The model SBA-25 Subgap Absorption Measurement System, consisting of a halogen lamp, a monochromator, and a chopper, is able to irradiate the monochromatic light in the alternate current light which has the smaller energy than that of the band gap. The amount of the light is amplified by a lock-in amp and then monitored and controlled to keep the light intensity at constant at each wavelength by the ND filter. The light intensity monitor which is placed in this system has made it possible to control the light intensity at real time. Then change between the light intensity and sample measurement and variation of the light intensity can be also maintained minimal so that excellent reproducible data can be obtained.
Specifications

- **Wavelength range**: 500~2100nm (2.5~0.6eV)
- **Irradiation area**: 6×6mm
- **Irradiation intensity precision**: ±5%
- **Irradiation uniformity in plane**: within ±10%
- **Light amount stability**: within ±5%
- **Irradiation intensity range**: 100nW/cm²~5mW/cm²

By simultaneous monitoring irradiation light intensity and servo mechanism, light intensity is automatically controlled in real time.

- **Wavelength purity**: approx. 24nm (Slit width of monochromator: 4mm)
- **Optical system**: Asymmetrical Czerny-Turner mount
  - Aperture ratio F=4.3
  - Reciprocal linear dispersion 6nm/mm (600 lines/mm)
  - Wavelength accuracy ±0.2nm

- **Irradiation light**: Direct current and Intermittent light, manual control switching
- **Chopper**: 0.1~100Hz
- **Irradiation direction**: Downward
- **Light intensity monitor**: Measuring by a lock in amp
- **Sample current measurement**: by connecting a current amp to the sample, its output voltage is to be measured by a lock in amp
- **Minimum detection current**: 100fA (1 e⁻¹³A)
- **Absorption coefficient**: 6 digit number

- **Measurement range**
- **Bias power supply**: 9V, 18V, 27V, a layer-built cell
- **Dimensions**: 1650(W)×700(D)×1530(H)mm (without a rack)
- **Power supply**: 220V, 8A (using the step down transformer to be supplied with the system)

 Configuration

- **Main unit**
- **Computer**: OS: Windows 7
- **Measurement software**: English
- **Manual**: English

*Specifications and appearance of the system in this catalog are subject to change without a prior notice.*