Opto-Edu (Beijing) Co., Ltd.
cnoec.com

8x-800000x Emission Scanning Electron Microscope Schottky Gun A63.7080 Std Feg Sem

Our Product Introduction

Basic Information

Place of Origin:	China
Brand Name:	CNOEC, OPTO-EDU
Certification:	CE,
Model Number:	A63.7080
Minimum Order Quantity:	1 pc
Price:	FOB $1~1000, Depend on Order Quantity
Packaging Details:	Carton Packing, For Export Transportation
Delivery Time:	5~20 Days
Payment Terms:	T/T, West Union, Paypal
Supply Ability:	5000 pcs/ Month

Product Specification

Resolution:	1.5nm@15KV(SE); 3nm@20KV(BSE)
Magnification:	8x~800000x
Electron Gun:	Schottky Emission Electron Gun
Accelerating Voltage:	0~30KV
Vacuum System:	Ion Pump, Turbo Molecular Pump Rotation Pump
Specimen Stage:	Five Axes Eucentric Motorized Stage
Electron Beam Current:	10pA~0.3μA
Max Specimen Diameter:	175mm
Highlight:	**8x emission scanning electron microscope**, **schottky gun emission scanning electron microscope**

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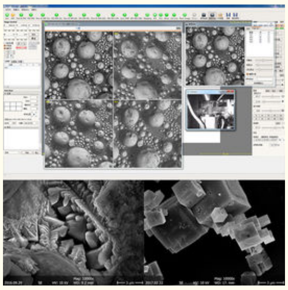
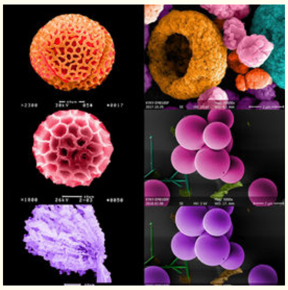
More Images





Product Description

8x~800000x With Detector SED+CCD, Five Axes Manual Stage or Motorized Stage

E-Beam Acceleration With Stable Beam Current Supply Excellent Image Under Low Voltage

Non Conduction Sample Can Be Observed Directly No Need To Be Sputtered In Low Voltage

Easy & Friendly Operation Interface, All Controled By Mouse In Windows System

Large Sample Room With Five Axes Eucentric Motorized Stage Large Size, Max Specimen Dia.175mm

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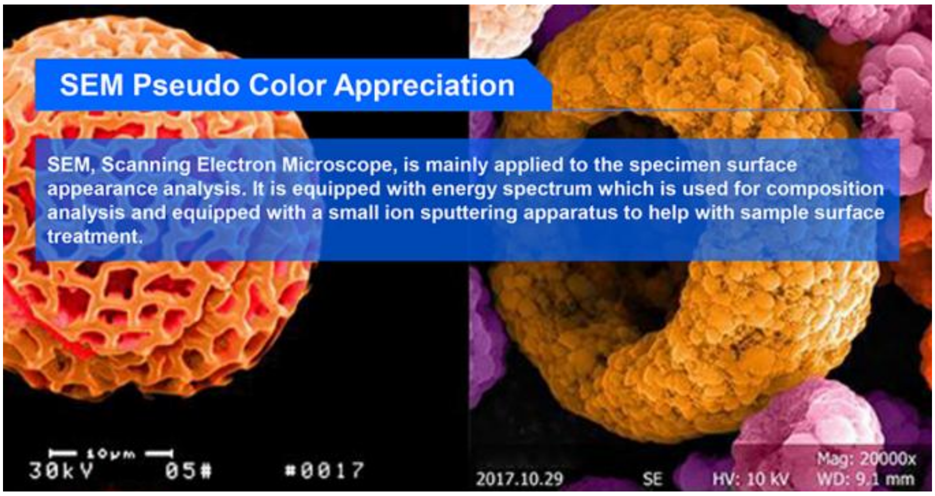
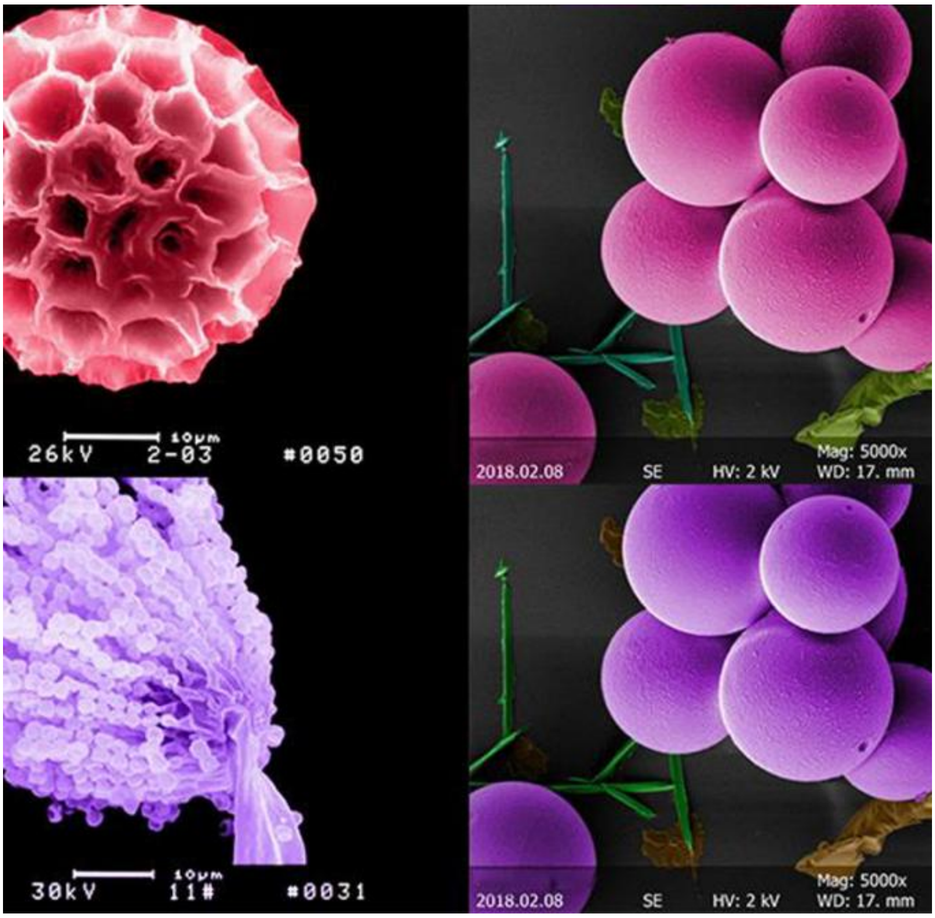
A63.7080

