



JINGXIN NEW MATERIALS

Lithium Niobate & Lithium Tantalate Wafers

01

精密晶体晶圆制造

PRECISION CRYSTAL WAFER MANUFACTURING

Building a Globally Leading Photonics Materials Industry Benchmark

Optical Lithium Niobate Crystals/Wafers

Optical Lithium Tantalate Crystals/Wafers

Specialty Doped Wafers



Seizing the AI and 6G era opportunities, with proprietary full-industry-chain technology spanning 'crystal-wafer-thin film

we aim to pioneer the industrialization of lithium niobate single-crystal thin-film materials.

3"-8"

SAW/OPTICAL

CUSTOM PROCESSING



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02

企业概况

COMPANY PROFILE

Focused on R&D, production, sales, and technical services of crystal materials

2024.12 Established in Zhuji, Zhejiang

FOCUS:

Crystals / Wafers / Thin Films

APPLICATION:

Optical Communications / RF Filtering / High-Power Lasers



标准化厂房 洁净车间



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使命、理念与价值观

MISSION AND VALUES

使命 MISSION

Breaking through the ‘bottleneck’ segments of high-end photonics materials
so Chinese crystal materials reach the top of the global industry chain.

Empowering the global photonics industry through proprietary materials innovation.

Business Philosophy:

Quality first, customer foremost—providing global customers with quality crystal materials and wafer processing services.

核心价值观

CORE VALUES

01

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04

Technology-Driven

Quality First

Customer-Centric

Innovation-Led

Service Philosophy: Rapid response, deep customization, full-process support.

We co-build joint development mechanisms with customers—from crystal growth to thin-film bonding.



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全流程制造

IN-HOUSE MANUFACTURING

From crystal growth to clean packaging

01 Crystal Growth & Oriented Slicing

02 Grinding & CMP Polishing

03 Cleaning, Inspection & Clean Packaging

Full-process inspection and traceability from incoming material check to finished-product shipment





产品矩阵

PRODUCT PORTFOLIO

LN

Lithium Niobate
Crystals/Wafers

3 – 8 inch SAW / Optical Grade

LT

Lithium Tantalate
Crystals/Wafers

For high-frequency filters and
piezoelectric devices

MgO:LN

MgO-Doped
Lithium Niobate
Crystals/Wafers

High-power optics & nonlinear
optics

LNOI

Thin-Film Lithium
Niobate / POI

High-speed modulators &
photonic integration

Wafer Processing Services

Slicing, Grinding, CMP Polishing, Cleaning & Inspection

Custom orientation & thickness, TV/Bow/Warp

公司建立了完善的质量管理体系，从原材料检验到成品出厂，每一道工序都有严格的检验标准和记录。

The company has established a comprehensive quality management system with strict inspection standards and records for every process from raw material inspection to final product delivery.

Certifications

认证 Certification	编号/状态 No./Status
ISO 9001:2015 质量管理体系	已获证 Certified
ISO 14001:2015 环境管理体系	已获证 Certified

Inspection Capabilities

检测项目 Item	设备/方法 Method	标准 Standard
晶向 Orientation	X射线定向仪 X-ray Diffractometer	±0.2°
尺寸 Dimensions	千分尺/光学测量 Micrometer/Optical	±0.005 mm
总厚度变化 TTV	激光干涉仪 Laser Interferometer	≤ 5μm
翘曲度 Warp	激光干涉仪 Laser Interferometer	≤ 40 μm
表面质量 Surface	暗场显微镜 Dark-field Microscope	S/D 20/10
粗糙度 Roughness	AFM/白光干涉仪 AFM/White-light	Ra ≤ 0.5 nm



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从晶体生长到最终清洗包装，全流程自主可控，为客户提供来料加工和定制服务。

From crystal growth to final cleaning and packaging, offering contract processing and customization services.

Processable Materials

材料 Material	型号 Grade	最大直径 Max Dia.
铌酸锂 LiNbO ₃	SAW 级 / 光学级	8"
钽酸锂 LiTaO ₃	SAW 级 / 光学级	6"
掺镁铌酸锂 MgO:LN	光学级	4"
石英 Quartz	SAW 级	6"
其他 Other	可协商 Negotiable	6"

