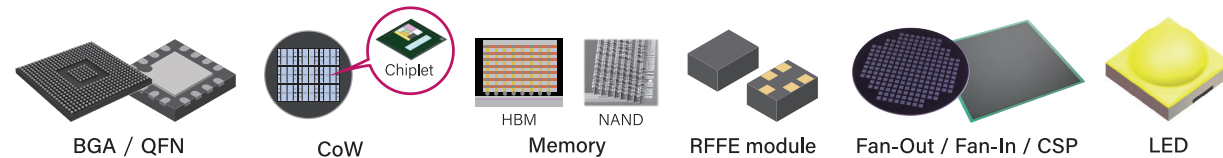
*** Cavity Down Structure is introduced.**

Dispense resin on the bottom cavity and immerse the workpiece set in the upper mold into the melted resin

Feature

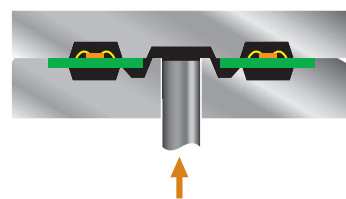
- Less resin flow
Less resin flow prevents defects including chip shift and wire sweep.
- Suitable for wafer / panel molding
Uniform resin dispense to the end face of workpiece enables high quality molding.

Target product



Transfer Molding

Tr.
Information ▶



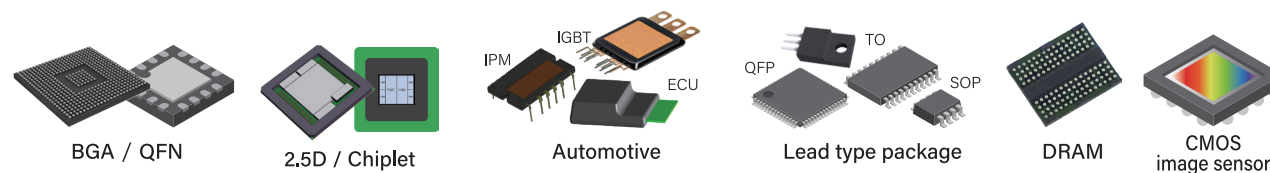
Injection Mold

Transfer molding is the molding method of filling the cavity with resin melted in the pot and then curing it.

Feature

- Applicable for complex shaped package
Applicable for various shaped packages including individual package and double side package.
- Suitable for exposure molding including chip and substrate exposure package.

Target product



Singulation

Sing.
Information ▶



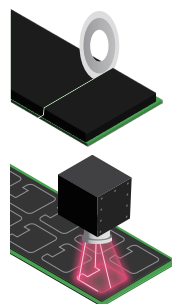
Sawing and singulation process for molded package by blade and laser.

Feature

- Offering both blade and laser singulation equipment to meet diverse customer needs.
- Supports a wide range of applications, from small packages to thick packages, substrates, and irregularly shaped cuts.
- In-house developed dicers and handlers deliver high accuracy dicing and high speed handling.

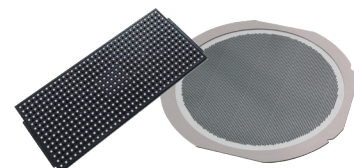
◆ Blade

◆ Laser



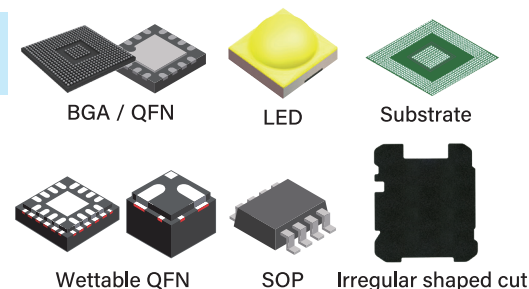
Dicing
Offload

Bulk / Tray / Ring offload



*Laser singulation is available only for bulk type.

Target product



CPM1180



Compression molding system for large size PLP molding to meet industry needs

Target product Large PLP

CPM1080



Compression molding system for high-quality and low-cost WLP/PLP molding processes

Target product WLP / PLP

PMC2030



The ultimate compression molding system pursuing market needs

Target product MAP BGA / MAP QFN

LCMseries



Compression molding system for LED packages with a unique molding method

Target product LED

YPM1180



All-in-one transfer molding system for high quality molding

Target product SOP / QFP / QFN

YPM1120



High productivity transfer molding system for lead frames

Target product IPM / ECU / IGBT

YPM1250-EPQ



Transfer molding system for 2.5D/3DIC/Chiplet products

Target product CPU / GPU

YPM1080-EP



Transfer molding system applicable for exposed die molding and varying package thickness

Target product e-MUF / BGA / DRAM

PSS2040



Singulation system applicable for 330mm panel

Target product BGA / QFN / Substrate

FMS4040



Singulation system to reduce manpower

Target product BGA / QFN / LED

LGR1040



Laser type half-cut machine suitable for wettable QFN packages

Target product Wettable QFN

LSG1040



Achieving High Productivity with Irregular Shape + Straight Laser Cutting: Laser Singulation Equipment

Target product BGA / QFN / SOP