

# PXSi

## 450mm Polycrystalline-Silicon Wafer

We are proud to stand at the forefront in the development of PXSi, 450mm Poly-Silicon mechanical test wafer for the ULSI process development. PXSi can be used for:

- Wafering
- Metrology for wafer characteristics
- Robotics and carrier testing
- Storage

### Material Property

- Polycrystalline
- Random orientation
- Uniform and “ultra-fine” microstructure <10 micron
- 100% density
- Purity:  $\sim 10^{16}$  atoms/cc  
Higher purity grade is under development



200mm

450mm

### Mechanical Property

	Bending Strength (Kg/mm <sup>2</sup> )	Vickers Hardness (Hv)
Polycrystalline Si wafer	33	1067
Single-Crystal Si wafer	31, 41	1015



Nippon Mining  
& Metals co., LTD



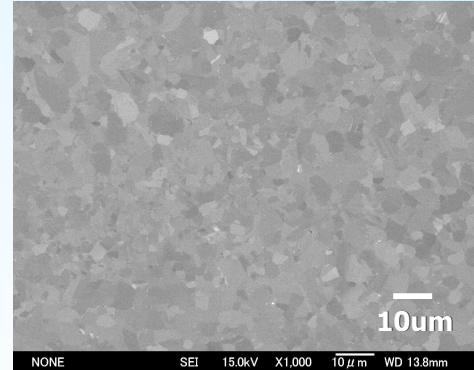
Nikko Materials USA, Inc.  
A unit of Nippon Mining & Metal

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### Wafer Line Up

**Double Side Polished Surface  
As-Sliced Finish Surface**



**Microstructure**

Total Wafer Characteristics	Units	Nominal	Tolerances
Diameter	mm	450	+/-0.1
Thickness	μm	925	+/-25
Thickness variation (max)	μm	10	-
Edge Profile	mm	Blunt	-
Orientation fiducial	-	Notch	-
Notch depth	mm	1.0	+0.025; -0.00
Notch angle	Degrees	90	+5; -1
Notch orientation	Degrees	180	+/-0.5 degree

### Business contact

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