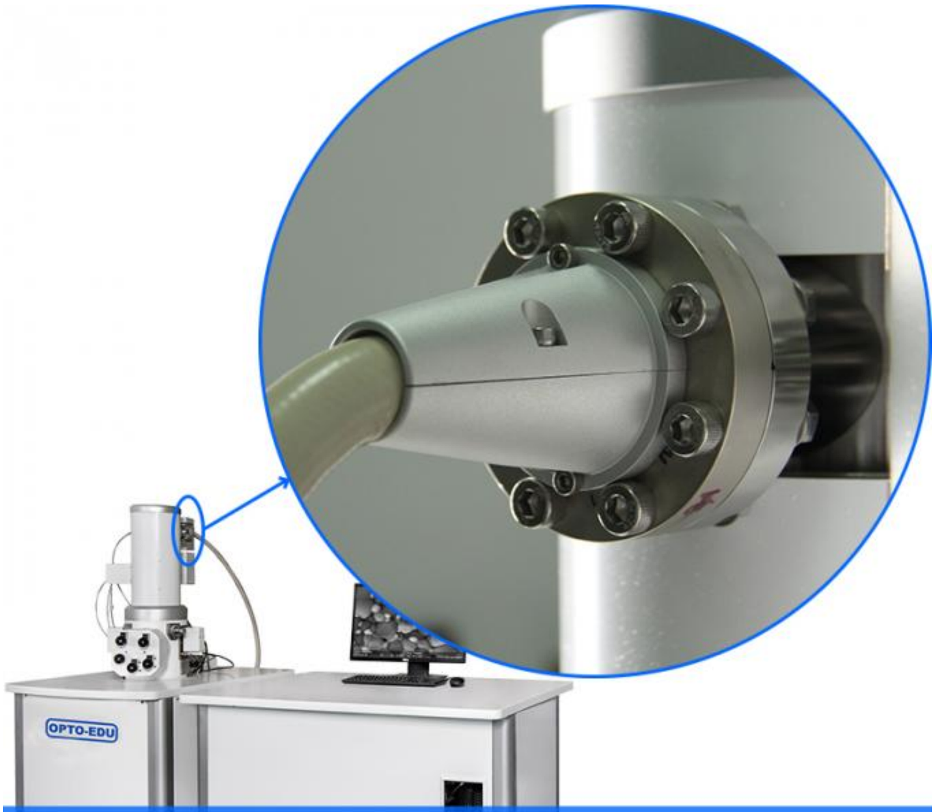
Schottky Field Emission Gun Scanning Electron Microscope, SED+CCD, 8x~800000x



