









# Compare FE-SEM products

SU3900 / SU3800 / SU3900SE / SU3800SE / SU5000 / SU7000 / SU8600 / SU8700



Model	 Scanning Electron Microscopes SU3900	 Scanning Electron Microscopes SU3800	 High Resolution Schottky Scanning Electron Microscope SU3900SE /SE Plus	 High Resolution Schottky Scanning Electron Microscope SU3800SE /SE Plus	 Schottky Field Emission Scanning Electron Microscope SU5000	 Ultra-High-Resolution Schottky Scanning Electron Microscope SU7000	 Ultra-high Resolution Field-emission Scanning Electron Microscope SU8600	 Ultra-high Resolution Schottky Scanning Electron Microscope SU8700
Magnification	5x - 300,000 x		5 to 600,000 x		10 to 600,000 x	20 to 2,000,000 x	20 to 2,000,000 x	20 to 2,000,000 x
Resolution	3.0 nm at 30 kV (SE, High Voltage, High Vacuum) 15.0 nm at 1 kV (SE, Low Voltage, High Vacuum) 4.0 nm at 30 kV (BSE, High Voltage, Low Vacuum)		0.9 nm@30 kV 2.5 nm@1 kV 1.6 nm@1 kV (SE with deceleration / available only for SE Plus specification)*		1.2 nm at 30 kV (SE) 3.0 nm at 1 kV (SE) 2.0 nm at 1 kV (SE with deceleration)* 1.6 nm at 1 kV (SE with EX deceleration)* 3.0 nm at 15 kV (BSE, variable pressure mode*)	0.8 nm at 15 kV (SE) 0.9 nm at 1 kV (SE)	0.6 nm at 15 kV (SE) 0.7 nm at 1 kV (SE with deceleration)	0.6 nm at 15 kV (SE) 0.8 nm at 1 kV (SE) 0.9 nm at 0.3 kV (SE)
Electron source	Pre-centered cartridge type tungsten hairpin filament		ZrO / W Schottky emitter		ZrO / W Schottky emitter		Cold cathode field emitter	ZrO / W Schottky emitter
Accelerating voltage	0.3 - 30 kV		0.5 kV~30 kV		0.5 to 30 kV	0.1 to 30 kV	0.5 to 30 kV	0.1 to 30 kV
Landing voltage	-		0.1 kV~2 kV (SE with deceleration / available only for SE Plus specification)*		0.1 to 20 kV*	0.01 to 7 kV*	0.01 to 20 kV (SE with deceleration)	0.01 to 7 kV (SE with deceleration)
Variable pressure	6 - 650 Pa		6 to 150 Pa		10 to 300 Pa*	5 to 300 Pa*	—	5 to 300 Pa*
Sample stage traverse	5-axis motorized stage X : 0 to 150 mm Y : 0 to 150 mm Z : 5 to 85 mm T : -20 to 90° R : 360°	5-axis motorized stage X : 0 to 100 mm Y : 0 to 50 mm Z : 5 to 65 mm T : -20 to 90° R : 360°	5-axis motorized stage X : 0 to 150 mm Y : 0 to 150 mm Z : 3 to 85 mm T : -20 to 90° R : 360°	5-axis motorized stage X : 0 to 100 mm Y : 0 to 50 mm Z : 3 to 65 mm T : -20 to 90° R : 360°	5-axis motorized stage X : 0 to 100 mm Y : 0 to 50 mm Z : 3 to 65 mm T : -20 to 90° R : 360°	5-axis motorized stage X : 0 to 135 mm Y : 0 to 100 mm Z : 1.5 to 40 mm T : -5 to 70° R : 360°	5-axis motorized stage X : 0 to 110 mm Y : 0 to 110 mm Z : 1.5 to 40 mm T : -5 to 70° R : 360°	
Maximum sample size	300 mm (in diameter)	200 mm (in diameter)	300 mm (in diameter)	200 mm (in diameter)	200 mm (in diameter)		150 mm (in diameter)	
Maximum sample thickness	130 mm (with holder)	80 mm (with holder)	130 mm (WD=10 mm)	80 mm (WD=10 mm)	80 mm (with holder)		36 mm (with holder)	
Signal detector	Secondary electron detector (SED) High sensitive semiconductor BSE detector Ultra Variable-pressure Detector (UVD)*		Secondary electron detector (SED) TOP detector (TD) (available only for SE Plus specification) 4+1-segment Semiconductor Type Backscattered Electron Detector (BSED) Ultra Variable Pressure Detector (UVD)*		Secondary electron detector (SED) TOP detector* Semiconductor type BSE detector (PD-BSED)* Ultra Variable pressure-Detector (UVD)* TE detector*	Upper detector (UD) Middle detector (MD) Lower detector (LD) Semiconductor type BSE detector (PD-BSED)* Ultra Variable-Pressure detector (UVD)* TE detector*	Upper detector (UD) (with SE/BSE signal mixing function) Lower detector (LD) Top detector (TD)* In-Column Middle detector (IMD)* Out-Column Crystal Type BSED (OCD)* Semiconductor type BSE detector (PD-BSED)* Cathodoluminescence detector (CLD)* TE detector*	Upper detector (UD) Lower detector (LD) Middle detector (MD)* Semiconductor type BSE detector (PD-BSED)* Ultra Variable-Pressure detector(UVD)* TE detector*
Analysis system	Energy Dispersive X-ray Spectrometry (EDS)* Wavelength Dispersive X-ray Spectrometer (WDS)*		Energy Dispersive X-ray Spectrometer (EDS)* Electron Backscatter Diffraction (EBSD)*		Energy Dispersive X-ray Spectrometer (EDS)* Electron Backscatter Diffraction (EBSD)* Wavelength Dispersive X-ray Spectrometer (WDS)*		Energy Dispersive X-ray Spectrometer (EDS)* Electron Backscatter Diffraction (EBSD)*	

\*option