

SEL-TEK LIMITED

Specialist suppliers to the semiconductor and medical sectors

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Hall Effect Measurement System



Model no.

HMS-3000 series (Manual / RT, 77K, RT~ 773K / variable magnet field)

HMS-5000 series. (Auto / 80K ~ 350K, RT ~ 773K, 0.51 Tesla)

HMS-7000 (photonic hall effect)

Powerful performance.

Reasonable price.

Sustainable customer service.

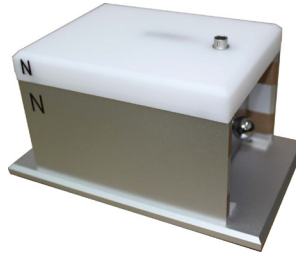
Compact desktop design.

Easy to use and install.

Ecopia's hall effect measurement systems are complete systems for measuring resistivity, carrier concentration, mobility, hall coefficient, N/P type decision and so on for semiconductor samples.

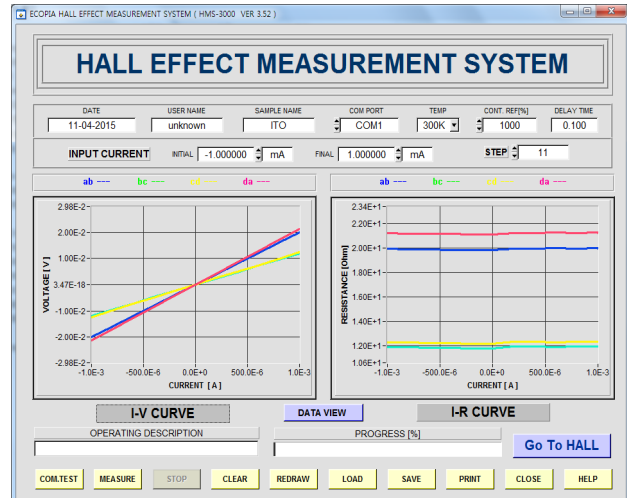
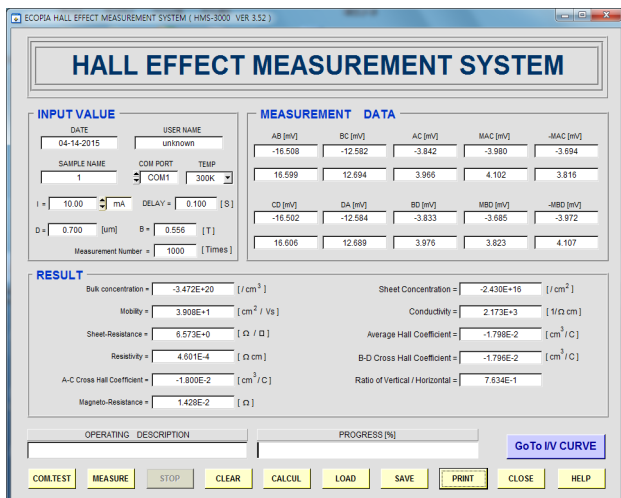
Hall Effect Measurement system

Model no. HMS-3000 + MS51R magnet.



NO	HMS-3000 Main body	Description
1	Size	32 x 30 x 10.5cm(W x D x H)
2	Weight	7.7kg
3	Carrier density	10e7~10e21(cm-3)
4	Resistivity	10e-4 ~ 10e7 (ohm.cm)
5	Mobility	1~10e7 (cm ² /Vs)
6	Input current range	1nA ~ 20mA (DC type)
7	Output voltage	12V
8	Software	Win XP, Vista, Win7 , Win8, Win10
9	Others in s/w	IV, IR graph plot. Hall coefficient, MR.

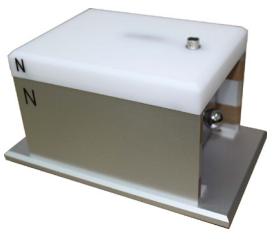
Software



Magnet kits compatible with HMS-3000

Main body	MS magnet	MP magnet	EVM magnet	High temp
HMS-3000	MS31R	MP31R	EVM-100R	HT55T3 (300°C)
	MS37R	MP37R	EVM-100N2R	HT55T5 (500°C)
	MS51R	MP51R		
	MS100T	MP100T		
Remark			Variable magnet field (0.27~0.97Tesla)	Variable Temperature (RT ~ 773K)

Model no. MS51R



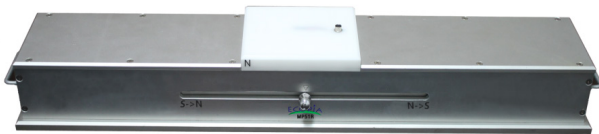
- * Compact desk top design.
- 0.51 Tesla permanent magnet.
- Measurable temp: RT, 77K

Model no. MS100T



- * 1.0 Tesla permanent magnet.
- Measurable temp: Room Temperature only.