序号 Step	工序 Process	说明 Description
1	长晶 Crystal Growth	提拉法生长单晶体 Czochralski method
2	退火极化 Annealing & Poling	消除热应力、单畴化 Stress relief & single domain
3	定向 Orientation	X射线定向仪确定晶向 X-ray orientation
4	外圆磨 Cylindrical Grinding	加工至目标直径 Grind to target diameter
5	切割 Slicing	线锯切割晶片 Wire saw slicing into wafers
6	倒角 Chamfering	边缘倒角处理 Edge chamfering
7	还原黑化 Reduction blacken	还原处理 Reduction treatment
8	双面研磨 Lapping	双面研磨至目标厚度 Double-side lapping
9	CMP 抛光 CMP Polishing	化学机械抛光 Chemical mechanical polishing
10	清洗 Cleaning	超净清洗 Ultra-clean cleaning
11	检验 Inspection	全面质量检验 Full quality inspection
12	包装 Packaging	无尘包装 Cleanroom packaging



铌酸锂晶体

LITHIUM NIOBATE WAFERS

8"

Large-Diameter Products



DIAMETER

3"/4"/6"/8"

ORIENTATION

X/Y/Z/128° Y / Custom

Applications

Optical modulators
RF filters

Optical waveguides & optical
switches

GRADE

SAW Grade / Optical
Grade

ROUGHNESS

Ra < 0.5 nm



钽酸锂与掺镁铌酸锂

LITAO₃ AND MGO:LINBO₃



LiTaO₃

SAW Grade / Optical Grade 3-6 inch

Core substrate for high-frequency filters



MgO:LiNbO₃

5 mol% Customizable
High optical-damage resistance

High laser-damage threshold

RF Filtering & Resonators High-Power Lasers Photorefractive & Nonlinear Optics

晶体规格参数对比

CRYSTAL SPECIFICATION COMPARISON

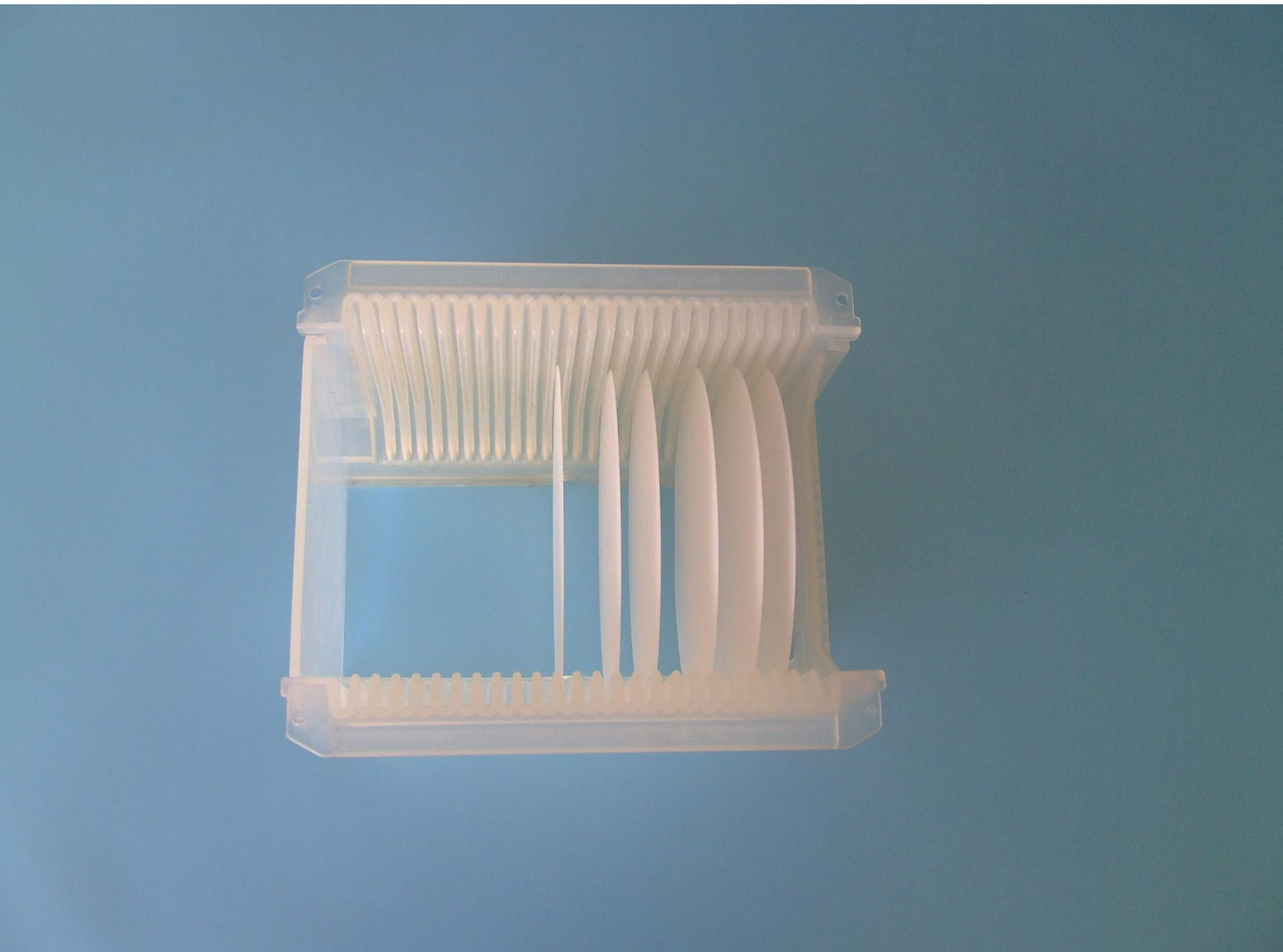
Lithium Niobate & Lithium Tantalate Product Range

