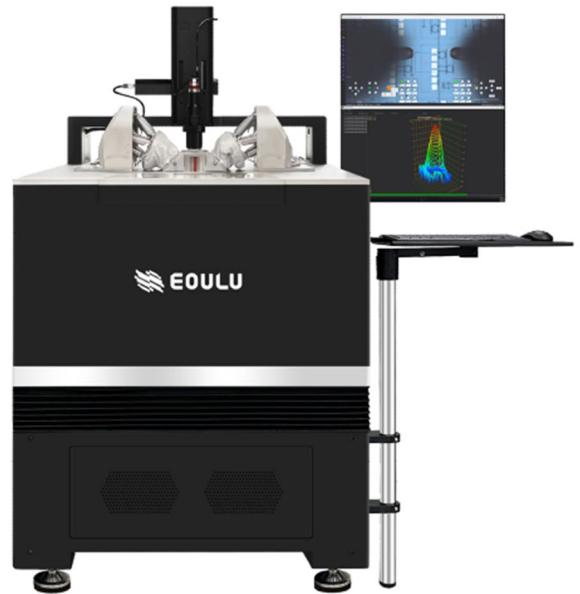


Eoulu F1 SiPh Probe Station

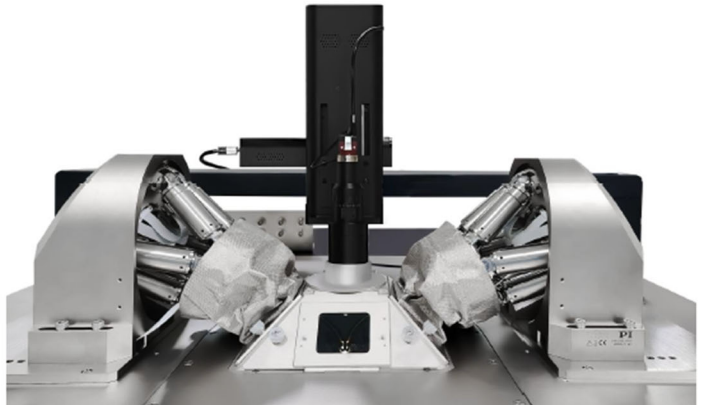
Novel Features

- The world's first evolvable and able-to-learn SiPh probe station, for which Eoulu owns 100% intellectual property rights
- Eoulu's patented design for new digital 3.0 system makes the probe station simpler and lighter
- Eoulu's patented design for SiPh AutoCal calibration software, combined with unique optical calibration kits and algorithms, enables precise positioning and rapid calibration
- With Eoulu's thermal system, the F1 SiPh probe station can realize variable temperature test from multi-angle single fiber to fiber array, from vertical coupling to edge coupling
- The world's smallest 12-inch SiPh probe station, only 1m wide, saving the clean room cost, and making it easy to move
- The world's lightest 12-inch SiPh probe station, and the main body only weighs 500 kg, so that the site can easily meet the requirement of bearing capacity



Product Description

- The world's first digital probe station launched by Eoulu
- F1 takes its name from two English words, Formula 1, which means to be as fast as F1 car
Focus 1, which means that all probe station are focused on this one
- Unlike all traditional probe station, it is no longer a probe station, but a probe platform
- From the wafer to the data, there is little manual work involved. You don't have to worry about inaccurate probing
- Featuring a powerful SiPh automation software and hardware integration solution
- Supporting multiple testing applications including O-O, O-E, E-O, and E-E
- futureC provides mass instrument interfaces and applications, making it easy for F1 to test wafers integrated with instruments
- Eoulu's futureD data system and background monitoring technology can be used to easily trace the data of each chip



F1 Mechanical Performance

No.	Item	Chuck			
		X-axis	Y-axis	Z-axis	Theta axis
1	Travel	301 mm	301 mm	20 mm	10°
2	Maximum positioning accuracy *	≤ 0.05 μm	≤ 0.05 μm	≤ 1 μm	± 0.003°
3	Speed **	≥ 50 mm/s	≥ 50 mm/s	≥ 20 mm/s	/
4	Maximum speed	150 mm/s	150 mm/s	35 mm/s	/
5	Wafer roughness adaptability *	100 μm			
6	Average time of mapping ***	Minimum value	Typical value	Maximum value	
		< 500 ms	< 1 s	< 3 s ****	
7	XY position locking *****	Minimum value	Typical value	Maximum value	
		0.02 μm	0.038 μm	1.5 μm	
8	Z position locking *****	Minimum value	Typical value	Maximum value	
		0.65 μm	3.5 μm	15 μm	

