Hitachi Tabletop Microscope TM-1000

Features

- Energy-saving design and size
- Easy to use - like a digital camera
- No coatings required for observing a non-conductive sample
- Stereoscopic morphological observation with greater depth of focus

Energy-saving design and size

Standard 3P outlet is required for installation. No cooling water necessary. System is ready for immediate use without special engineering or installation procedures.

Easy to use - just like a digital camera

The “TM-1000” is ready to use in only three minutes. Traditional electron microscopes require condition settings prior to use. Condition settings are not necessary for “TM-1000”. Image observation can be easily achieved even by novice users.

No metal coatings required to observe a non-conductive sample

Since there is no need for metal coating preparation, observation of insulator samples can be carried out quickly with the "TM-1000". Depending on observation conditions such as sample type or magnification, charge-up may occur. Charge-up can cause image disturbances which makes it difficult to conduct accurate image observation. By setting the observation mode to "Charge-up reduction mode" the interference will be reduced and observation becomes sharper.

Stereoscopic morphological observation with greater depth of focus

The "TM-1000" allows for stereoscopically morphological observation with high resolution and a greater depth of focus which are not available with an optical microscope.

Application data

The "TM-1000" uses backscattered electrons (BSE) for image observation.Morphology as well as composition information of the sample can be obtained. A brighter field indicates the area where consists of higher atomic number ele- ments (and vice versa).

Specifications

Items	Description
Magnification	20~10,000× (digital zoom: 2, 4×)
Accelerating voltage	15kV
Observation mode	Standard mode/charge-up reduction mode
Specimen traverse	X:15 mm, Y:18 mm
Maximum sample size	70mm in diameter
Maximum sample thickness	20mm
Electron gun	Pre-centered cartridge filament
Detection system	High-sensitive semiconductor BSE detector
Autoimageadjustmentfunction	Autostart,Autofocus,AutoBrightness
Frame memory	640 × 480 pixels, 1,280 × 960 pixels
Image data memory	HDD of PC and other recording medium
Image format	BMP
Data display	Micron marker, Micron value, date and time, image number comments
Evacuation system (vacuum pump)	Turbomolecular pump: 30L/s × 1 unit, Diaphragm pump: 1m3/h × 1 unit
Safety device	Over-current protection function

PC Specifications

Items	Description
OS	Windows xp Home Edition (SP2)
CPU	Intel Celeron M340 or better (or compatible CPU)
Amount of memory installed	256MB or larger
Display resolution	1,024 × 768 pixels (16,770,000 colors)
Display	15"
Interface connector	USB 2.0

Dimensions and weight

Items	Description
Main Unit	338(W) × 564(D) × 513(H)mm, 58.5kg
Control Unit	140(W) × 564(D) × 513(H)mm, 23.0kg

Diaphragm pump	145(W) × 256(D) × 217(H)mm, 4.5kg

Installation Condition

Items	**Description**
Room temperature	15~30°C
Humidity	70%RH or less
Power source	Single-phase AC 100,110,115,200,220 or 240V(±10%), 500VA
Grounding	100Ω or better