

## Tipless Probes

Model: **ACL -TL**

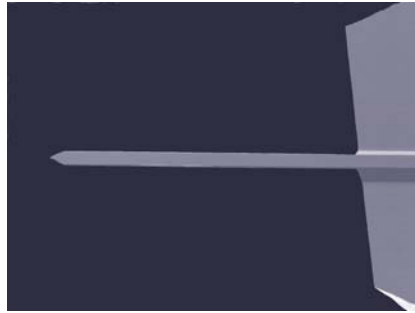
Type: **AC** mode / Tapping mode **Long Cantilever Probes**

### Substrate Specifications

**Material:** Single Crystal Silicon, N-type, 0.01 -0.025Ω-cm, Antimony doped  
**Size ( LxWxT ) :** 3.4mm X 1.6 mm X 300 μm

### Cantilever Specifications

<b>Material</b>	Si
<b>Shape</b>	Rectangular
<b>Cross-section</b>	Trapezoidal
<b>No. of cantilevers</b>	1
<b>Front side coating</b>	None
<b>Back side coating</b>	None



### Parameters

Frequency ( kHz )			Spring Constant ( N/m )			Thickness ( μm )			Length ( μm )			Width ( μm )		
Typ	Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	Min	Max
190	145	230	48	20	95	7	6	8	225	215	235	43	38	48

### Ordering Info

Part Number	Short Description	Probes / Pk
ACL-TL-10	Tip Less Long Non Contact / Tapping Probe	10
ACL-TL- 20	Tip Less Long Non Contact / Tapping Probe	20
ACL-TL- 50	Tip Less Long Non Contact / Tapping Probe	50
ACL-TL- 200	Tip Less Long Non Contact / Tapping Probe	200
ACL-TL- W	Tip Less Long Non Contact / Tapping Probe - wafer	Minimum 410

Model : **ACT -TL**

Type: **AC** mode / Tapping mode Probes

### Substrate Specifications

**Material:** Single Crystal Silicon, N-type, 0.01 -0.025Ω-cm, Antimony doped  
**Size ( LxWxT ) :** 3.4mm X 1.6 mm X 300 μm

### Cantilever Specifications

<b>Material</b>	Si
<b>Shape</b>	Rectangular
<b>Cross-section</b>	Trapezoidal
<b>No. of cantilevers</b>	1
<b>Front side coating</b>	None
<b>Back side coating</b>	None



### Parameters

Frequency ( kHz )			Spring Constant ( N/m )			Thickness ( μm )			Length ( μm )			Width ( μm )		
Typ	Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	Min	Max
300	200	400	40	25	75	4	3.5	4.5	125	115	135	40	35	45

### Ordering Info

Part Number	Short Description	Probes / Pk
ACT-TL- 10	Tip Less Standard Non Contact / Tapping Probe	10
ACT-TL- 20	Tip Less Standard Non Contact / Tapping Probe	20
ACT-TL- 50	Tip Less Standard Non Contact / Tapping Probe	50
ACT-TL- 200	Tip Less Standard Non Contact / Tapping Probe	200
ACT-TL- W	Tip Less Standard Non Contact / Tapping Probe - wafer	Minimum 410

## Model : FORT -TL

Type: **AC** mode / Tapping mode **Long Cantilever Probes**

### Substrate Specifications

**Material:** Single Crystal Silicon, N-type, 0.01 -0.025Ω-cm, Antimony doped  
**Size ( LxWxT ) :** 3.4mm X 1.6 mm X 300 μm

### Cantilever Specifications

Material	Si
Shape	Rectangular
Cross-section	Trapezoidal
No. of cantilevers	1
Front side coating	None
Back side coating	None



### Parameters

Frequency (kHz)			Spring Constant (N/m)			Thickness (μm)			Length (μm)			Width (μm)		
Typ	Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	Min	Max
60	50	70	3	1	5	2.5	2.0	3.0	225	215	240	32	27	37

### Ordering Info

Part Number	Short Description	Probes / Pk
FORT- TL-10	Tip Less Force Modulation Probes	10
FORT- TL- 20	Tip Less Force Modulation Probes	20
FORT- TL-50	Tip Less Force Modulation Probes	50
FORT- TL-200	Tip Less Force Modulation Probes	200
FORT- TL-W	Tip Less Force Modulation Probes, Wafer	Minimum 410

## Model : SICON -TL

Type: **AC** mode / Tapping mode **Long Cantilever Probes**

### Substrate Specifications

**Material:** Single Crystal Silicon, N-type, 0.01 -0.025Ω-cm, Antimony doped  
**Size ( LxWxT ) :** 3.4mm X 1.6 mm X 300 μm

### Cantilever Specifications

Material	Si
Shape	Rectangular
Cross-section	Trapezoidal
No. of cantilevers	1
Front side coating	None
Back side coating	None



### Parameters

Frequency (kHz)			Spring Constant (N/m)			Thickness (μm)			Length (μm)			Width (μm)		
Typ	Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	Min	Max	Typ	Min	Max
12	11	18	0.2	0.1	0.6	2.5	2.0	3.0	450	425	475	45	40	50

### Ordering Info

Part Number	Short Description	Probes / Pk
SICON-TL-10	Tip Less Si Contact Mode Probes	10
SICON-TL-20	Tip Less Si Contact Mode Probes	20
SICON-TL-50	Tip Less Si Contact Mode Probes	50
SICON-TL-200	Tip Less Si Contact Mode Probes	200
SICON-TL-W	Tip Less Si Contact Mode Probes , Wafer	Minimum 410