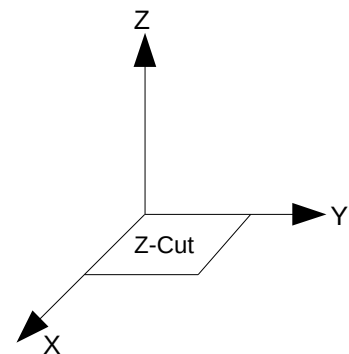
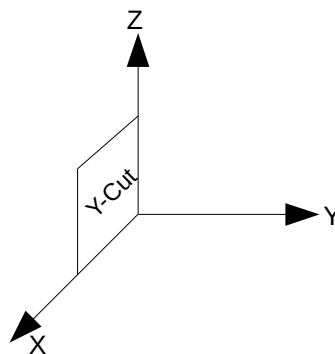
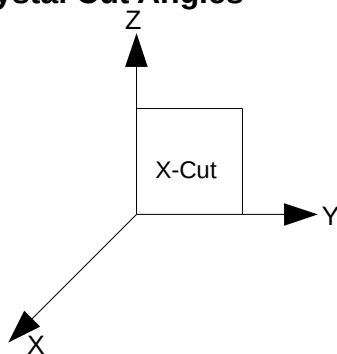


## Datasheet Single Crystal Quartz Wafer

### Properties

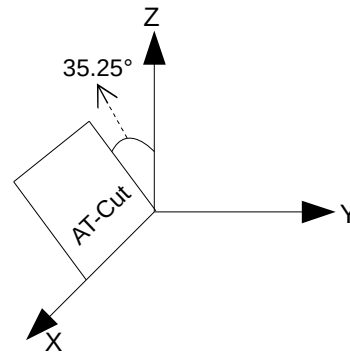
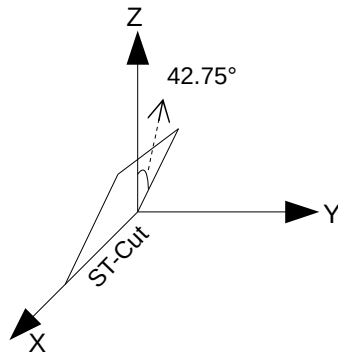
Formula	SiO <sub>2</sub>
Growth method	Hydrothermal
Crystal structure	Hexagonal
Lattice constant	a=4.9 Å , C=5.4 Å
Q value	1.8 x 10 <sup>6</sup> min.
Inclusion	IEC Grade II
Grade	SAW grade (Purity > 99.9%) , Optical grade (Purity: 99.99%)
Density	2.67 g / cm <sup>3</sup>
Poisson's ratio	NA
Young's modulus	97.2 Gpa / 76.5 Gpa
Moh's hardness	7
Melting point	1620 °C
Specific heat	0.18 cal / gm
Thermal conductivity	0.0033 cal / cm / °C
Thermal expansion coefficient	13.71 ×10 <sup>-6</sup> /K
<b>Electrical Properties</b>	
Resistivity ( ohm-cm )	8@250 °C / 6.5@350 °C
Loss Tangent	37 x 10 <sup>-4</sup>
Dielectric constant	4.6
Refractive index ( @ 589 nm )	Nd =1.544

### Crystal Cut Angles



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### Wafer Specifications:

Specification	Value
Diameter	2/ 3 / 4/ 6 Inches
Thickness	0.4 mm / 0.5 mm / 0.7 mm / 1.1 mm
Angle cut	X cut / Y cut / Z cut/AT-cut 35.25° / ST cut 42.75°
Surface	Single side polished / Double sides (Optically Transparent) polished__
Flat	SEMI.Std. flat or Notch
TTV	<= 15 um
Roughness	Ra <=10 A
Surface quality	60 / 40

For VRITRA TECHNOLOGIES

*Srinivas*  
Partner

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