产品参数	铌酸锂（Lithium Niobate）	钽酸锂（Lithium Tantalate）
直径	3"/4"/6"/8"	3"/4"/6"
切向	X-cut/Z-cut/Y-cut/Y128-cut	X112-cut/Y42-cut/Y36-cut/Z-cut
长度	50-120 mm	50-120 mm
直径公差	±0.5 mm	±0.5 mm
真圆度	±0.5 mm	±0.5 mm
表面状态	研磨/粗抛/精抛	研磨/粗抛/精抛



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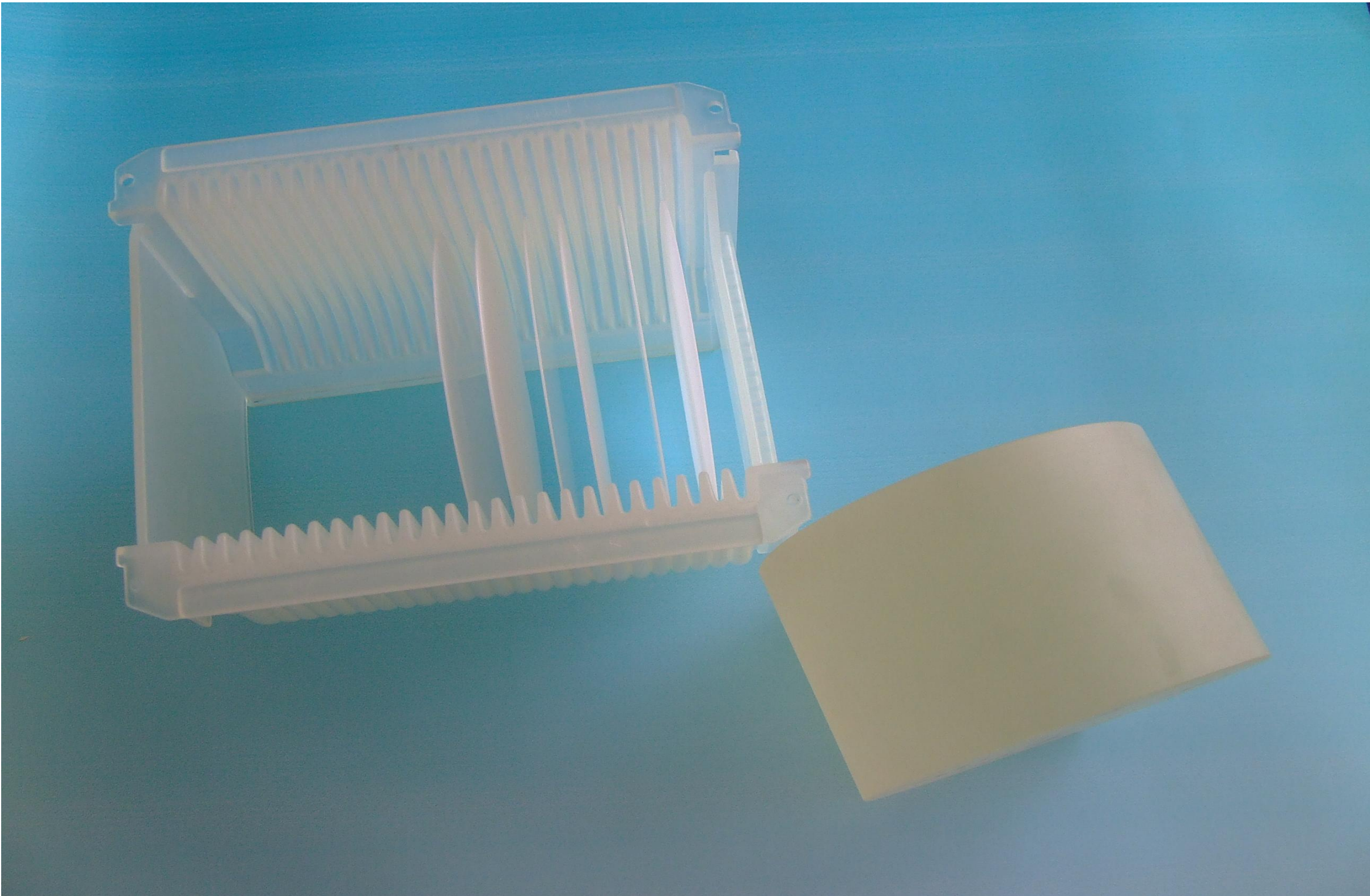
Lithium Niobate &Lithium Tantalate Wafers