SEM Pseudo Color Appreciation

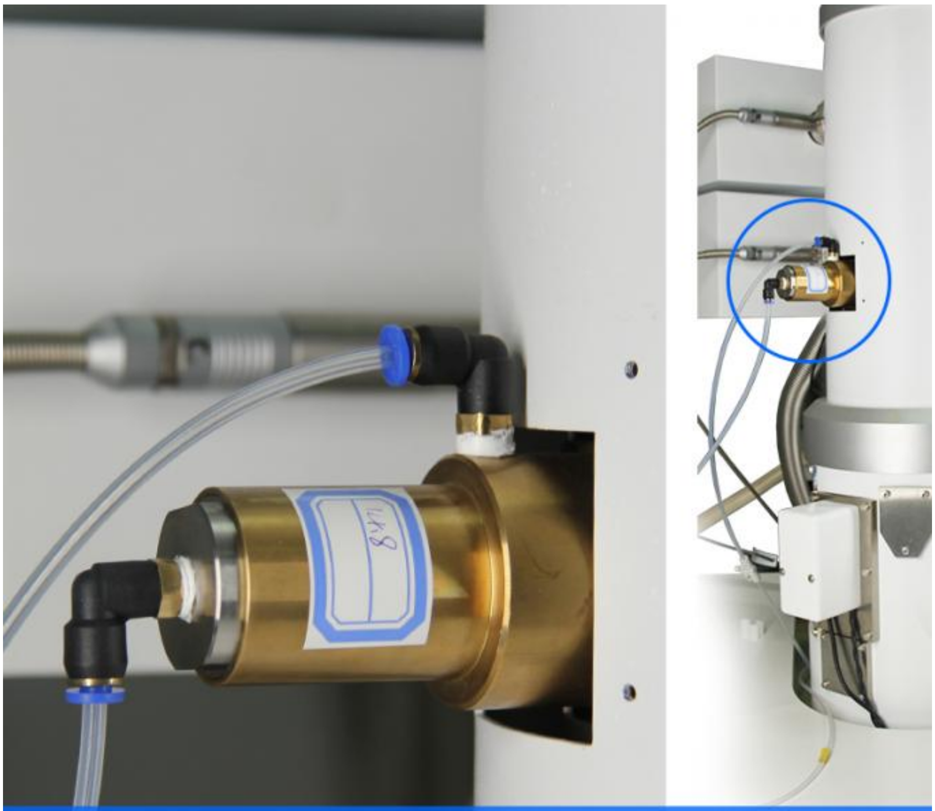
SEM, Scanning Electron Microscope, is mainly applied to the specimen surface appearance analysis. It is equipped with energy spectrum which is used for composition analysis and equipped with a small ion sputtering apparatus to help with sample surface treatment.





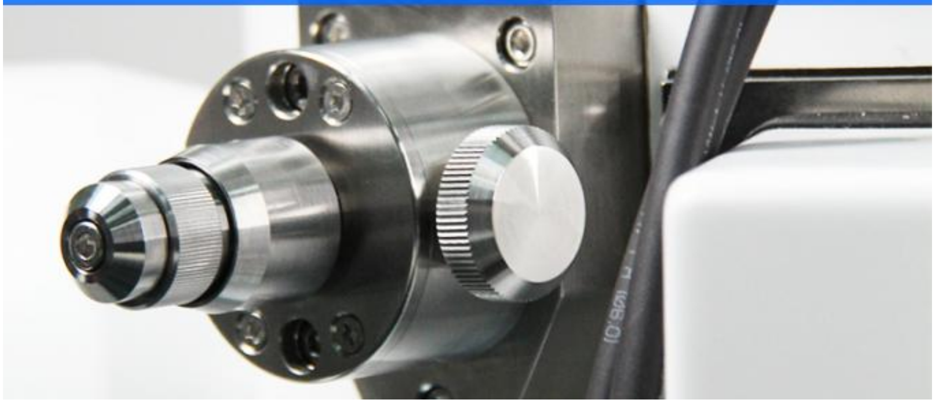
Schottky Field Emission Gun Electron Gun
Electron Gun Room Vacuum>2E-7 Pa

