

## International price list I-13 (as of November 1, 2000)

valid for all non-EU and non-EFTA countries

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Non-Contact / Tapping-Mode™ Sensors - <i>preferred type</i> -				
Tip	Order Code	Type, Short description, Application, Features	Sensors per set	Price
Pointprobe®		POINTPROBE® silicon cantilevers for non-contact- / tapping-mode™ AFM (high frequency) - <i>preferred type</i> - force const. typ. 42 N/m, resonance frequency typ. 330 kHz		
	NCH-16	Set of 16 sensors with data sheet of all sensors	16	471.20 US\$
	NCH-50	Set of 50 sensors without data sheet	50	1,228.35 US\$
	NCH-W	Wafer of 385 sensors with data sheet of up to 32 sensors	385	5,672.45 US\$
	NCHR-16	ditto, with reflex coating on the detector side of the cantilever		
	NCHR-50	Set of 16 sensors with data sheet of all sensors	16	565.25 US\$
	NCHR-50	Set of 50 sensors without data sheet	50	1,474.40 US\$
	NCHR-W	Wafer of 385 sensors with data sheet of up to 32 sensors	385	6,806.75 US\$
	NCHPt-16	ditto, with PtIr5 coating on the tipside and the detector side		
SuperSharp Silicon	NCHPt-16	Set of 16 sensors with data sheet of all sensors	16	708.70 US\$
	NCHPt-50	Set of 50 sensors without data sheet	50	1,844.90 US\$
	NCHPt-W	Wafer of 385 sensors with data sheet of up to 32 sensors	385	8,521.50 US\$
	SSS-NCH-8	ditto, with SUPERSHARPSILICON tip, radius typ. 2 nm		
	SSS-NCH-16	Set of 8 sensors with data sheet of all sensors	8	640.30 US\$
	SSS-NCH-16	Set of 16 sensors with data sheet of all sensors	16	1,067.80 US\$
	SSS-NCH-50	Set of 50 sensors without data sheet	50	2,668.55 US\$
	SSS-NCH-W	Wafer of 380 sensors with data sheet of up to 32 sensors	380	15,212.35 US\$
High Aspect Ratio Tips	AR5-NCHR-8	ditto, with HIGH ASPECT RATIO tips, aspect ratio ≥ 5, with reflex coating on the detector side of the cantilever		
	AR5-NCHR-8	Set of 8 sensors with data sheet of all sensors	8	700.15 US\$
	AR5-NCHR-16	Set of 16 sensors with data sheet of all sensors	16	1,166.60 US\$
	AR5-NCHR-50	Set of 50 sensors without data sheet	50	2,917.45 US\$
	AR5-NCHR-W	Wafer of 380 sensors with data sheet of up to 32 sensors	380	16,627.85 US\$
	AR5T-NCHR-8	ditto, with TILT COMPENSATED HIGH ASPECT RATIO tips, aspect ratio ≥ 5, tilt compensation 13°, with reflex coating on the detector side of the cantilever		
	AR5T-NCHR-8	Set of 8 sensors with data sheet of all sensors	8	1,050.23 US\$
	AR5T-NCHR-16	Set of 16 sensors with data sheet of all sensors	16	1,749.90 US\$
Diamond Coated Tips	AR5T-NCHR-50	Set of 50 sensors without data sheet	50	4,376.18 US\$
	AR5T-NCHR-W	Wafer of 380 sensors with data sheet of up to 32 sensors	380	24,941.78 US\$
	DT-NCHR-8	ditto, with DIAMOND COATED TIPS, with reflex coating on the detector side of the cantilever		
	DT-NCHR-8	Set of 8 sensors with data sheet of all sensors	8	826.50 US\$
	DT-NCHR-16	Set of 16 sensors with data sheet of all sensors	16	1,377.50 US\$
	DT-NCHR-50	Set of 50 sensors without data sheet	50	3,444.70 US\$
	DT-NCHR-W	Wafer of 380 sensors with data sheet of up to 32 sensors	380	19,634.60 US\$
	CDT-NCHR-8	ditto, with CONDUCTIVE DIAMOND COATED TIPS, with reflex coating on the detector side of the cantilever		
	CDT-NCHR-8	Set of 8 sensors with data sheet of all sensors	8	991.80 US\$
	CDT-NCHR-16	Set of 16 sensors with data sheet of all sensors	16	1,653.00 US\$
	CDT-NCHR-50	Set of 50 sensors without data sheet	50	4,133.64 US\$
	CDT-NCHR-W	Wafer of 380 sensors with data sheet of up to 32 sensors	380	23,561.52 US\$

