



CRISTAL LASER



**Cutting edge non linear crystals
from the heart of Europe**

Manufactured in France, Sold worldwide

Key facts and figures

Europe's premier non-linear crystals manufacturer
since 1990, with a leading expertise in **UV applications**



> 10 000
PRODUCTS SOLD
AROUND THE
WORLD



> 40
COUNTRIES
SERVED



1
PRODUCT ON
PLANET MARS



> 2500 M²
PRODUCTION
AREA



> 130
CUSTOMERS
WORLDWIDE

Key facts and figures...

One stop shop: from crystal growth to finished products

Crystal growth

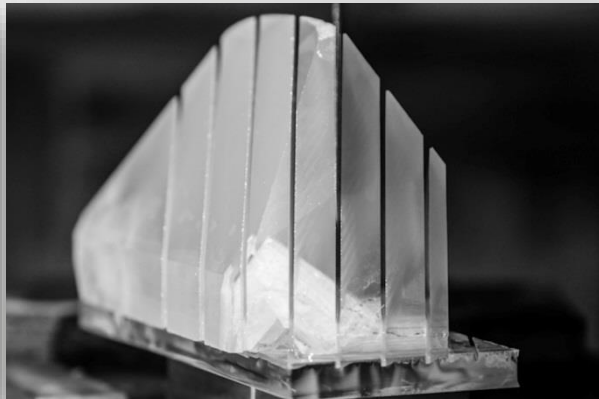


Crystal growth capacity:
>25000 crystals/year

Largest LBO boules in the world

Proprietary growth station design

Manufacturing



11 saws and 9 polishing machines

Highly automatic process

No one-of-a-kind tool: each one is backed up

Quality and control



Premier quality control equipment (Zygo, AFM, PCI)

Laser test benches for final control and assemblies

Clean room

Our portfolio



LBO

Lithium Triborate - LiB_3O_5



KTP

Potassium Titanyl Phosphate - KTiOPO_4



KTA

Potassium Titanyl Arsenate - KTiOAsO_4



RTP

ELECTRO-OPTIC ASSEMBLIES
Rubidium Titanyl Phosphate - RTiOPO_4

Main applications



- ✦ **Material processing:**
semicon, marking, μ -machining
- ✦ **Space and defense:**
Eye safe laser rangefinders,
Aeolus, Curiosity & Perseverance
- ✦ **Medical:**
ophthalmology or dermatology
- ✦ **Bio-technologies:**
DNA sequencing, cytometry
- ✦ **Scientific research:**
PW laser facilities



LBO crystals for SHG and THG

- ✦ High bulk damage threshold
- ✦ Small walk off angle
- ✦ NCPM SHG
- ✦ High transparency for UV generation



What makes us different:

- ✧ Ultra-low bulk absorption : $<2\text{ppm/cm@1064nm}$
- ✧ Outstanding polishing and coating quality, enabling a 300W UV-laser
- ✧ Long lifetime under UV-exposure: 10.000+ hours at 30W on one single spot
- ✧ Coating damage thresholds $>40\text{J/cm}^2\text{@1064nm}$, 10ns for dual-AR coating
- ✧ Available size up to $100\times100\text{mm}^2$; length up to 100mm



KTP crystals for OPO and SHG

- ✦ Small walk-off angle in the XY plane
- ✦ High non-linearity
- ✦ Large temperature acceptance
- ✦ Mainly used for SHG and OPO



What makes us different:

SHG KTP crystal

- ✦ Low bulk absorption: 100ppm/cm at 1064nm
- ✦ High damage threshold of AR-coatings: $>10\text{J}/\text{cm}^2$ at 1064nm for 10ns pulses
- ✦ Available in antigrey-track KTP

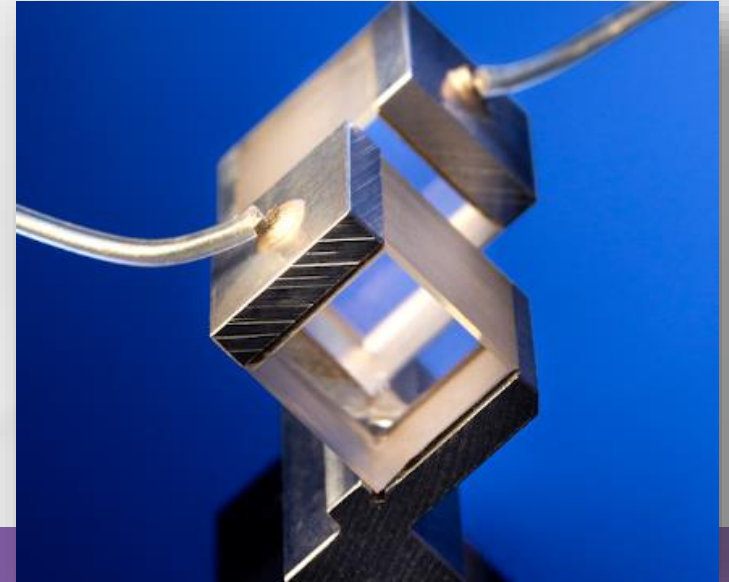
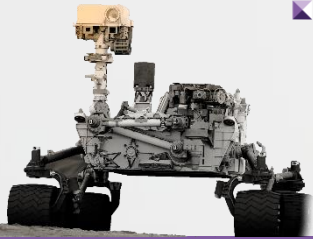
OPO KTP crystal

- ✦ Guaranteed non-linear optical homogeneity thanks to a dedicated test bed
- ✦ High damage threshold of AR-coatings: $>10\text{J}/\text{cm}^2$ at 1064nm for 10ns pulses
- ✦ OPO mirror coatings on KTP parts (monolithic OPO) are available



RTP Q-switches and pulsepickers

- ✦ Non hygroscopic
- ✦ Low switching voltage
- ✦ Good extinction ratio
- ✦ No piezo and pyro-electric effects



What makes us different:

- ✦ Excellent extinction ratio: >30dB measured in our test chamber over -50°C/+70°C
- ✦ High damage threshold of AR-coatings: >10J/cm² at 1064nm for 10ns pulses
- ✦ Space- and defense qualified assembly process and hardware
- ✦ Capability to perform an assembly on customer-supplied mounts
- ✦ No long-term degradation under static HV (8kV/cm in 500 hours)





**Thank you for
your interest!**

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