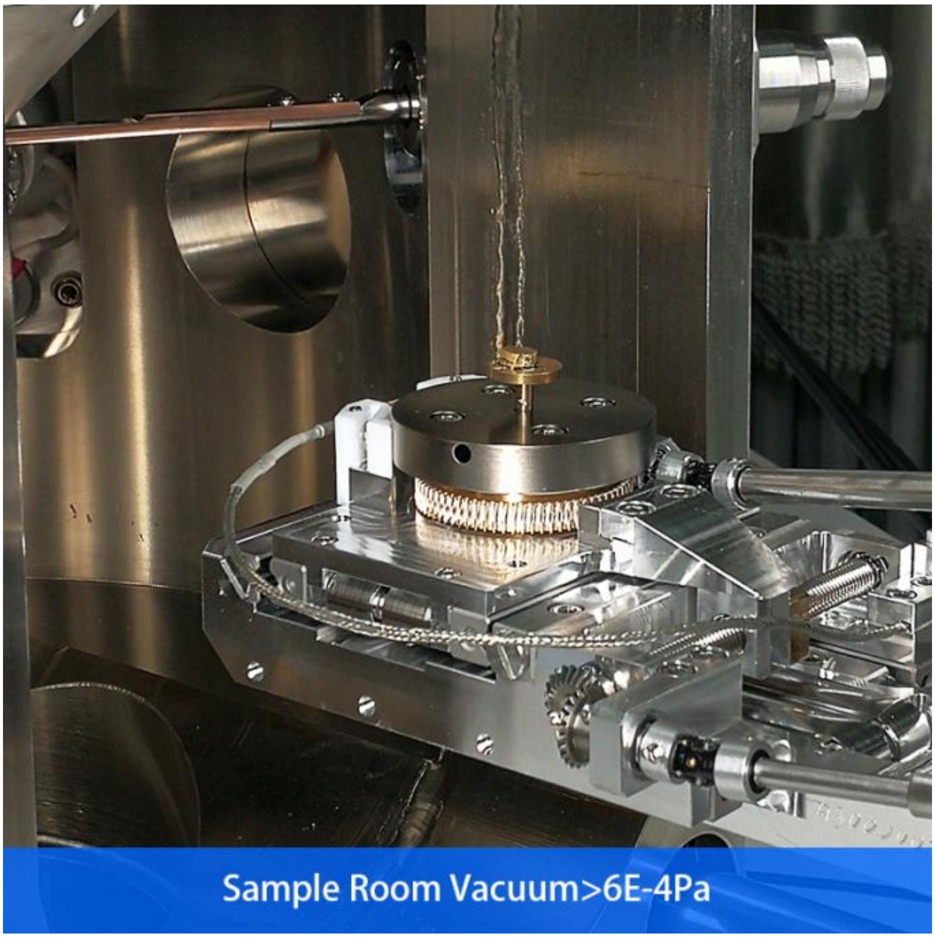
Vacuum System: Ion Pump



The Isolating Valve Ensures That The Upper Vacuum Is Not Affected When The Sample Room Is Opened

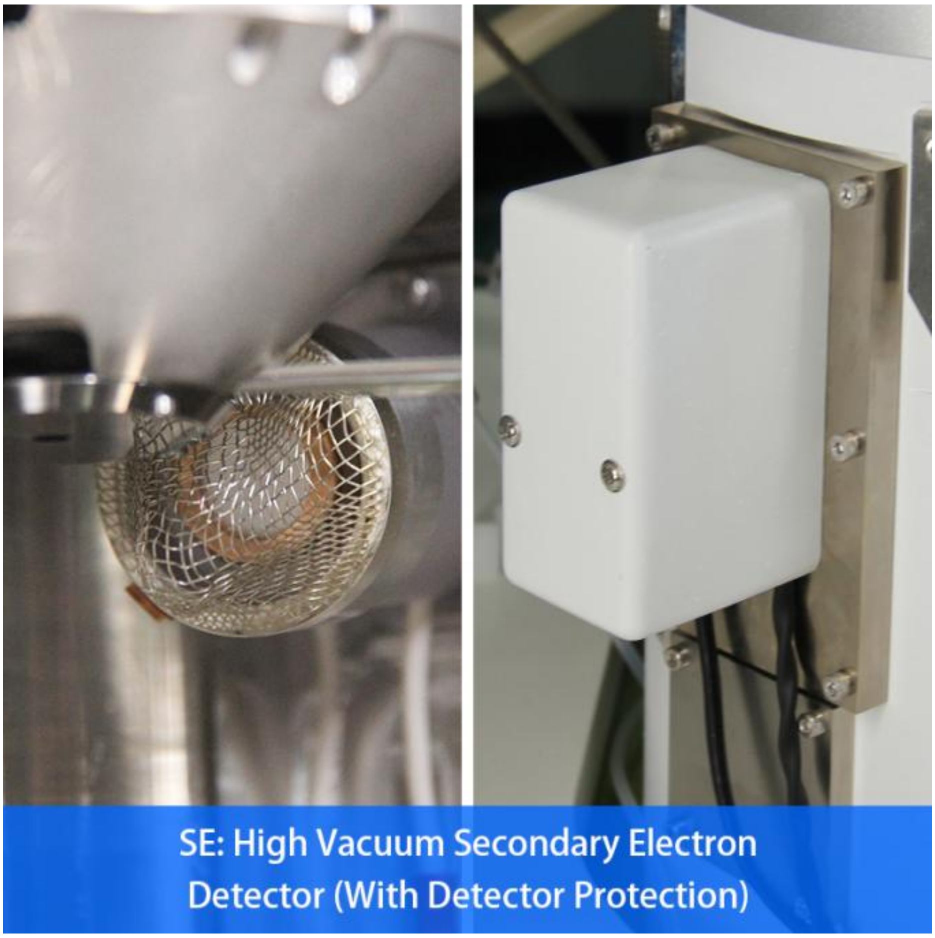
3 Molybdenum Objective Apertures, Adjustable Outside Of Vacuum System, No Need Disassemble Objective To Change Aperture





