FSM 128 Film Stress & Wafer Bow Measurement System

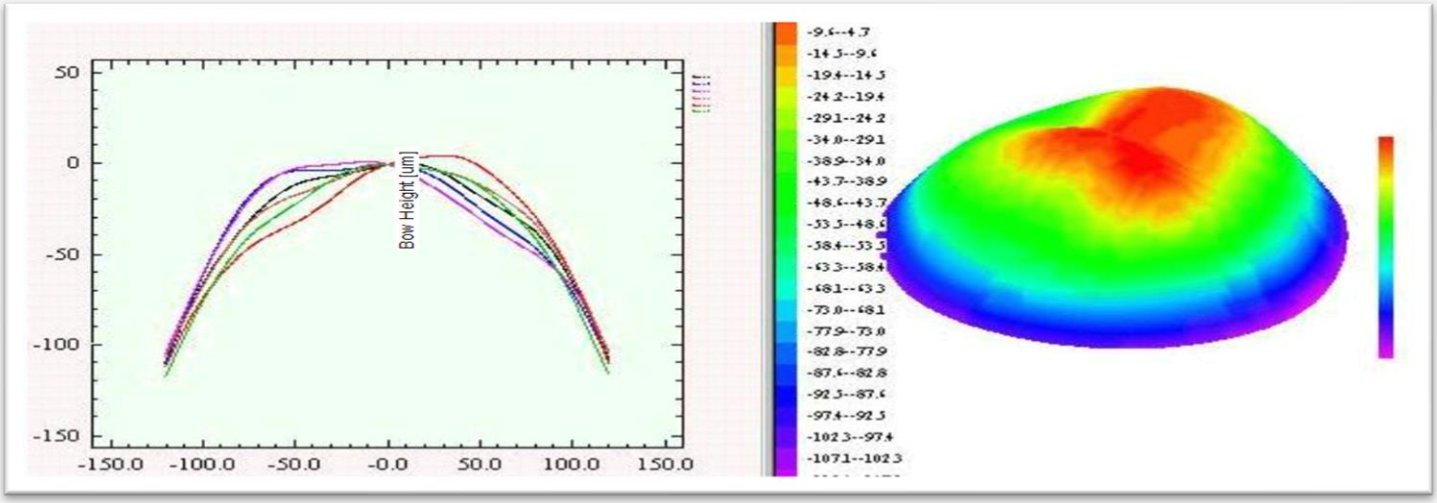
Non-contact
Laser scanning

Room Temperature

Wafer Size: 50mm to 300mm

Manual Loading

Semiconductor, Optoelectronics & FPD Application



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FSM 128 Film Stress & Wafer Bow Measurement System

Introduction

The FSM 128 is an advanced system for precise wafer stress, curvature, and bow measurement. Utilizing a non-contact technique, it ensures accuracy and reliability. Available in Film Stress & Wafer Bow Measurement System, it supports wafers up to 300mm, providing 2D/3D stress mapping with intuitive operation.

Specifications

- **Film Stress Range:** 1 MPa to 1.4 GPa (for Si wafers with ≥1µm bow/curvature change)
- **Bow Sensitivity:** Detects 1-micron height changes (P-doped Si)
- **Scan Range:** 3mm edge exclusion
- **Mapping:** 32 scan lines (6 recommended) with 40 data points/mm
- **Bow Measurement:** Measures bow heights up to 2000µm
- **Advanced Optics:** Patented dual laser switching for accuracy
- **Software:** Windows 7–11 compatibility, data export to Excel™, JPEG maps
- **Operating Conditions:** Ambient temperature
- **Measurement Method:** Non-contact laser scanning
- **Wafer Compatibility:**
  - **FSM 128NT:** 50mm to 200mm
  - **FSM 128L:** 50mm to 300mm
- **Scanning:** High-precision single scan and programmable multiple diametric scans for 2D/3D mapping
- **Repeatability:** 1% (1 sigma) on a 20m curvature mirror standard
- **Accuracy:** <2.5% on a 20m radius curvature mirror
- **Laser Class:** Class 1

Data and Connectivity

- Export results to Excel™ or JPEG.

System Requirements

- **Computer**: Intel Core i5 or later, 2GB RAM, 1TB hard drive, 4 USB ports, 2 Ethernet ports.

Dimensions & Weight

- **FSM 128NT**: 14" (W) x 20" (D) x 16" (H), 55 lbs
- **FSM 128L**: 14" (W) x 28" (D) x 16" (H), 60 lbs

Power Requirements

- 110V/220V; 20A

Notes

- Wafer bow is the deviation of the center point of the wafer's front surface when supported on a 3-point system.
- Repeatability and accuracy depend on film type, thickness, and substrate.

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