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Non-Contact / Tapping-Mode™ Sensors - long cantilever -				
Tip	Order Code	Type, Short description, Application, Features	Sensors per set	Price
Pointprobe®		POINTPROBE® silicon cantilevers for non-contact- / tapping-mode™ AFM - long cantilever - force const. typ. 48 N/m, resonance frequency typ. 190 kHz		
	NCL-16	Set of 16 sensors with data sheet of all sensors	16	471.20 US\$
	NCL-50	Set of 50 sensors without data sheet	50	1,228.35 US\$
	NCL-W	Wafer of 385 sensors with data sheet of up to 32 sensors	385	5,672.45 US\$
	NCLR-16	ditto, with reflex coating on the detector side of the cantilever Set of 16 sensors with data sheet of all sensors	16	565.25 US\$
	NCLR-50	Set of 50 sensors without data sheet	50	1,474.40 US\$
	NCLR-W	Wafer of 385 sensors with data sheet of up to 32 sensors	385	6,806.75 US\$
SuperSharp Silicon	SSS-NCL-8	ditto, with SUPERSHARPSILICON tip, radius typ. 2 nm Set of 8 sensors with data sheet of all sensors	8	640.30 US\$
	SSS-NCL-16	Set of 16 sensors with data sheet of all sensors	16	1,067.80 US\$
	SSS-NCL-50	Set of 50 sensors without data sheet	50	2,668.55 US\$
	SSS-NCL-W	Wafer of 380 sensors with data sheet of up to 32 sensors	380	15,212.35 US\$
High Aspect Ratio Tips	AR5-NCLR-8	ditto, with HIGH ASPECT RATIO tips, aspect ratio ≥ 5, with reflex coating on the detector side of the cantilever Set of 8 sensors with data sheet of all sensors	8	700.15 US\$
	AR5-NCLR-16	Set of 16 sensors with data sheet of all sensors	16	1,166.60 US\$
	AR5-NCLR-50	Set of 50 sensors without data sheet	50	2,917.45 US\$
	AR5-NCLR-W	Wafer of 380 sensors with data sheet of up to 32 sensors	380	16,627.85 US\$
Diamond Coated Tips	DT-NCLR-8	ditto, with DIAMOND COATED TIPS, with reflex coating on the detector side of the cantilever Set of 8 sensors with data sheet of all sensors	8	826.50 US\$
	DT-NCLR-16	Set of 16 sensors with data sheet of all sensors	16	1,377.50 US\$
	DT-NCLR-50	Set of 50 sensors without data sheet	50	3,444.70 US\$
	DT-NCLR-W	Wafer of 380 sensors with data sheet of up to 32 sensors	380	19,634.60 US\$
	CDT-NCLR-8	ditto, with CONDUCTIVE DIAMOND COATED TIPS, with reflex coating on the detector side of the cantilever Set of 8 sensors with data sheet of all sensors	8	991.80 US\$
	CDT-NCLR-16	Set of 16 sensors with data sheet of all sensors	16	1,653.00 US\$
	CDT-NCLR-50	Set of 50 sensors without data sheet	50	4,133.64 US\$
	CDT-NCLR-W	Wafer of 380 sensors with data sheet of up to 32 sensors	380	23,561.52 US\$

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**New**

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Non-Contact / Tapping-Mode™ Sensors - <i>special types</i> -				
Pointprobe®		POINTPROBE® silicon cantilevers non-contact mode with reflex coating on the detector side of the cantilever - <i>special type A</i> - force const. typ. 15 N/m, resonance frequency typ. 130 kHz		
	SEIHR-16	Set of 16 sensors with data sheet of all sensors	16	565.25 US\$
	SEIHR-50	Set of 50 sensors without data sheet	50	1,474.40 US\$
	SEIHR-W	Wafer of 385 sensors with data sheet of up to 32 sensors	385	6,806.75 US\$
SuperSharp Silicon		ditto, with SUPERSHARPSILICON tip, radius typ. 2 nm		
	SSS-SEIH-8	Set of 8 sensors with data sheet of all sensors	8	640.30 US\$
	SSS-SEIH-16	Set of 16 sensors with data sheet of all sensors	16	1,067.80 US\$
	SSS-SEIH-50	Set of 50 sensors without data sheet	50	2,668.55 US\$
	SSS-SEIH-W	Wafer of 380 sensors with data sheet of up to 32 sensors	380	15,212.35 US\$
Pointprobe®		POINTPROBE® silicon cantilevers for non-contact mode with reflex coating on the detector side of the cantilever - <i>special type B</i> - force const. typ. 27 N/m, resonance frequency typ. 130 kHz		
	ZEIHR-16	Set of 16 sensors with data sheet of all sensors	16	565.25 US\$
	ZEIHR-50	Set of 50 sensors without data sheet	50	1,474.40 US\$
	ZEIHR-W	Wafer of 385 sensors with data sheet of up to 32 sensors	385	6,806.75 US\$