Sample Room Vacuum>6E-4Pa

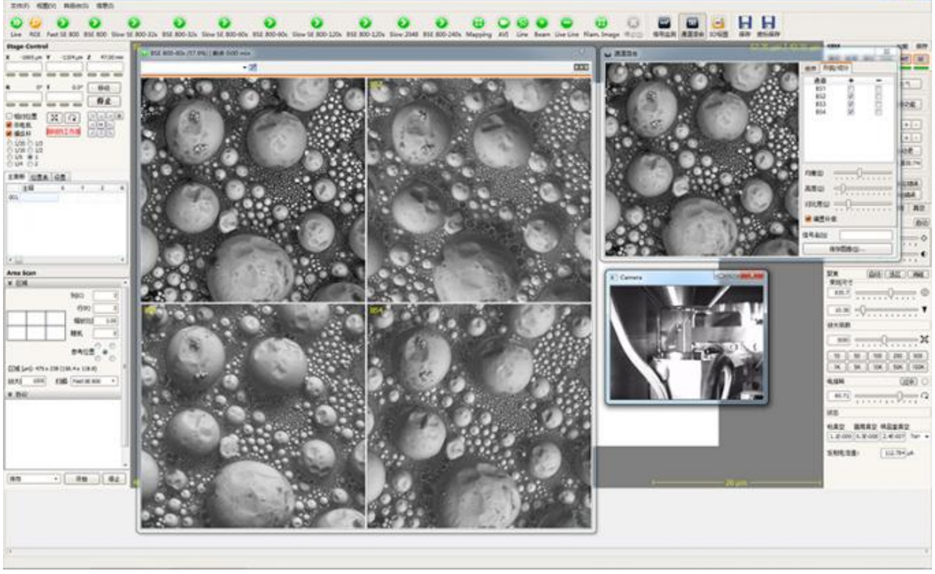
5 Axes Auto Middle Stage
Touch Alert & Stop Function



SE: High Vacuum Secondary Electron
Detector (With Detector Protection)

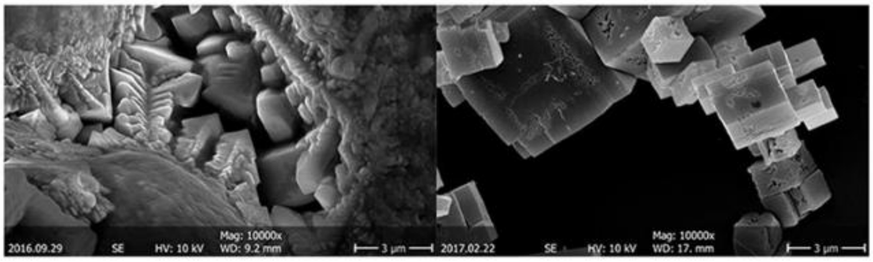
Optional Accessory Connection Interface

PC Work Station Win 10 System
With Professional Image Analysis Software



A63.7080, A63.7081 Software Main Function		
High voltage integrated commissioning	Automatic filament on / off	Potential shift regulation
Brightness adjustment	Electric to central adjustment	Automatic brightness
Contrast adjustment	Objective lens adjustment	Auto focus
Magnification adjustment	Objective degaussing	Automatic astigmatism elimination

Selected area scanning mode	Electric rotation adjustment	Management of microscope parameters
Point scanning mode	Electron beam displacement adjustment	Real time display of scanning field size
Line scanning mode	Electron beam tilt adjustment	Gun lens adjustment
Surface scanning	Scanning speed adjustment	Multichannel input
High voltage power monitoring	Swing centering	Ruler measurement