Model no. MP51R

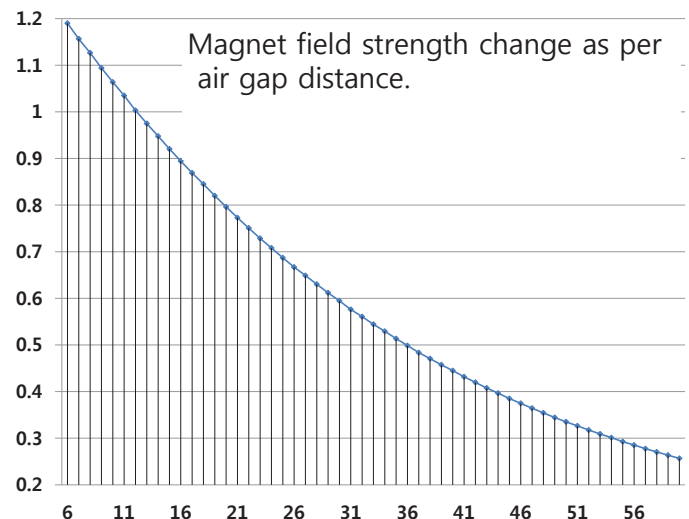


- * Easy slide magnet moves on the rail.
- * Round magnets positioned on both ends , apply N to S and S to N polarity.
- 0.51 Tesla permanent magnet.
- Measurable temp : RT, 77K

Model no. EVM-100R/ EVM-100N2R



- Variable magnet kit
- Magnet field : 0.25 ~ 0.97 Tesla
- Measurable temp : RT, 77K.
- Compatible with HMS-3000



Magnet kits compatible with HMS-3000

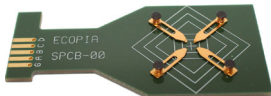
Model no. HT55T3/ HT55T5



- * 0.51 Tesla permanent magnet.
- Measurable temp : RT ~ 300°C / 500°C.
- Temp controller box is also supplied with.
- Purge gas can flow inside the chamber.
- Good to perform with PPM level gas , mixed with inert gas.

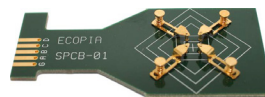
* Sample mounting board

Model no. SPCB-00



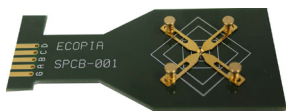
- Measurable size: 5mm x 5mm ~ 20mm x 20mm
- measurable thickness : less than 1.5mm
- gold plated clip and tip

Model no. SPCB-01



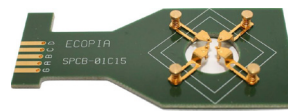
- Measurable size: 5mm x 5mm ~ 20mm x 20mm
- measurable thickness : less than 2mm
- gold plated clip and tip

Model no. SPCB-001



- Measurable size: 2mm x 2mm ~ 12mm x 12mm
- measurable thickness : less than 1.5mm
- gold plated clip and tip

Model no. SPCB-01C15



- Measurable size: 5mm x 5mm ~ 20mm x 20mm
- measurable thickness : less than 2mm
- gold plated clip and tip
- round hole in the center.

• We have more sample mounting boards and if you need different shape of sample board, please visit our website or contact us.

* Contact materials.

- Contact material is to improve electrical conductivity by soldering it on four point corner of sample.



- **In95Sn5% compound**
- 50g
- 100g.



- **Gold paste 2g.**
- silver extender is also provided.

Model no. HMS-5000+ AMP55T

Model no. HMS-5300/ HMS-5500 + AMP55T + (AHT55T3/AHT55T5 as an option)



HMS-5000 + AMP55T is also same with HMS-5300 + AMP55T and HMS-5500 + AMP55T in actual configuration.

But, HMS-5000 main body controller is only able to use with AMP55T, and not possible to use with high temp magnet kit (AHT55T3 , AHT55T5) later.

