

Wafers, quartz substrates

Typical application

- components of SAW for the frequency stabilization and filtration (resonators, filters, oscillators)
- components for sensors with SAW
- optoelectronic components
- RF Microwave Circuits
- biotechnic fields
- photolithography technology
- etc.

Features

- we standardly produce wafers with diameters of 3" (76.2 mm) and 4" (100.0 mm),
- we supply wafers with various surface qualities - from fine-lapped to polished with SAW quality,
- material: synthetic quartz and other piezoelectric crystalline materials (such as lithium niobium, lithium tantalum, langasit and others)



Typical specifications of Quartz Wafers

Parameter	3" substrate	4" substrate	tolerance
Diameter [mm]	76.2	100	± 0.2 mm
Thickness [μ m]	from 250 to 2000 μ m, standard 350 or 500, resp. according to customer specification		± 10 μ m
Cut angle	family of ST cuts (rotated Y-cut around the X axis about $25^\circ - 50^\circ$), cuts Y90°, Z90°, X90°, ZX 1°50', ... specials and some double rotated cuts according to customer specification		$\pm 5'$
Cut angle marking	with slots in the main flat, and/or on side of the wafer, by using sec.flats - the size and location by customer, laser description below the primary pad - by customer specification		
The main flat - location - length [mm]	normally perpendicular to the axis-X 23.5 mm (3") or 32 mm (4") or customer specified		$\pm 15'$ ± 1.5 mm
Surface Quality	fine lapped- typically the back side – $R_a = 0,12 - 0,20$ μ m, optically polished – $R_a < 10$ nm, polished SAW quality – RMS < 1 nm (different quality for each side can be choose)		
TTV [μ m]	< 8		
Bow [μ m]	< 40		

Differences from standard values and other parameters can be consulted.

Outline dimensions [mm]

