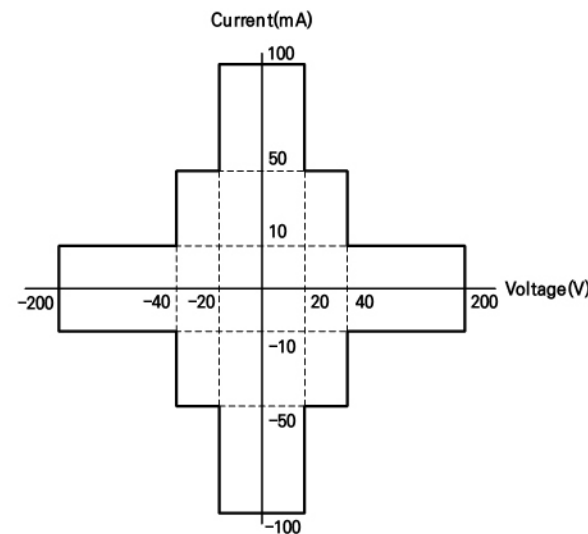
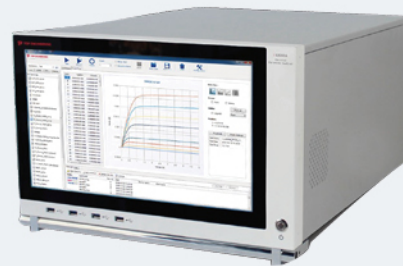


## SMU Module Specifications

Measurement and output range  
(rated power : 2W)



### Components



S3000A



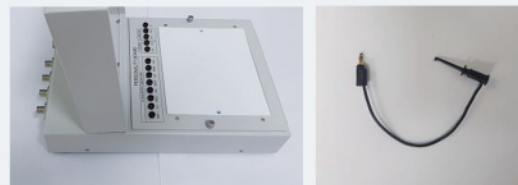
Triaxial cable (SMU)



SMA to BNC coaxial cable  
(PGU)



LAN Cable



DUT box & Grabber

### General Information

#### • Mainframe display

15.6 inch LCD touch screen  
1920 x 1080 full HD

#### • Operating Condition

Temperature: 10~40 degree C  
Humidity: 10~75% RH  
Pressure: 800~2060 hpa

#### • Calibration period : 1year

#### • Size and Mass

Mainframe size (W x H x D) : 430 mm x 290 mm x 530 mm  
Mass of equipment(kg) : 26kg (MPSMU 12ch)

#### • Power requirement

Rated Voltage : Main 100~240 Vac  
Rated Frequency : 50/60 Hz, 1 Phase, 2Wires + PE  
Rated Current : 10 A

