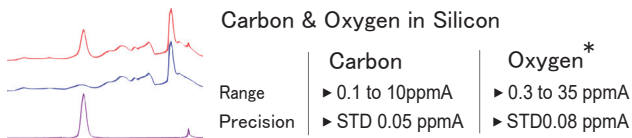
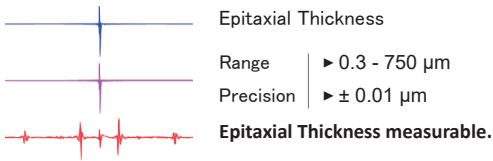


# SE50-ECO FT-IR Metrology Tool

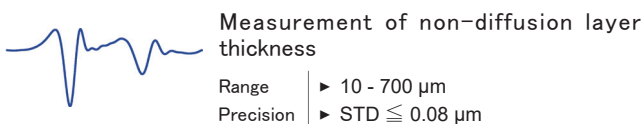
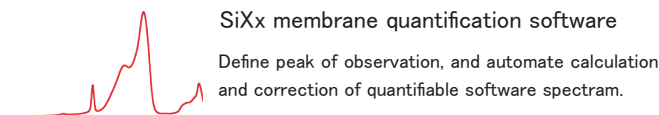
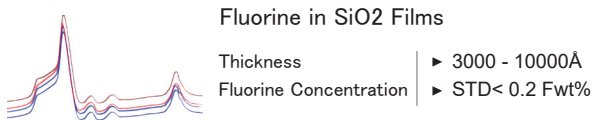
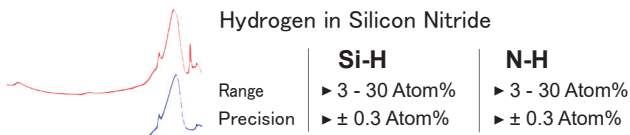
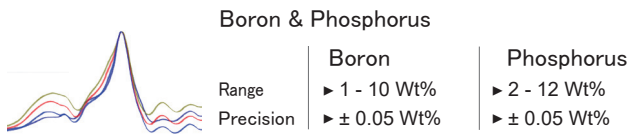
## For Material Characterization

Systems Engineering combines the Thermo Fisher Scientific's FT-IR measurement technology and JEL's sorter system to introduce a next generation "FT-IR SE50-ECO series" as semiconductor material characterization tools.

## Application Specifications



\* All carbon and oxygen values reported using ASTM 1979 calculations.



## SE50A-ECO 300SF/SFE

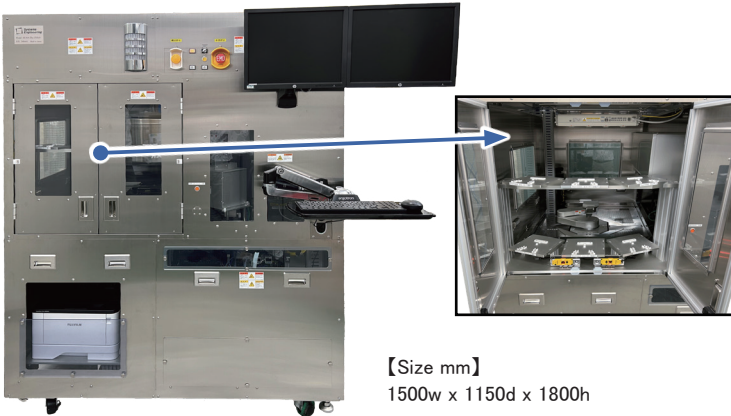


### SE50A-THz 150SiS

#### Non-diffusion layer thickness measurement system

##### 【Features】

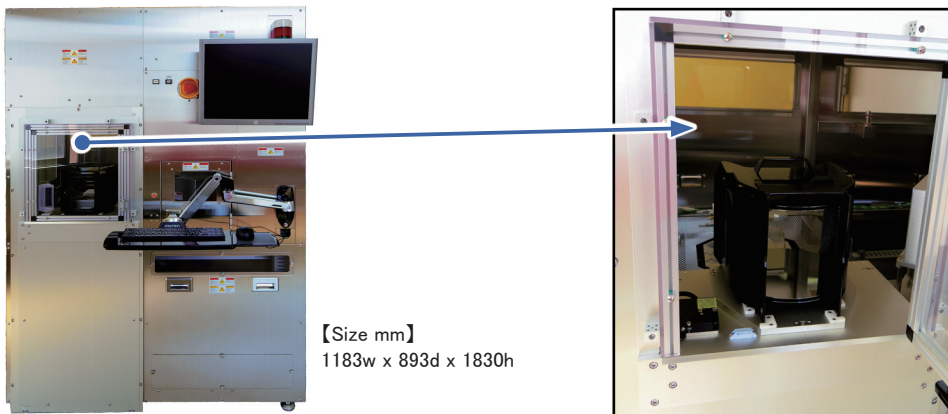
- Measurement of non-diffusion layer thickness of N/N+ type wafer with good reproducibility
- Up to 6 cassettes of 5 and 6-inch wafers can be installed
- Sorting according to the thickness of the non-diffusion layer



