**Wafer Support System**

**[TWS3000 SERIES]**

- **Overview**
  This system was designed for temporally bonding of ultra thin wafer for advanced 3D packaging requirement. Unique UV hardening resin is used for the bonding of wafer and supporting material realizing excellent TTV, high accuracy alignment, normal temperature bonding and high throughput. The system have already introduced to Memory device, Power device and also other various production lines and achieving low CoO for the mass production.

- **Features**
  - **High throughput** ... realized >24 WPH
  - **High accuracy** ... achieving TTV(Total Thickness Variation) < 3μm
  - **Normal temperature bonding** ... Almost no thermal impact to the wafer when bonding with supporting material by adopting UV hardening resin.
  - **Low cost** ... Repeated use of supporting material is possible thus used glass recycling tool is also line upped.
  - **Dry process** ... Bonding, de-bonding of supporting material is performed by all dry process and no organic solvent are used.
Wafer Support System Process Flow

Grinder → Post Processor

Wafers → Bonder → Debonder → Thin Wafers

Recycler

Unit Process Flow

Bonding Process
Wafers → SC → VB → UV → Bonded Wafers
- Coating adhesive
- Bonding wafer
- Hardening by UV

Debonding Process
Bonded Wafers → LU → PU → Thin Wafers
- Removing glass
- Remove adhesive

Recycling Process
PP ↔ MC ↔ CC
- Coating LTHC
- Metal etching
- Cleaning glass

After back grinding

Bonding accuracy Data

TTV: 1.5 μm
Wafer Support System
[TWS3000 SERIES]

● System Process Flow

● Bonder [TWS B3000]

Wafer → AL/TM → SC
- Centering of wafer
- Measurement of wafer thickness
- Coating of adhesive

Support Glass → TM → AL → VM
- Measurement of glass thickness
- Centering of glass
- Bonding glass to wafer inside vacuum chamber

Bonded Wafer ← TM ← UV
- Measurement of bonded wafer
- Hardening of the adhesives by UV

● Debonder [TWS D3000]

Bonded Wafer → AL1
- Centering of wafer (with dicing frame)
- Rotate wafer

Support Glass ← SA2 ← LU1
- Remove support glass
- Transfer support glass
- Apply laser

Wafers ← AL1 ← PU1
- Return work to original direction
- Peel glue

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