Contact Mode Sensors				
Tip	Order Code	Type, Short description, Application, Features	Sensors per set	Price
Pointprobe®		POINTPROBE® silicon cantilevers for contact-mode AFM - <i>preferred type</i> - force const. typ. 0.2 N/m, resonance frequency typ. 13 kHz		
	CONT-16	Set of 16 sensors with data sheet of all sensors	16	471.20 US\$
	CONT-50	Set of 50 sensors without data sheet	50	1,228.35 US\$
	CONT-W	Wafer of 385 sensors with data sheet of up to 32 sensors	385	5,672.45 US\$
		ditto, with reflex coating on the detector side of the cantilever		
	CONTR-16	Set of 16 sensors with data sheet of all sensors	16	565.25 US\$
	CONTR-50	Set of 50 sensors without data sheet	50	1,474.40 US\$
	CONTR-W	Wafer of 385 sensors with data sheet of up to 32 sensors	385	6,806.75 US\$
		ditto, with PtIr5 coating on the tipside and the detector side		
	CONTPt-16	Set of 16 sensors with data sheet of all sensors	16	708.70 US\$
	CONTPt-50	Set of 50 sensors without data sheet	50	1,844.90 US\$
	CONTPt-W	Wafer of 385 sensors with data sheet of up to 32 sensors	385	8,521.50 US\$
Pointprobe®		POINTPROBE® silicon cantilevers for contact mode contact mode with reflex coating - <i>special type</i> - force const. typ. 1.6 N/m, resonance frequency typ. 27 kHz		
	ZEILR-16	Set of 16 sensors with data sheet of all sensors	16	565.25 US\$
	ZEILR-50	Set of 50 sensors without data sheet	50	1,474.40 US\$
	ZEILR-W	Wafer of 385 sensors with data sheet of up to 32 sensors	385	6,806.75 US\$

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### Sensors for Special Application Modes

Tip	Order Code	Type, Short description, Application, Features	Sensors per set	Price
Pointprobe®		POINTPROBE® silicon cantilevers for lateral / friction force microscopy force const. typ. 0.2 N/m, resonance frequency typ. 25 kHz		
	LFM-16	Set of 16 sensors with data sheet of all sensors	16	998.45 US\$
	LFMR-16	ditto, with reflex coating on the detector side of the cantilever Set of 16 sensors with data sheet of all sensors	16	1,197.95 US\$
Pointprobe®		POINTPROBE® silicon cantilevers for force modulation mode force const. typ. 2.8 N/m, resonance frequency typ. 75 kHz		
	FM-16	Set of 16 sensors with data sheet of all sensors	16	471.20 US\$
	FM-50	Set of 50 sensors without data sheet	50	1,228.35 US\$
	FM-W	Wafer of 385 sensors with data sheet of up to 32 sensors	385	5,672.45 US\$
		ditto, with reflex coating on the detector side of the cantilever		
	FMR-16	Set of 16 sensors with data sheet of all sensors	16	565.25 US\$
Diamond Coated Tips	FMR-50	Set of 50 sensors without data sheet	50	1,474.40 US\$
	FMR-W	Wafer of 385 sensors with data sheet of up to 32 sensors	385	6,806.75 US\$
		ditto, with DIAMOND COATED TIPS, with reflex coating on the detector side of the cantilever		
	DT-FMR-8	Set of 8 sensors with data sheet of all sensors	8	826.50 US\$
	DT-FMR-16	Set of 16 sensors with data sheet of all sensors	16	1,377.50 US\$
	DT-FMR-50	Set of 50 sensors without data sheet	50	3,444.70 US\$
New	DT-FMR-W	Wafer of 380 sensors with data sheet of up to 32 sensors	380	19,634.60 US\$
		ditto, with CONDUCTIVE DIAMOND COATED TIPS, with reflex coating on the detector side of the cantilever		
	CDT-FMR-8	Set of 8 sensors with data sheet of all sensors	8	991.80 US\$
	CDT-FMR-16	Set of 16 sensors with data sheet of all sensors	16	1,653.00 US\$
	CDT-FMR-50	Set of 50 sensors without data sheet	50	4,133.64 US\$
	CDT-FMR-W	Wafer of 380 sensors with data sheet of up to 32 sensors	380	23,561.52 US\$
Pointprobe®		POINTPROBE® silicon cantilevers for electrostatic force microscopy with PtIr5 coating on the tipside and the detector side force const. typ. 2.8 N/m, resonance frequency typ. 75 kHz		
	EFM-16	Set of 16 sensors with data sheet of all sensors	16	708.70 US\$
	EFM-50	Set of 50 sensors without data sheet	50	1,844.90 US\$
	EFM-W	Wafer of 385 sensors with data sheet of up to 32 sensors	385	8,521.50 US\$
Pointprobe®		POINTPROBE® silicon cantilevers for magnetic force microscopy force const. typ. 2.8 N/m, resonance frequency typ. 75 kHz with hard magnetic coating on the tipside and reflex coating on the detector side of the cantilever		
	MFMR-16	Set of 16 sensors with data sheet of all sensors	16	1,134.30 US\$