Selection Guide

Key Specifications	Single-Signal			Dual-Signal (Differential)		
	LF Series	RF Series	HF Series	LF Series	RF Series	HF Series
Maximum Frequency	50 GHz	110 GHz	110 GHz	67 GHz	110 GHz	110 GHz
Typical Insertion Loss @ 40 GHz ** GSG, 150 μ m Pitch, Standard GSGSG, 150 μ m Pitch, Standard	- 0.50 dB	- 0.62 dB	- 0.57 dB	- 0.80 dB	- 0.80 dB	- 0.80 dB
Typical Return Loss @ 40 GHz ** GSG, 150 μ m Pitch, Standard GSGSG, 150 μ m Pitch, Standard	- 20.50 dB	- 17.80 dB	- 18.54 dB	- 13.00 dB	- 13.00 dB	- 13.00 dB
Typical Contact Resistance ***	< 10 m Ω	< 10 m Ω	< 10 m Ω	< 10 m Ω	< 10 m Ω	< 10 m Ω
Tip Configuration	GSG, GS, SG	GSG, GS, SG	GSG, GS, SG	GSGSG, GSSG	GSGSG, GSSG	GSGSG, GSSG
Probe Pitch *****	50 μ m ~ 1250 μ m (25 μ m step)	50 μ m ~ 1250 μ m (25 μ m step)	50 μ m ~ 1250 μ m (25 μ m step)	50 μ m ~ 1250 μ m (25 μ m step)	50 μ m ~ 1250 μ m (25 μ m step)	50 μ m ~ 1250 μ m (25 μ m step)
Typical Lifetime *****	> 1,000,000	> 1,000,000	> 1,000,000	> 1,000,000	> 1,000,000	> 1,000,000
Maximum Temperature	200°C	200°C	200°C	200°C	200°C	200°C
Minimum Pad Size	70 $\times$ 70 μ m	30 $\times$ 30 μ m	30 $\times$ 30 μ m	70 $\times$ 70 μ m	30 $\times$ 30 μ m	30 $\times$ 30 μ m
Features	• Suitable for uneven wafer • Stable testing • High repeatability • Long lifetime • Fast delivery	• Ultra Low Contact Resistance • Small contact marks • Stable testing • High repeatability	• Ultra low Contact Resistance • Small contact marks • Stable testing • High repeatability	• Suitable for uneven wafer • Stable testing • High repeatability • Long lifetime • Fast delivery	• Ultra low Contact Resistance • Small contact marks • Stable testing • High repeatability	• Ultra low Contact Resistance • Small contact marks • Stable testing • High repeatability
Recommendation *****	• PCB Board Testing • Mass Production Testing	• Filter Testing	• Device Modeling Testing • Characterization Testing	• PCB Board Testing • Mass Production	• Filter Testing	• Device Modeling Testing • Characterization Testing

110 GHz Single-Signal : RF110 Series

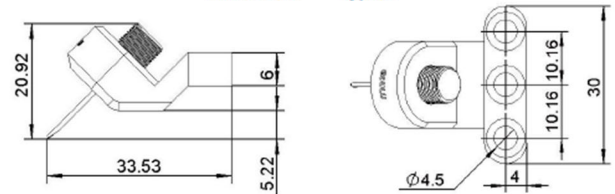
Electrical Specifications

1	Frequency Range	DC ~ 110 GHz		
2	Insertion Loss ** (GSG, 150 μ m Pitch, Standard)	Max	Typical	Min
		- 0.96 dB	- 1.13 dB	- 1.37 dB
3	Return Loss ** (GSG, 150 μ m Pitch, Standard)	Max	Typical	Min
		- 11.60 dB	- 16.86 dB	- 19.24 dB
4	Characteristic Impedance	50 Ω		
5	Contact Resistance ***	< 10 m Ω		
6	Maximum DC Current	5 A		
7	Maximum DC Voltage	200 V		

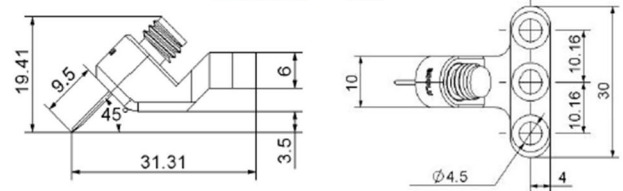
Mechanical Specifications

1	Tip Configuration	GSG
2	Probe Pitch *****	50 μ m ~ 150 μ m (25 μ m step)
3	Connector	1.0 mm (female)
4	Probe Tip Material	Copper Alloy
5	Typical Lifetime *****	> 1,000,000
6	Maximum Temperature	200°C
7	Minimum Pad Size	30 $\times$ 30 μ m
8	Probe Shape	Typical / Mini / Slim
9	Recommended Cable	C110 Series Cables

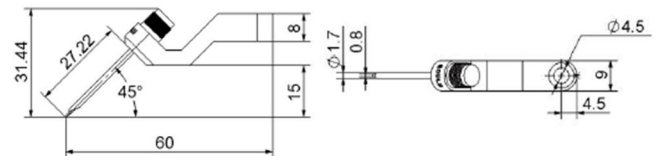
Dimensions — Typical *****



Dimensions — Mini *****



Dimensions — Slim *****



325 GHz Waveguide Probes

Electrical Specifications

1	Frequency Range	220 ~ 325 GHz	
2	Insertion Loss (GSG, 150 μ m Pitch)	T Model	S Model
		- 6.5 dB	- 5.0 dB
3	Return Loss (GSG, 150 μ m Pitch)	T Model	S Model
		- 13.0 dB	- 12.0 dB
4	Characteristic Impedance	50 Ω	
5	Contact Resistance *	< 10 m Ω	
6	Maximum DC Current	500 mA	

Dimensions — T Model ****

