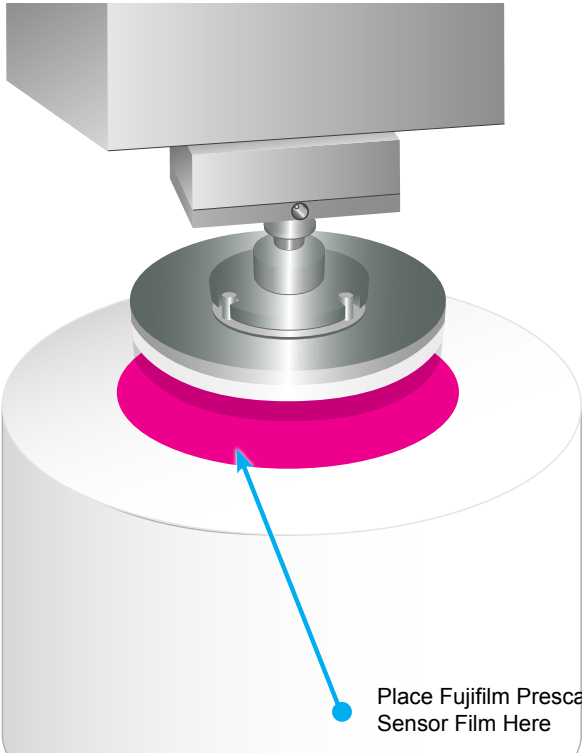


TACTILE PRESSURE INDICATING SENSOR FILM

Application: Wafer Polishing

Fujifilm Prescale® is a unique, affordable and easy to use tool that reveals the distribution and magnitude of pressure in your wafer polisher.

FUJIFILM PRESCALE® IN A WAFER POLISH



BENEFITS

- ▶ Ensures uniform distribution of pressure
- ▶ Provides better control of wafer thicknesses and variation
- ▶ Promotes optimal regulation of grind rate through polishing
- ▶ Prevents chips and other surface defects
- ▶ Provides permanent record for calibration and control

Fujifilm Prescale® is used to reveal pressure variation across the wafer surface. By monitoring both pressure magnitude and distribution of your wafer bonding device with Fujifilm Prescale®, wafer surface defects can be sharply reduced.

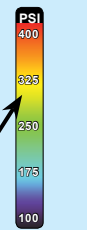
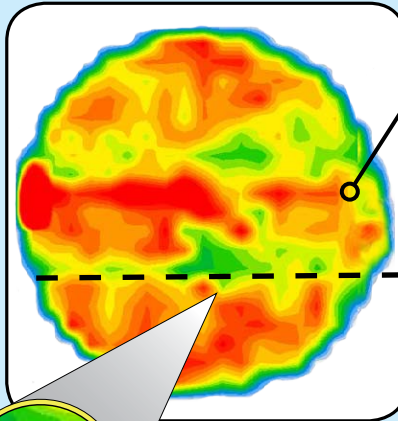
When placed in your wafer polisher, the film instantaneously and permanently changes color in direct proportion to the actual pressure applied. Precise pressure magnitude is then easily determined by comparing the resultant color intensity to a standardized color correlation chart. No training or instrumentation is required.

Fujifilm Prescale® dramatically reveals a complete pressure “map”

STEP 1



STEP 2

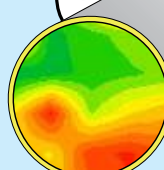
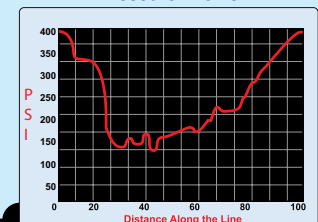


Color Indicates Precise PSI Value

Pressure Statistics

Image:	Sample Pseudocolor Rep	
Pressure		
Average	28.050	PSI
Std. Dev	57.93	PSI
Area	0.14	sq.in
Force	39.44	lbf
Minimum	20.319	PSI
Maximum	43.200	PSI
Format	###	

Pressure Profile



Zoomed View

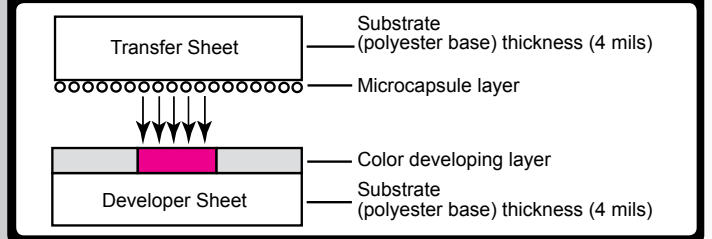
Colorization applied with the Topaq® optical analysis system

Tactile Pressure Indicating Sensor Film

Accurate, Cost-effective, Easy to Employ Pressure Mapping Technology

Have you ever needed to evaluate pressure or force between two touching or mating surfaces? Previously, your only alternatives were strain gauges and load cells, that are both time consuming and difficult to interface. Now with the advent of our disposable one-time use pressure film, Fujifilm Prescale®, evaluating surface contact pressure distribution and magnitude is accurate, quick and highly economical.

CROSS SECTIONAL VIEW OF FUJIFILM PRESCALE® FILM



7 Sensitivities To Accommodate A Wide Range Of Pressures

FILM TYPE	PRESSURE RANGE	
EXTREME LOW	7.2 - 28 PSI	(0.5 - 2 kg/cm ²)
ULTRA LOW	28 - 85 PSI	(2 - 6 kg/cm ²)
SUPER LOW	70 - 350 PSI	(5 - 25 kg/cm ²)
LOW	350 - 1,400 PSI	(25 - 100 kg/cm ²)
MEDIUM	1,400 - 7,100 PSI	(100 - 500 kg/cm ²)
HIGH	7,100 - 18,500 PSI	(500 - 1,300 kg/cm ²)
SUPER HIGH	18,500 - 43,200 PSI	(1,300 - 3,000 kg/cm ²)

INDUSTRY APPLICATIONS

AEROSPACE	Composite Layups, Material Testing, Bolted Joints
AUTOMOTIVE	Gasketing, Impacts, Fuel Cell Stacking, Clutches, Brakes, Tire Tread
ELECTRONICS	Heat Sinks, LCD Bonding, PCB Lamination, Wafer Bonding/Polishing
MEDICAL	Clamping, Gait Analysis, Ergonomics, Orthotics and Prosthetics

PACKAGING	Heat Sealing, Converting
PLASTICS	Lamination Press, Die Extrusion Injection Molding, Stamping
PRINTING/PAPERMAKING	Nip Impressions

PHYSICAL SPECIFICATIONS

OPERATING TEMPERATURE	41°F to 95°F (5°C - 35°C) (much higher for brief exposure)	SUBSTRATE	Polyethylene Terephthalate (PET)
HUMIDITY RANGE	20% to 90% RH	ACCURACY	±10% visual, ±2% utilizing optional optical measurement systems
GAUGE	4, 8, or 20 mils	SHELF LIFE	2 years
SPATIAL RESOLUTION	5 to 15 microns		

MSDS Available Upon Request.



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