#### • Warm up time : 30 min (at least)

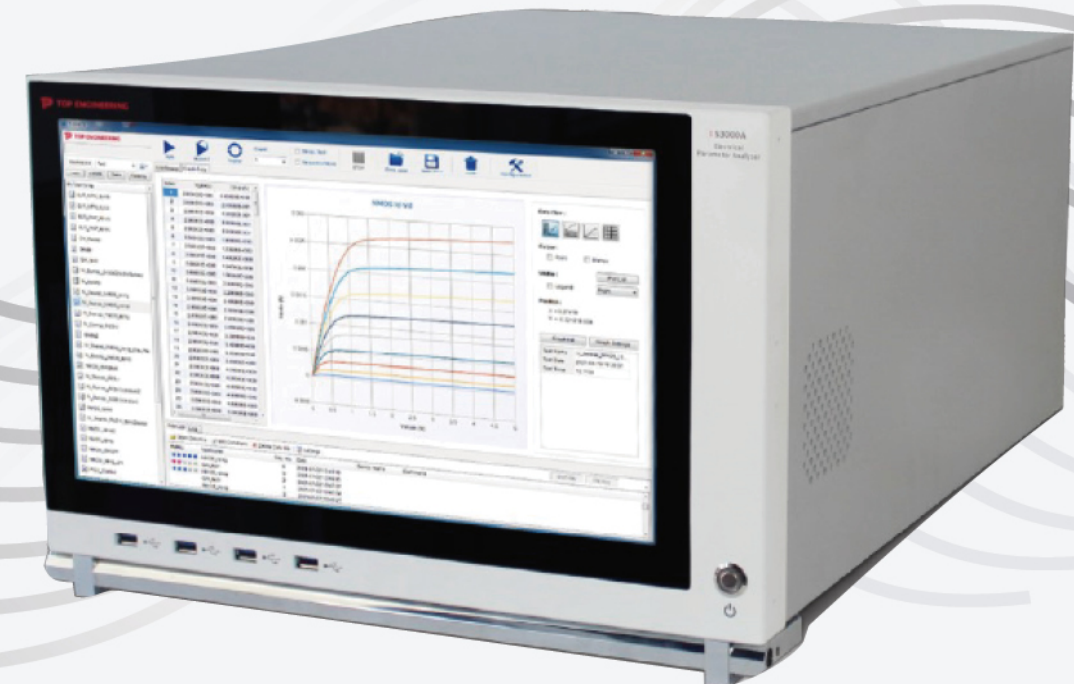
www.hanback.com



홈페이지 바로가기

# S3000A

## Electrical Parameter Analyzer



본 카탈로그의 제품사양 및 외형은 품질개선을 위해 예고 없이 변경될 수 있습니다.

국·내외 교육기관 총판

제조사

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(삼평동 616-1)

# S3000A

## Electrical Parameter Analyzer

- Accelerates R&D for semiconductor and electrical materials, enabling the evaluation of electrical parameters across diverse fields, including semiconductors, advanced materials, and electrochemistry.
- Provides high-precision measurements, including I-V (Current-Voltage) characterization.
- Supports both manual and fully automated measurements for R&D applications.
- The system accommodates up to 12 slots, allowing for various instrument modules to be configured based on user requirements. Notably, it can be equipped with up to 12 MPSMU channels.

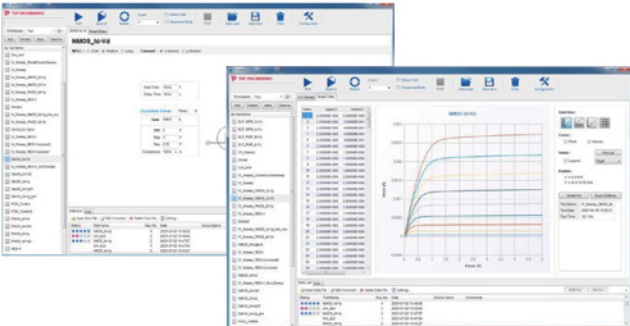
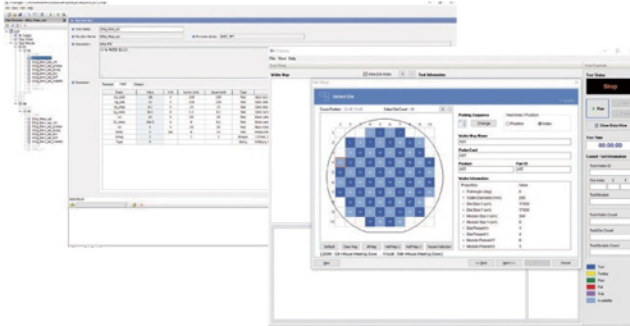
### Key Specifications/Functions

| Measurement Capabilities       | Features                                                                                                                                                                                                             |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Current/Voltage(IV)<br>(S3020) | <ul style="list-style-type: none"><li>Voltage and Current Range : 100V/0.1A</li><li>Current and Voltage Resolution : 1fA/0.1μV</li><li>Spot, Sweep and other function for basic and advance IV measurement</li></ul> |