A63.7080 Multi-angle

SEM	A63.7069	A63.7080	A63.7081
Resolution	3nm@30KV(SE) 6nm@30KV(BSE)	1.5nm@30KV(SE) 3nm@30KV(BSE)	1.0nm@30KV(SE) 3.0nm@1KV(SE) 2.5nm@30KV(BSE)
Magnification	8x~300000x Negative True Magnification	8x~800000x Negative True Magnification	6x~1000000x Negative True Magnification
Electron Gun	Pre-Centered Tungsten Filament Cartridge	Schottky Field Emission Gun	Schottky Field Emission Gun
Voltage	Accelerating Voltage 0~30KV, Continuous Adjustable, Adjust Step 100V@0-10Kv, 1KV@10-30KV		
Quick View	One Key Quick View Image Function	N/A	N/A
Lens System	Three-levels Electromagnetic Tapered Lens	Multi-levels Electromagnetic Tapered Lens	
Aperture	3 Molybdenum Objective Apertures, Adjustable Outside Of Vacuum System, No Need Disassemble Objective To Change Aperture		
Vacuum System	1 Turbo Molecular Pump 1 Mechanical Pump Sample Room Vacuum>2.6E-3Pa Electron Gun Room Vacuum>2.6E-3Pa Fully Auto Vacuum Control Vacuum Interlock Function **Optional Model: A63.7069-LV** 1 Turbo Molecular Pump **2** Mechanical Pumps Sample Room Vacuum>2.6E-3Pa Electron Gun Room Vacuum>2.6E-3Pa Fully Auto Vacuum Control Vacuum Interlock Function **Low Vacuum** Range 10~270Pa For Quick Switch in 90 Seconds For BSE(LV)	1 Ion Pump Set 1 Turbo Molecular Pump 1 Mechanical Pump Sample Room Vacuum>6E-4Pa Electron Gun Room Vacuum>2E-7 Pa Fully Auto Vacuum Control Vacuum Interlock Function	1 Sputter Ion Pump 1 Getter Ion Compound Pump 1 Turbo Molecular Pump 1 Mechanical Pump Sample Room Vacuum>6E-4Pa Electron Gun Room Vacuum>2E-7 Pa Fully Auto Vacuum Control Vacuum Interlock Function
Detector	**SE**: High Vacuum Secondary Electron Detector (With Detector Protection)	**SE**: High Vacuum Secondary Electron Detector (With Detector Protection)	**SE**: High Vacuum Secondary Electron Detector (With Detector Protection)

	BSE: Semiconductor 4 Segmentation Back Scattering Detector **Optional Model: A63.7069-LV** **BSE(LV)**: Semiconductor 4 Segmentation Back Scattering Detector	Optional	Optional
	CCD: Infrared CCD Camera	**CCD:** Infrared CCD Camera	**CCD:** Infrared CCD Camera
Extend Port	2 Extend Ports On Sample Room For EDS, BSD, WDS etc.	4 Extend Ports On Sample Room For BSE, EDS, BSD, WDS etc.	4 Extend Ports On Sample Room For BSE, EDS, BSD, WDS etc.
Specimen Stage	5 Axes Stage, 4 **Auto** +1 **Manual** Control Travel Range: X=70mm, Y=50mm, Z=45mm, R=360°, T=-5°~+90°(Manual) Touch Alert & Stop Function	5 Axes **Auto Middle** Stage Travel Range: X=80mm, Y=50mm, Z=30mm, R=360°, T=-5°~+70° Touch Alert & Stop Function Optional Model: **A63.7080-M** 5 Axes **Manual** Stage **A63.7080-L** 5 Axes **Auto Large** Stage	5 Axes **Auto Large** Stage Travel Range: X=150mm, Y=150mm, Z=60mm, R=360°, T=-5°~+70° Touch Alert & Stop Function
Max Specimen	Dia.175mm, Height 35mm	Dia.175mm, Height 20mm	Dia.340mm, Height 50mm
Image System	Real Still Image Max Resolution 4096x4096 Pixels, Image File Format: BMP(Default), GIF, JPG, PNG, TIF	Real Still Image Max Resolution 16384x16384 Pixels, Image File Format: TIF(Default), BMP, GIF, JPG, PNG Video: Auto Record Digital .AVI Video	Real Still Image Max Resolution 16384x16384 Pixels, Image File Format: TIF(Default), BMP, GIF, JPG, PNG Video: Auto Record Digital .AVI Video
Computer & Software	PC Work Station Win 10 System, With Professional Image Analysis Software To Fully Control Whole SEM Microscope Operation, Computer Specification No Less Than Inter I5 3.2GHz, 4G Memory, 24" IPS LCD Monitor, 500G Hard Disk, Mouse, Keyboard		
Photo Display	The Image Level Is Rich And Meticulous, Showing Real Time Magnification, Ruler, Voltage, Gray Curve		
Dimension & Weight	Microscope Body 800x800x1850mm Working Table 1340x850x740mm Total Weight 400Kg	Microscope Body 800x800x1480mm Working Table 1340x850x740mm Total Weight 450Kg	Microscope Body 1000x1000x1730mm Working Table 1330x850x740mm Total Weight 550Kg
Optional Accessories			
Optional Accessories	**A50.7002** EDS Energy Dispersive X-Ray Spectrometer **A50.7011** Ion Sputtering Coater	**A50.7001** BSE Back Scattering Electron Detector **A50.7002** EDS Energy Dispersive X-Ray Spectrometer **A50.7011** Ion Sputtering Coater **A50.7030** Motorize Control Panel	**A50.7001** BSE Back Scattering Electron Detector **A50.7002** EDS Energy Dispersive X-Ray Spectrometer **A50.7011** Ion Sputtering Coater **A50.7030** Motorize Control Panel

