

Fabrication of Surface Acoustic Wave Devices on Lithium Niobate

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Materials

Name	Company	Catalog Number	Comments
Absorber	Dragon Skin, Smooth-On, Inc., Macungie, PA, USA	Dragon Skin 10 MEDIUM	
Amplifier	Mini-Circuits, Brooklyn, NY, USA	ZHL-1-2W-S+	
Camera	Nikon, Minato, Tokyo, Japan	D5300	
Chromium etchant	Transene Company, INC, Danvers, MA, USA	1020	
Developer	Futurrex, NJ, USA	RD6	
Developer	EMD Performance Materials Corp., Philidaphia, PA, USA	AZ300MIF	
Dicing saw	Disco, Tokyo, Japan	Disco Automatic Dicing Saw 3220	
Gold etchant	Transene Company, INC, Danvers, MA, USA	Type TFA	
Hole driller	Dremel, Mount Prospect, Illinois	Model #4000	4000 High Performance Variable Speed Rotary
Inverted microscope	Amscope, Irvine, CA, USA	IN480TC-FL-MF603	
Laser Doppler vibrometer (LDV)	Polytec, Waldbronn, Germany	UHF-120	4" double-side polished 0.5 mm thick 128°Y-rotated cut lithium niobate
Lithium niobate substrate	PMOptics, Burlington, MA, USA	PWLN-431232	
Mask aligner	Heidelberg Instruments, Heidelberg, Germany	MLA150	Fabrication process is performed in it.
Nano3 cleanroom facility	UCSD, La Jolla, CA, USA		
Negative photoresist	Futurrex, NJ, USA	NR9-1500PY	
Oscilloscope	Keysight Technologies, Santa Rosa, CA, USA	InfiniiVision 2000 X-Series	
Positive photoresist		AZ1512	Denton Discovery 18 Sputter System
Signal generator	NF Corporation, Yokohama, Japan	WF1967 multifunction generator	Wafer Dipper 4"
Sputter deposition	Denton Vacuum, NJ, USA	Denton 18	
Teflon wafer dipper	ShapeMaster, Ogden, IL, USA	SM4WD1	