### SE50S-ECO Stage System



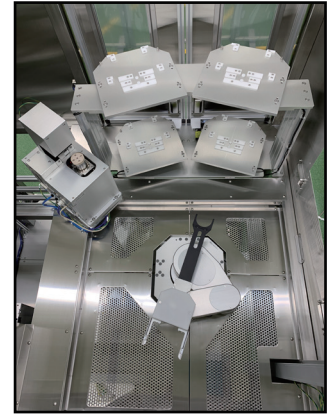
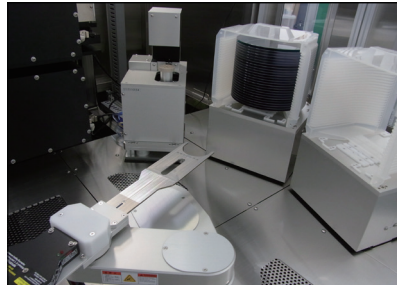
### SE50A-ECO 200SS 1 open Cassette System



### SE50A-ECO 200SMIF/200DSMIF System



**SE50A-ECO 200DS 2~4 open Cassettes System**



【Size mm】  
1400w x 1150d x 1710h

**SE50A-ECO 300SS/300SF/300SFE/300DF/300DFE System**



【Size mm】  
1470w x 1486d x 1830h



【Size mm】  
1470w x 1530d x 1830h



【Size mm】  
1985w x 1500d x 1830h

**SE50A-OIP Ingot Oi profiler**



【Size mm】  
4800w x 1515d x 1822h

【PC rack Size mm】  
660w x 600d x 480h

## Specifications

RELIABILITY	
MTBF	> 6 months
MTTR	48 hours
MTTS	4 hours
Uptime	> 97%

OPTICAL	
Spectral Range	7800 - 350cm <sup>-1</sup>
Spectral Resolution	0.5cm <sup>-1</sup>
Beam Diameter	Standard 8mm (Variable)
Analysis Angle	15°

Computer Specifications	
Operation System	Windows 10 64bit
	Memory 32GB
	Hard Disk SSD RAID1

FACILITY REQUIREMENTS	
Power	100 - 240V (50/60Hz)
House Vacuum	-61±10kPa (G) 30L/min (ANG)
Pressurized Gas	CDA 0.6MPa (G)
	N <sub>2</sub> 0.2MPa (G) 15L/min (ANR)

## SE50 series part number

Hardware				
Product#	Model	Wafer size	Station	Handling
ECO-02S	SE50S-ECO	2-12 inch	Stage	Edge Grip
ECO-031	SE50A-ECO_150SS	2-6 inch	Single	Vacuum
ECO-032	SE50A-ECO_150DS	2-6 inch	Double	Vacuum
ECO-041	SE50A-ECO_200SS	4-8 inch	Single	Vacuum
ECO-042	SE50A-ECO_200DS	4-8 inch	Double	Vacuum
ECO-043D	SE50A-ECO_200DSMIF	8 inch	Double SMIF	Vacuum
ECO-044	SE50A-ECO_200FS	4-8 inch	Four	Vacuum
ECO-051	SE50A-ECO_300SS	8-12 inch	Single	Vacuum
ECO-052	SE50A-ECO_300DS	8-12 inch	Double	Vacuum
ECO-051F	SE50A-ECO_300SF	8-12 inch	Single Foup	Vacuum
ECO-052F	SE50A-ECO_300DF	8-12 inch	Double Foup	Vacuum
ECO-051E	SE50A-ECO_300SSE	12 inch	Single	Edge Grip
ECO-052E	SE50A-ECO_300DSE	12 inch	Double	Edge Grip
ECO-051FE	SE50A-ECO_300SFE	12 inch	Single Foup	Edge Grip
ECO-052FE	SE50A-ECO_300DFE	12 inch	Double Foup	Edge Grip
THZ-02	SE50A-THz_150DS	4-6 inch	Double	Vacuum
THZ-04	SE50A-THz_150FS	4-6 inch	Four	Vacuum
THZ-06	SE50A-THz_150SiS	4-6 inch	Six	Vacuum

Software	
Product#	Model
ECO-1EP	Epitaxial Thickness
ECO-1CO	Carbon & Oxygen in Silicon
ECO-1BP	Boron & Phosphorus in BPSG or PSG Films
ECO-1SN	Hydrogen in Silicon Nitride
ECO-1SF	Fluorine in Silicon Oxide Films
ECO-1MB	Multi Background Option
ECO-1GM	GEM/SECS Host Communication
ECO-1SH	Share File Host Communication
ECO-1DS	Double Station Sorting Support
ECO-1FS	Four Station Sorting Support
ECO-1SS	Six Station Sorting Support
ECO-1OH	Hydrogen in Silicon Software
ECO-1SC	SiC Epitaxial Thickness Support
ECO-1SU	Shuttle Background Software
ECO-1CH	Carbon-doped Films
ECO-1SO	Silicon Oxide Film Analysis (SiXx)

Option	
Product#	Model
ECO-FA1	200mm wafer adapter for FOUF system
ECO-FA2	Tag Reader for FOUF & SMIF system • Keyence : BL600 • Omron : V640
ECO-FA3	E84 OHT Support for OHT COM module
ECO-FA4	Safety Light Curtain for OHT
ECO-FA5	Sensing Ionizer System
ECO-FA6	Water ID Reader Module
ECO-FA7	Optical FFU (Fan Filter Unit)
ECO-FA8	Share File Host Communication