Product Accessories


A50.7001
BSE Detector


A50.7002
EDS (X Ray Detector)


A50.7003
EBSD (Electron Beam Backscattered Diffraction)


A50.7013
Critical Point Dryer

A50.7010
Coating Machine

A50.7011
Ion Sputtering Coater

A50.7012
Argon Ion
Sputtering Coater

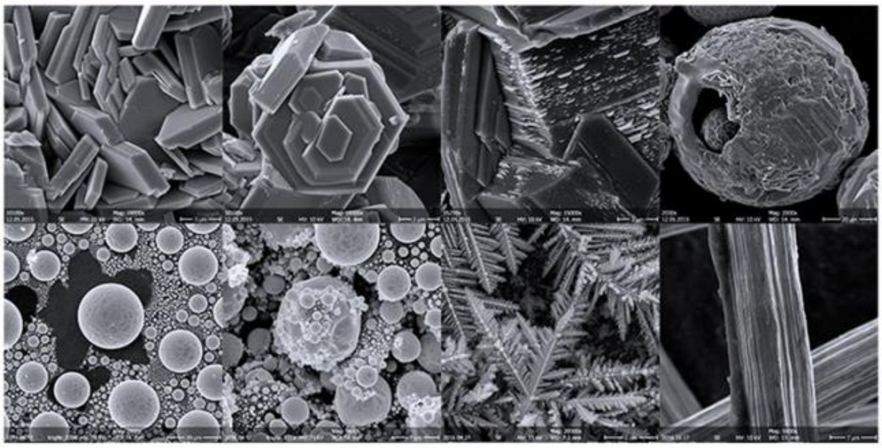
A50.7014
Electron Beam
Lithography

A50.7030 Motorize Control Panel
Motorize Control Panel, Integrated Computer Mouse To Control Magnification, Brightness, Contrast, Focus, Working Stage Moving Easily.

A50.7001	BSE Detector	Semiconductor Four Segment Back Scattering Detector; Available In Ingredients A+B, Morphology Info A-B; Available Sample Observe Without Sputtering Gold; Available In Observe Impurity And Distribution From Grayscale Map Directly.
A50.7002	EDS (X Ray Detector)	Silicon Nitride (Si3N4) Window To Optimize Low Energy X-ray Transmission For Light Element Analysis; Excellent Resolution And Their Advanced Low-noise Electronics Provide Outstanding Throughput Performance; The Small Footprint Offers Flexibility To Ensure Ideal Geometry And Aata Collection Conditions; The Detectors Contain A 30mm2 Chip.
A50.7003	EBSD (Electron Beam Backscattered Diffraction)	user could analysis crystal orientation, crystal phase and micro texture of materials and related materials performance,etc. automatic optimization of EBSD camera settings during the data collection, do interactive real-time analysis to obtain maximum information all the data were branded with time tag, which can be viewed at any time high resolution 1392 x 1040 x 12 Scanning and index speed: 198 points / sec, with Ni as the standard, under the condition of 2~5nA, it can ensure the index rate ≥99%; works well under the condition of low beam current and low voltage of 5kV at 100pA orientation measuring accuracy: Better than 0.1 degrees Using triplex index system: no need rely on single band definition , easy indexing of poor pattern quality dedicated database: EBSD special database obtained by electron diffraction: >400 phase structure Index ability: it can automatically index all crystal materials of 7 crystal systems. The advanced options include calculating elastic stiffness (Elastic Stiffness), Taylor (Taylor) factor, Schmidt (Schmid) factor and so on.
A50.7010	Coating Machine	Glass Protecting Shell: ∮250mm; 340mm High; Glass Processing Chamber: ∮88mm; 140mm High, ∮88mm; 57mm High; Specimen Stage Size: ∮40mm (max); Vacuum System:molecula Pump And Mechanical Pump; Vacuum Detection: Pirani Gage; Vacuum:better Than 2 X 10-3 Pa; Vacuum Protection:20 Pa With Microscale Inflation Valve; Specimen Movement: Plane Rotation,tilt Precession.
A50.7011	Ion Sputtering Coater	Glass Processing Chamber: ∮100mm; 130mm High; Specimen Stage Size: ∮40mm(Hold 6 Specimen Cups) ; Golden Target Size: ∮58mm*0.12mm(thickness); Vacuum Detection: Pirani Gage; Vacuum Protection:20 Pa With Microscale Inflation Valve; Medium Gas:argon Or Air With Argon Gas Special Air Inlet And Gas Regulating In Microscale.
A50.7012	Argon Ion Sputtering Coater	The Sample Was Plated With Carbon And Gold Under High Vacuum; Rotatable Sample Table, Uniform Coating, Particle Size About 3-5nm; No Selection Of Target Material, No Damage To Samples; The Functions Of Ion Cleaning And Ion Thinning Can Be Realized.