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### Evaluation Kits and Alignment Chip

Tip	Order Code	Type, Short description, Application, Features	Sensors per set	Price
Pointprobe®		POINTPROBE® Evaluation Kits containing a selection of the available Pointprobe® sensors including a short description of the different sensor types; without data sheet		
	KIT-1	Contents: 4 NCH, 4 NCHR, 2 CONT, 2 CONTR, 2 MFMR, 4 FM, 4 FMR	22	726.75 US\$
	KIT-2	Contents: 4 NCL, 4 NCLR, 3 CONT, 2 CONTR, 2 EFM, 2 LFM, 2 LFMR	19	726.75 US\$
	ALIGN-8	ALIGNMENT CHIP suitable for all POINTPROBE®, DIAMOND COATED, HIGH ASPECT RATIO and SUPERSHARP SILICON sensors Set of 8 chips	8	486.40 US\$

### Calibration Standard

	Order Code	Type, Short description, Application, Features	Chips per set	Price
	2D200	CALIBRATION STANDARD for the x-y calibration of the scanning mechanism, lattice of inverted pyramids, 200nm pitch, accuracy of position $\pm 5\text{nm}$	1	971.85 US\$

### European Metrology Consortium Calibration Standards

**NEW**

	Order Code	Type, Short description, Application, Features	Chips per set	Price
Lateral Standards	2D100	CALIBRATION STANDARD for the x-y-calibration of the scanning mechanism, lattice of inverted pyramids, 100nm pitch, accuracy of position $\pm 5\text{nm}$	1	1,600.00 US\$
	2D300	CALIBRATION STANDARD for the x-y calibration of the scanning mechanism, lattice of inverted pyramids, 300nm pitch, accuracy of position $\pm 5\text{nm}$	1	1,000.00 US\$
Height	H8	HEIGHT STANDARD for very precise z-calibration of the scanning mechanism nominal step height of 8nm	1	1,600.00 US\$
Flatness	FLAT	FLATNESS STANDARD for analysis and correction of the scanner bow, smooth plane with a maximum peak to valley distance of 10nm on a 100 by 100 $\mu\text{m}^2$ area	1	800.00 US\$
	CERT	CERTIFICATION of the European Metrology Consortium Standards by the Physikalisch Technische Bundesanstalt (PTB) the German authority for metrology (equivalent to NIST).	per chip	500.00 US\$

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### SELECTION

Subject to availability sets of 8 sensors or sets of 16 sensors can be selected according to customer requirements (e.g. with narrow tolerances). The additional selection fee is 127.83 DM per set (EU and EFTA) or 66.00 US\$ per set (non-EU and non-EFTA).

### GUARANTEES

**YIELD:** We guarantee more than 90% good sensors (exception: For SuperSharpSilicon tips, Diamond Coated tips and Conductive Diamond Coated tips we guarantee more than 80% good sensors). Every good sensor meets the following specifications.

**MECHANICAL PROPERTIES:** For every sensor type we give a specified range for the force constant and the resonance frequency (see: product description of each sensor type). These values are guaranteed for good sensors.

**TIP RADIUS:** For good sensors we guarantee a tip radius of smaller than 15 nm (uncoated sensors only). The typical tip radius is better than 10 nm. For SuperSharpSilicon sensors we guarantee a tip radius of smaller than 5 nm, the typical tip radius is in the order of 2 nm. Coated tips have a typical radius in the order of the layer thickness.

**ASPECT RATIO:** For the High Aspect Ratio tips AR5 and the Tilt Compensated High Aspect Ratio tips AR5T we guarantee an aspect ratio of 5:1 for the last 2 µm of the tip. The typical aspect ratio is in the order of 7:1.

**COATINGS:** Although the coatings are almost free of stress it cannot be avoided completely. The bending of the cantilever due to stress is less than 2°.

### TERMS AND CONDITIONS

**TERMS:** Prices are FCA Wetzlar including packing & insurance, but exclusive of any tax and custom duties. For international transports (non-EU and non-EFTA) a flat-rate of 80.00 US\$ is added to the invoice. EU and EFTA shipments are free of charge. Shipment is via Federal Express (international) or DPD (EU and EFTA). Other carriers are subject to an additional handling charge (minimum 100.00 DM for EU and EFTA shipments, minimum 100.00 US\$ for international shipments). Payment net within 30 days of date of invoice. Overdue interest: 1% per month.

**DELIVERY:** Delivery period is 2 weeks if in stock, otherwise up to 4 months depending on status of processing.

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