

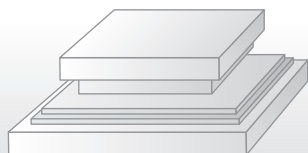
Pressure Measurement Film

PRESCALE

Application Examples

[No.22]

Measured Object



Panel Polishing Equipment

Uses

To check pressure uniformity between the polisher stage and polishing sheet.

Benefits

Quality improvement

Reduction in number of defects

Reduction in adjustment time

Industry

LCDs

Examples of relevant products

Smartphones
Tablet PCs



Applications

Checking uniformity in a polisher.

Challenges

In the manufacture of LCDs, cullets (glass shavings) may adhere to the panel surface during polishing of the panel edge. When a polarizing plate is mounted on a panel with cullets, air bubbles may form and the yield rate may deteriorate. To prevent this problem, a polisher and washer are used to form a smooth panel. However, since high pressure cannot be applied to the panel surface during polishing, it is very important to maintain sufficient, uniform pressure between the panel and the polishing sheet.

Measurement

Product used: Prescale (Ultra Low Pressure LLLW)

Prescale is placed between the panel adsorption stage and the polishing unit as pressure is applied under normal conditions. The Prescale film is then removed and the color is evaluated to determine process performance. It is easy to evaluate if the panel adsorption stage and polishing unit are in balance.

Panel polisher

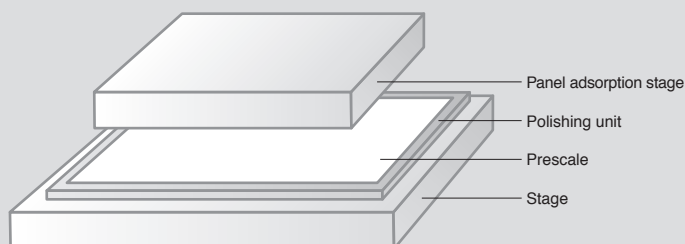


Polisher and washer
Photo provided by FUK Co., Ltd.

Polishing section



Pressure distribution measurement using Prescale



Results (images)

[Defective]

Pressure is unevenly applied.



[Acceptable]

Pressure balance is even, providing a good result.



Benefits of Prescale

● Quality loss prevention

Quality problems are easily detectable and output is improved.

● Time loss prevention

Pressure uniformity can be quickly checked during design and maintenance.

Without using Prescale

When Prescale is not used in the polishing stage, the resulting defects contribute to increased material and time loss and subsequent process waste. In addition, defects in the polishing process are typically evaluated using visual methods. Adjustments can only be made after repeated trial and error. This process results in the loss of panel **materials and increases design adjustment time.**

With Prescale

Pressure distributions are validated during actual use conditions. By checking pressure uniformity in advance, **quality improvements and design adjustment time reductions can be achieved.**

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