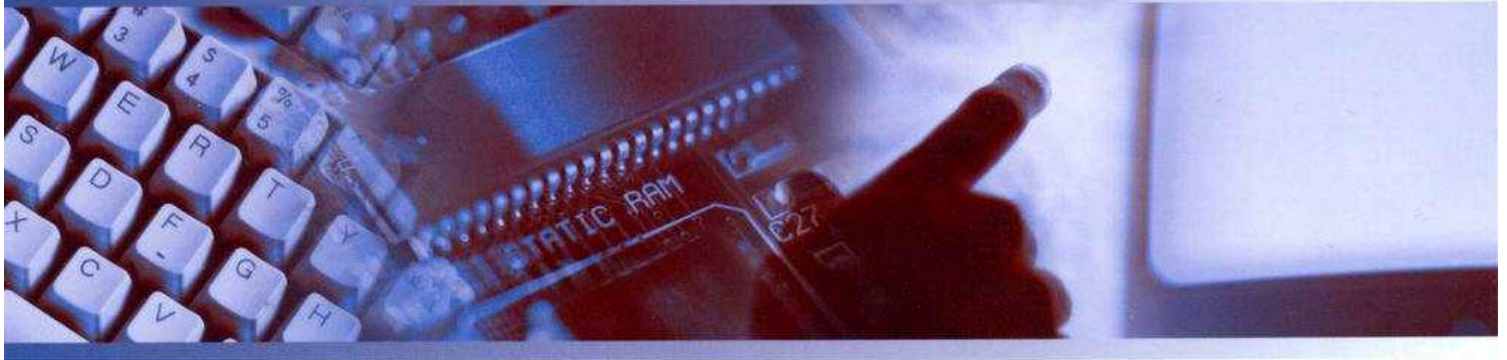


Hall Effect Measurement System



HMS-3000

Very Competitive Price, Compact Desktop Design, Easy-To-Use

The Ecopia HMS-3000 Hall Effect Measurement Systems are complete systems for measuring the resistivity, carrier concentration, and mobility of semiconductors.



Hall Effect Measurement System

HMS - 3000

■ Main Body



- Precise constant current source : 1nA ~20mA
- Confirm van der pauw law by this system.
- LED for checking Ohmic contact failure.
- Visualizing I-V, I-R curve.

■ Magnet Set



- Selectable magnetic set classified by Magnetic Flux Density.(1.0T, 0.51T, 0.37T, 0.31T)
- By ensuring magnet road, minimized outflow of Magnetic Flux Density.

■ Low temp test



- 77K condition using liquid nitrogen offers simple structure cryostat.
- Sample protection by flowing liquid nitrogen through funnel.
- Measurable dark/light condition : built-in special material to intercept light.
- Maintain 15min at 77K by special insulating material.

■ HMS-3000 Software



- Results: bulk/sheet concentration, mobility, resistivity, magnetoresistance, hall coefficient (RH, RH1, RH2), conductivity, V/H ratio of resistance.

■ I-V, I-R Curve



- As applying input current, user can get I-V, I-R curve ranging from initial to final value.

HMS - 2000

■ **Main Body**



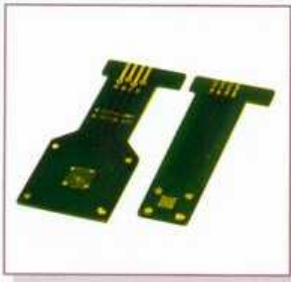
- Precise constant current source : 10nA ~20mA
- Confirm van der pauw law by this system.
- Manual and Automatic – User can select it in measuring.
- LED for checking Ohmic contact failure.

■ **HMS - 2000 SOFTWARE**



- Results : bulk / sheet
concentration, mobility, resistivity, magnetoresistance, hall coefficient, conductivity, V/H ratio of resistance.

■ **Sample Measurement Board**



- PCB sample board
- 6mm x 6mm
- 20mm x 20mm

■ **GENERAL FACTORS**

Input Current	Resistivity ($\Omega \cdot \text{cm}$)	Density(cm^{-3})	Mobility($\text{cm}^2 / \text{Volt} \cdot \text{sec}$)	Magnetic Flux Density	Temperature	Sample Measurement Board
1nA~20mA (HMS-3000)	$10^{-4} \sim 10^7$ including Low temp.	$10^7 \sim 10^{21}$	$1 \sim 10^7$ including Low temp.	0.31T 0.37T 0.51T 1T	77K 300K	PCB Sample Board (6mm × 6mm) (20mm × 20mm)

SPECIFICATION

SIZE (W×D×H) : MAIN BODY	320×300×105 mm (Constant Current Source / Meter System)
WEIGHT :	7.7kg(without package)
MEASURABLE SAMPLE SIZE :	6mm×6mm, 20 mm×20 mm
MEASUREMENT TEMPERATURE :	300K, 77K(Liquid Nitrogen)–Keep temp for 15min.
MEASUREMENT MATERIALS :	All semiconductors including Si, ZnO, SiGe, SiC, GaAs, InGaAs, InP, GaN (N Type & P Type can be measured).
PERMANENT MAGNETIC SIZE	50mm Diameter
MAGNETIC FLUX DENSITY :	0.31, 0.37T, 0.51T, 1.0T
INPUT CURRENT RANGE	1nA-20mA ,Compliance : 13V
MOBILITY(cm ² / Volt-sec)	1~10 ⁷ (including low temperature)
DENSITY(cm ⁻³):	10 ⁷ ~10 ²¹
VOLTAGE MEASUREMENTS:	Input impedance : 2×10 ⁷ Input voltage range: +/-12V
RESISTIVITY RANGE:	10 ⁻⁴ to 10 ⁷ (Ohms-cm)

For further information,
please contact:

Bridge Technology
(480) 988-2256
sales@bridgetec.com