NO	HMS5300 Main body	Description	NO	Magnet kit (AMP55T)	Description
1	Size	44 x 42 x 14cm (W x D x H)	1	size	68 x 22 x 11cm (W x D x H)
2	Weight	8.5kg	2	Weight	16kg
3	Carrier density	10e7~10e21(cm-3)	3	Temp	80K~350K
4	Resistivity	10e-4 ~ 10e7 (ohm.cm)	4	Magnet flux density	0.51Tesla (+/-0.03T)
5	Mobility	1~10e7 (cm ² /Vs)	5	Temp Uniformity	+/- 0.5dC.
6	Input current range	1nA ~ 20mA (DC type)	6	Sample size	5mm x 5mm ~ 20mm x 20mm
7	Output voltage	12V	7	Sample holding kit (SH80350R) weight	3 kg
8	Software	Win XP, Vista, Win7, Win8, Win10			
9	Others in s/w	IV, IR graph plot. Hall coefficient, MR.			

Software – main measurement page

Hall Effect Measurement system

Model no. HMS-5300 + AHT55T3 + (AMP55T as an option)

Model no. HMS-5500 + AHT55T5 + (AMP55T as an option)

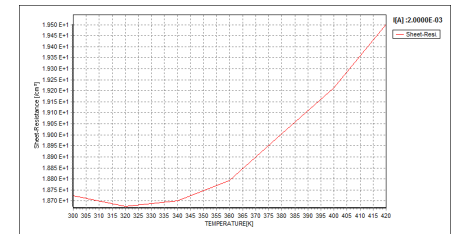
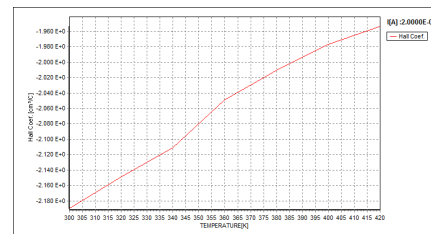
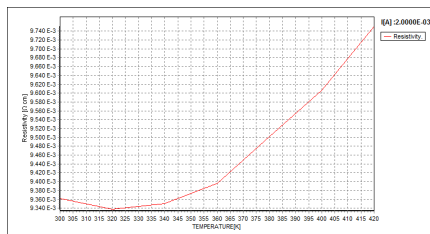
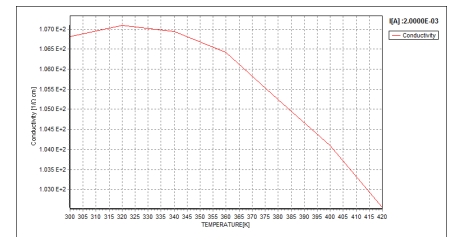
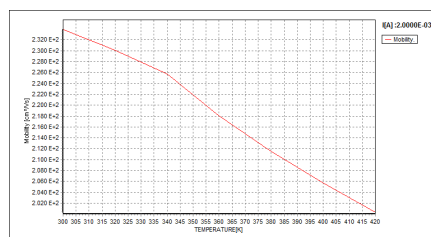
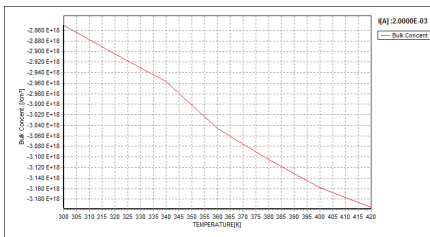


HMS-5000 mainbody is only able to be compatibly used with low temp kit AMP55T (80K~ 350K).

However, HMS-5300 and HMS-5500 main body controller are able to use with each high temp magnet kit model AHT55T3 for 300dc , and AHT55T5 for 500dc later.

NO	HMS5300 Main body	Description	NO	Magnet kit (AHT55T3, AHT55T5)	Description
1	Size	44 x 42 x 14cm (W x D x H)	1	size	68 x 24 x 24cm (W x D x H)
2	Weight	8.5kg	2	Weight	16kg
3	Carrier density)	10e7~10e21(cm-3)	3	Temp	AHT55T3 (RT~ 300dC) AHT55T5 (RT ~ 500dc)
4	Resistivity)	10e-4 ~ 10e7 (ohm.cm)	4	Magnet flux density	0.51Tesla (+/-0.03T)
5	Mobility)	1~10e7 (cm2/Vs)	5	Temp Uniformity	+/- 0.5dc.
6	Input current range	1nA ~ 20mA (DC type)	6	Sample size	5mm x 5mm ~ 20mm x 20mm
7	Output voltage	12V			
8	Software	Win XP, Vista, Win7, Win8, Win10			
9	Others in s/w	IV, IR graph plot. Hall coefficient, MR.			