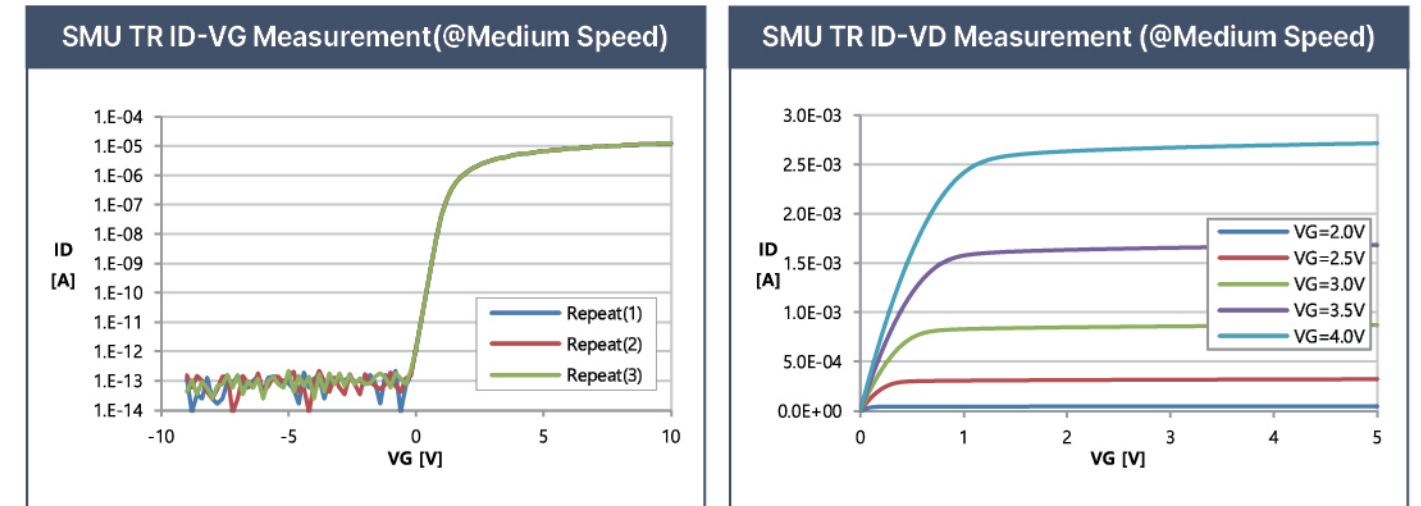
### Instrument Modules

| Code  | Name  | Description                            | Qty | Total channel |
|-------|-------|----------------------------------------|-----|---------------|
| S3020 | MPSMU | Medium Power SMU (1ch) : 2W,200V/100mA | 4ea | 4ea           |

### Software

| T-Space                                                                                                                                                   | T-REX                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                        |                                                        |
| <b>Basic Test System S/W</b> <ul style="list-style-type: none"><li>Sets each device and item</li><li>Displays the Graph and Data of test device</li></ul> | <b>Automation Test System S/W</b> <ul style="list-style-type: none"><li>Manages Control of Probe Station</li><li>Programs recipe</li></ul> |

### Measurement Example



### SMU Module Specifications

#### Voltage range, resolution, and accuracy<sup>1</sup>

| Voltage range | Force resolution <sup>2</sup> | Measure resolution <sup>2</sup> | Measure accuracy | Maximum current |
|---------------|-------------------------------|---------------------------------|------------------|-----------------|
| ±0.5 V        | 2 μV                          | 0.1 μV                          | ±(0.02%+150 μV)  | 0.1 A           |
| ±2 V          | 5 μV                          | 0.5 μV                          | ±(0.02%+200 μV)  | 0.1 A           |
| ±5 V          | 20 μV                         | 1 μV                            | ±(0.02%+500 μV)  | 0.1 A           |
| ±20 V         | 50 μV                         | 5 μV                            | ±(0.02%+1 mV)    | 0.1 A           |
| ±40 V         | 100 μV                        | 10 μV                           | ±(0.02%+2 mV)    | 50 mA           |
| ±200 V        | 500 μV                        | 50 μV                           | ±(0.02%+3 mV)    | 10 mA           |

#### Current range, resolution, and accuracy<sup>1</sup>

| Current Range | Force resolution <sup>2</sup> | Measure resolution <sup>2</sup> | Measure accuracy | Maximum voltage          |
|---------------|-------------------------------|---------------------------------|------------------|--------------------------|
| ±1 nA         | 10 fA                         | 1 fA                            | ±(0.1%+400 fA)   | 200 V                    |
| ±10 nA        | 50 fA                         | 2 fA                            | ±(0.1%+2 pA)     | 200 V                    |
| ±100 nA       | 500 fA                        | 20 fA                           | ±(0.1%+20 pA)    | 200 V                    |
| ±1 μA         | 5 pA                          | 200 fA                          | ±(0.1%+200 pA)   | 200 V                    |
| ±10 μA        | 50 pA                         | 2 pA                            | ±(0.05%+2 nA)    | 200 V                    |
| ±100 μA       | 500 pA                        | 20 pA                           | ±(0.05%+20 nA)   | 200 V                    |
| ±1 mA         | 5 nA                          | 200 pA                          | ±(0.05%+200 nA)  | 200 V                    |
| ±10 mA        | 50 nA                         | 2 nA                            | ±(0.05%+2 μA)    | 200 V                    |
| ±100 mA       | 500 nA                        | 20 nA                           | ±(0.05%+20 μA)   | 40 V (20 V) <sup>3</sup> |

#### Notes

- Resolution and accuracy is valid under specific environmental conditions.
- Specified resolution is limited by fundamental noise limits.
- 40V(10mA<I<sub>o</sub>≤50mA), 20V(50mA<I<sub>o</sub>≤0.1A)