

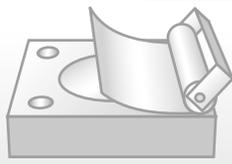
Pressure Measurement Film

# PRESCALE

Application Examples

[No.8]

**Measured Object**



Background tape lamination roller

**Uses**

Verifying background tape lamination pressure uniformity

**Benefits**

- Adjustment time savings
- Higher quality
- Loss reduction

**Industry**      **Semiconductor Production**

**Applications**      **Verifying background tape lamination pressure uniformity**

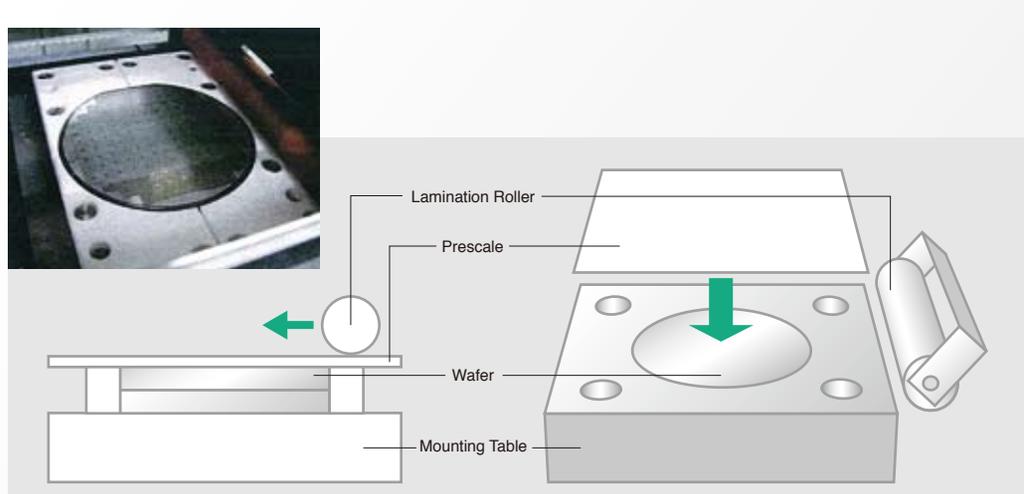
**Challenges**

The process for laminating background tape (protective film) precedes grinding. If the lamination roller pressure distribution is not uniform, the background tape can become wrinkled. If the height of the wafer and the surrounding mounting table are not optimal, wafer cracking and poor background tape lamination occurs. Previously, only trial and error adjustment methods had been available to prevent this.

**Measurement**

**Product used: Prescale (Extreme low pressure 4LW)**

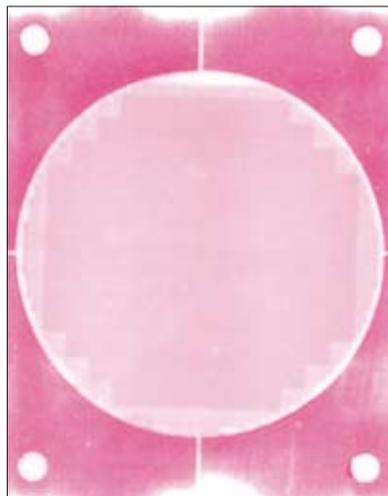
Prescale is placed on the wafer and the surrounding mounting table, after which the lamination roller is operated at the usual pressure. The Prescale is then removed and its color is examined to determine whether pressure had been uniformly applied.



The diagram illustrates the measurement setup. A wafer is mounted on a mounting table. A lamination roller is positioned above the wafer. A Prescale film is placed between the wafer and the mounting table. A green arrow indicates the direction of the lamination roller's movement, which applies pressure to the Prescale film. The resulting color change on the Prescale film indicates the pressure distribution.

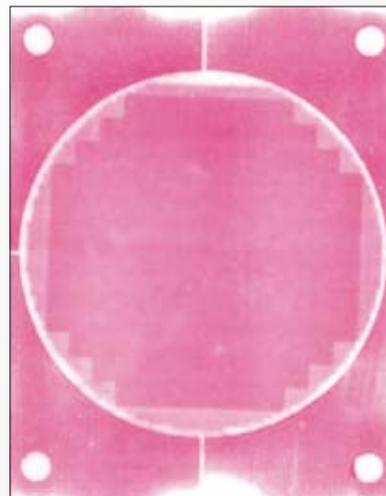
## Results (images)

### [Not Good]



Insufficient pressure was applied to wafer area.

### [Good]



Uniform pressure was applied.

## Benefits of Prescale

### ● Time Savings

Substantial improvements in equipment adjustment work efficiency.

### ● Quality improvement

The ability to verify pressure uniformity in advance reduces losses resulting from poor quality. Wafer cracking is eliminated.

#### Without using Prescale

Wrinkles may cause loss of backgrind tape, and wafer cracking may occur if the height adjustment of the wafer and the surrounding mounting table area is poor. The recovery process requires trial and error adjustments using actual lamination results. Tape, wafer and other **losses occur, and time is required for adjustments, etc.**

#### Using Prescale

Using Prescale, it is possible to verify the amount of pressure applied to the silicon wafer by the lamination roller under actual usage conditions. Only Prescale can show the pressure distribution under such conditions. Furthermore, the ability to periodically check the uniformity of pressure results in **adjustment time and material loss savings.**

\*Note that the specifications and performance data described in this catalog are subject to change without notice for the purpose of improvement. Since the images provided are used for illustration purposes only, they may differ slightly from the actual product.

**FUJIFILM**

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<http://www.fujifilm.com/products/prescale/>