SAW 级铌酸锂晶片，用于声表面波器件制造。

SAW grade LN wafer, specifically for SAW devicemanufacturing.

参数 Parameter	SAW 级 SAW Grade	光学级 Optical Grade
直径 Diameter	3", 4", 6", 8"	3", 4"
切向 Orientation	X / Z / Y / Y41° / Y64° / Y128°	X / Z / Y
厚度 Thickness	0.18 / 0.25 / 0.35 / 0.50 / 1.00 mm	0.35 /0.5 / 1.0 mm
厚度公差 Thickness Tol.	±0.02 mm	±0.02 mm
总厚度变化 TTV	≤ 5μm	≤ 5μm
翘曲度 Warp	≤ 40 μm	≤ 40 μm
表面质量 Surface Quality	Ra<0.5nm	S/D 20/10
抛光 Polishing	单面 SSP	双面 DSP
平行度 Parallelism	/	≤ 10 arc sec



钽酸锂（ LiTaO_3 ）晶片具有良好的压电耦合系数和温度稳定性，是高端 SAW 滤波器的核心基材。

Lithium Tantalate (LiTaO_3) wafers feature good piezoelectric coupling coefficient and temperature stability, core substrate for high-end SAW filters.

参数 Parameter	规格 Specification
直径 Diameter	3", 4", 6"
切向 Orientation	X112° / Y28° / Y36° / Y42° / 38° / YZ
厚度 Thickness	0.25 / 0.35 / 0.50 / 1.00 mm
厚度公差 Thickness Tol.	±0.02 mm
总厚度变化 TTV	≤ 5 μm
翘曲度 Warp	≤ 40 μm
表面质量 Surface Quality	Ra<0.5nm; S/D 20/10
抛光 Polishing	SSP & DSP
平行度 Parallelism	≤ 10 arc sec



掺镁铌酸锂晶片，掺杂浓度 4.9~6 mol%，具有高抗光损伤阈值。广泛应用于高功率光学器件和光折变应用。

MgO:LN wafer with doping concentration 4.9~6 mol%, featuring high optical damage threshold..widely used in high-power optical devices and photorefractive applications.

参数 Parameter	规格 Specification
材料 Material	MgO:LiNbO ₃
掺杂浓度 Doping	4.9 mol% / 5.0 mol% / 6.0 mol%
直径 Diameter	3", 4"
切向 Orientation	X-cut / Z-cut
厚度 Thickness	0.5 / 1.0 mm
厚度公差 Thickness Tol.	±0.01 mm
总厚度变化 TTV	≤ 5 μm
表面质量 Surface Quality	S/D 20/10
抛光 Polishing	双面 Double-side



核心应用 CORE APPLICATIONS

One material platform enabling diverse high-performance optoelectronic devices

01

02

03

04

Optical Communications & Data
Centers

RF Filtering & Front-End

High-Power Lasers

Sensing & Novel Photonic Devices

High-speed modulators
Optical waveguides & photonic
integration

SAW filters
Resonators & RF front-end

MgO-Doped Materials
Nonlinear Optics

Fiber sensing
Terahertz, AR/VR, Quantum
information



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从晶体到薄膜

STRATEGIC ROADMAP

2026-2027	6-inch Optical-Grade Production Line
2028-2029	8-inch Capacity Expansion & LN01 Pilot Line
2030+	6/8-inch LN01 Industrialization

感谢关注，期待合作

Thank you for your interest,we look forward to our cooperation.

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