Software – electrical parameters vs variable temperature.



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Model no. HMS-7000 + AMP55T + Photonic module

+ (AHT55T3 or AHT55T5 as an option)

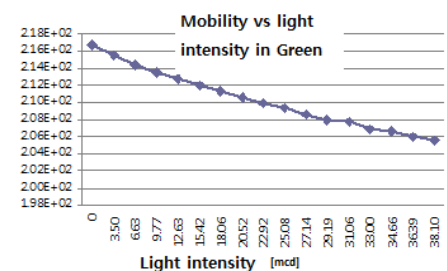
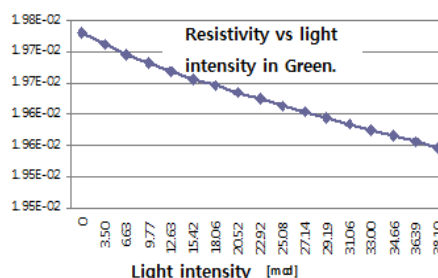
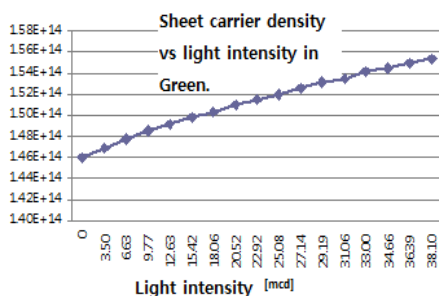


HMS-7000 model is also able to integrate with AMP55T and/or AHT55T3 (and AHT55T5) . However, for photonic measurement, only AMP55T model can be applicable. AHT55T3(and AHT55T5) model is not available for photonic hall effect but for high temp performance.

NO	HMS7000 Main body	Description
1	Size	44 x 42 x 14cm (W x D x H)
2	Weight	8.5kg
3	Carrier density	10e7~10e21(cm-3)
4	Light intensity	Light intensity vs electrical parameters (carrier density, mobility, resistivity, hall coefficient)
5	Resistivity	10e-4 ~ 10e7 (ohm.cm)
6	Mobility	1~10e7 (cm2/Vs)
7	Input current range	1nA ~ 20mA (DC type)
8	Output voltage	12V
9	Software	Win XP, Vista, Win7,Win8, Win10
10	Others in s/w	IV, IR graph plot. Hall coefficient, MR.

Please refer to see magnet kit information in previous page. All of things are same in AMP55T, AHT55T3 and AHT55T5.

Software – light intensity vs carrier density, resistivity, mobility graph in green color.



Ecopia items that we have made and supplied.

HMS-3000/MP51R
- Hall effect. RT, 77K, 0.51T



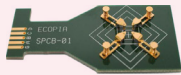
HMS-5300/AMP55T
- Hall effect. 80K~ 350K, 0.51T



HMS-5300/AHT55T3
- Hall effect. RT~ 573K, 0.51T



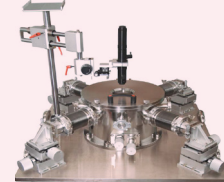
SPCB
- sample mounting board



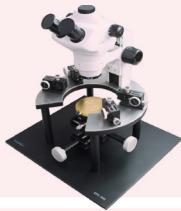
EVM-100R.
- Variable magnet (0.25~ 0.97T)



ETCP-2000
- Cryogenic probe (80K~ 573K)



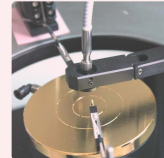
EPS-300
- Compact probe station.



EPS-1000
- Compact probe station.



Optical probe
- photo detector.



EMP-11
- Manipulator.



Hot chuck
- RT ~ 300dc.



ELT-1000
- LED tester with S/W



RTP-1300 (4", 6")
- Rapid Thermal Processing.



RTP-1200 (15 x 20mm)
- Rapid Thermal Processing.



MFC(Mass Flow Controller)
- And other vacuum accs.



ETMS-1000
- Seebeck coefficient Measurement



SE-300
- Magnetron sputter



M-150
- Mask aligner.



< Contact information >

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