A50.7013	Critical Point Dryer	Inner Diameter: 82mm, Inner Length: 82mm; Pressure Range:0-2000psi; Temperature Range:0°-50° C (32°-122° F)
A50.7014	Electron Beam Lithography	Based On Scanning Electron Microscope, A Novel Nano-exposure System Was Developed; The Modificaton Has Kept All The Sem Functions For Making Nanoscale Line Width Image; The Modificated Ebl System Widly Applied Into Microelectronic Devices, Optoelectronic Devices, Quantun Devices, Microelectronics System R&d.

Real Effect



A63.7080, A63.7081 Standard Consumables Outfit			
1	Field Emission Filament	Installed In Microscope	1 Pc
2	Sample Cup	Dia.13mm	5 Pcs
3	Sample Cup	Dia.32mm	5 Pcs
4	Carbon Double-sided Conductive Tape	6mm	1 Package
5	Vacuum Grease		10 Pcs
6	Hairless Cloth		1 Tube
7	Polishing Paste		1 Pc
8	Sample Box		2 Bags
9	Cotton Swab		1 Pc
10	Oil Mist Filter		1 Pc
A63.7080, A63.7081 Standard Tools & Parts Outfit			
1	Inner Hexagon Spanner	1.5mm~10mm	1 Set
2	Tweezers	Length 100-120mm	1 Pc
3	Slotted Screwdriver	2*50mm, 2*125mm	2 Pcs
4	Cross Screwdriver	2*125mmm	1 Pc
5	Clean vent pipe	Dia.10/6.5mm(Out Diameter/Inner Diameter)	5m
6	Vent pressure reducing valve	Output Pressure 0-0.6MPa	1 Pc
7	Internal baking power supply	0-3A DC	2 Pcs
8	UPS power supply	10kVA	2 Pcs

Working Condition, Requirement For Installation

1. Applications:

SEM is mainly applied to the specimen surface appearance analysis. It is equipped with energy spectrum which is used for composition analysis and equipped with a small ion sputtering apparatus to help with sample surface treatment.

2. Power Supply Requirements:

2.1 Voltage: AC 220V ± 10%, 50Hz ± 1 Hz, standard sine wave.
2.2 It is not recommended to share the power supply line with the instrument for equipment with high power and large power consumption change.
2.3 Three power sockets needed for:

1. Scanning electron microscope instrument body, computer: AC 220V, 50Hz, 16A
2. Mechanical pump and air compressor: AC 220V, 50Hz, 16A

3. Environmental Requirements For Installation Site:

3.1 It is recommended to keep the temperature between 16~30 C
3.2 The relative humidity shall be less than 60%
3.3 Recommend configuration: air conditioner, dehumidifier and other equipment that can ensure the temperature and humidity of the laboratory.
3.4 Noise: < 68 DB
3.5 The durability of the instrument operation: continuously working

4. A63.7080 Instrument Dimension & Weight

Microscope Body 800x800x1480mm
Working Table 1340x850x740mm
Total Weight 450Kg
The floor bearing capacity should ≥ 250kg/m3, and it is recommended to place it on the first floor

5. A63.7080 Packaging Dimension & Weight

1 Set in 3 Wooden Boxes:
110*110*158(cm) *1
127*115*136(cm) *1
160*80*111 (cm) *1
Total Volume 5.3189CBM, Total G.W. 872 kg

After-sale Service

--Standard 1 Year Warranty Included
--Extend Warranty 1 Year Cost 12% of Sales Contrast Amount
--On-Site Installation Cost USD6000.0 For 5+2 Days
--On-Site Maintenance Cost USD4500.0 For 3+2 Days
--Free Training for Visiting Customer in Beijing Included (Round Trip Ticket & Lodging Fee Not Included)
--Consumables Items & Accessories Available For All Life Time of Machine