



We are committed to supply of all types of substrates to microelectronics industry
为微电子工业提供各类优质基层材料

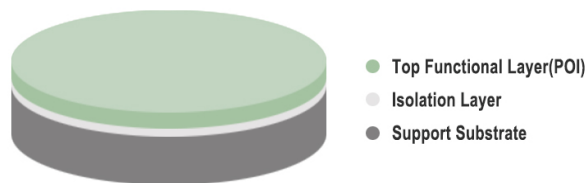
Lithium Niobate on Insulator Substrates /Wafers (LNOI)

铌酸锂单晶薄膜晶片

Lithium Niobate Thin Films on Insulator is kind of POI (Piezoelectric on Insulator) wafer. It's stacked sequence structure is made of support substrates that can be silicon, quartz, fused silica, sapphire or LN wafer, the interlayer is thermal oxide SiO2 that works as insulator and lithium niobate film is the functional layer above the insulation layer.

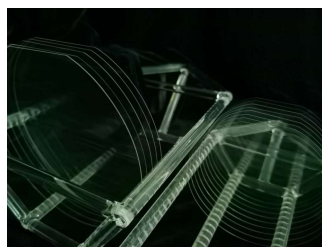
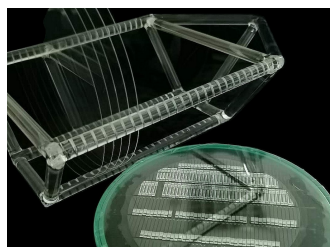
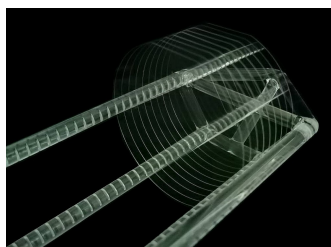
POI /LNOI engineered substrates enable the design of filters with high quality factor, large bandwidth, very low temperature sensitivity and low insertion loss with a simple device manufacturing technology. These wafers are developed and used for high-speed modulators, high Q factor SAW devices, IR-detectors, THz devices.

We work with our strategical partner who has experienced at technology of smart cut and wafer bonding and supply with important Piezoelectric layer on LN/LT from the sizes of 3" 4" 6" up to 8" to build the special wafer with multilayered structure.



Specifications For LNOI 铌酸锂单晶薄膜晶片规格简要

Layers	Parameters	Specifications			
Top Functional Layer	Material	Lithium Niobate		Lithium Tantanlate	
	Diameter	3"	4"	6"	8"
	Surface orientation	X-cut or per request			
	Primary flat orientation		per request		deg(°)
	Secondary flat orientation		per request		
	Film Thickness average thickness		300-600		nm
	Front side /face roughness		Optical polished		
Isolation Layer	Buried Oxide avg thickness	4600	4700	4800	nm
	Buried Oxide thickness uniformity	-5	0	5	%
Support substrate	Material	SI/LN/SAPPHIRE/QUARTZ/ETC			
	Diameter	3"	4"	6"	8"
	Support layer total thickness	525	525	625	725
	Device growth method	CZ	CZ	ZVD	hydrothermal
	Device orientation	{100}		0.5	deg(°)
	Device doping type	N	N		
	Device dopant		Phos		
Surface finish			10	nm	



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