



# RTP PHASE MODULATORS

Rubidium Titanyle Phosphate -  $\text{RTiOPO}_4$

## MAIN FEATURES

- Non hygroscopic
- Large electro-optic coefficient
- No piezo- or pyroelectric effects

## APPLICATIONS

- Phase-modulation
- Single-frequency lasers
- Amplitude modulation

## WHAT MAKES US DIFFERENT?

- No long-term degradation under HV
- Very precise orientation of optical axes
- Deposited gold electrodes on Z-sides on request
- Available in cross-sections up to  $15 \times 15 \text{mm}^2$
- Available length up to 40mm

## TECHNICAL HIGHLIGHTS

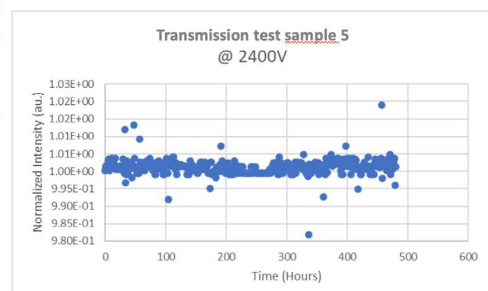
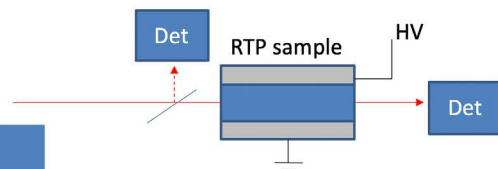
Stability of Cristal Laser's RTP under static voltage- courtesy of Fibertek, USA:  
no degradation under 8kV/cm over 500 hours

### RTP sample 5 testing

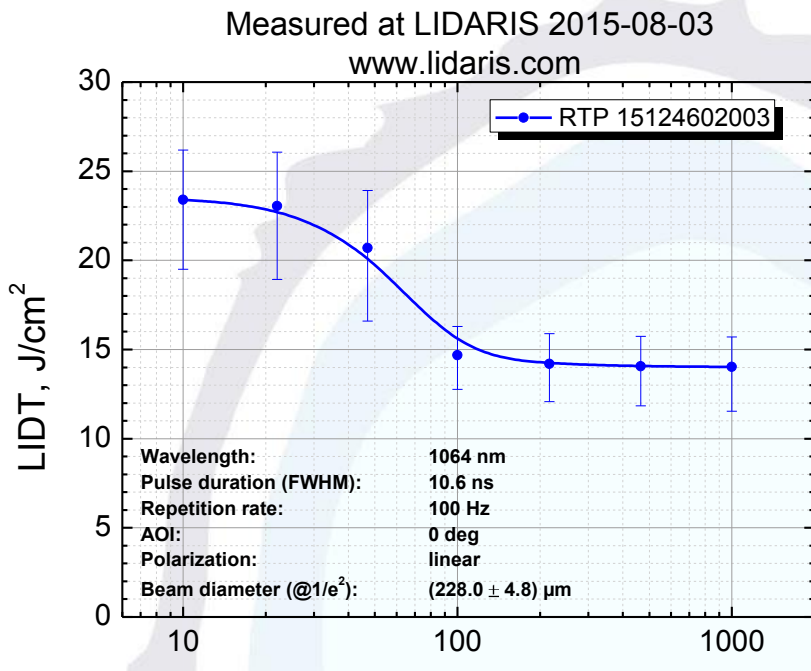


Sample voltage	E field (V/mm)	Run time (hrs.)	Transmission degradation
500	167	29	Negligible
1000	333	45	Negligible
1440	480	117	Negligible
2000	667	141	Negligible
2400	800	480	Negligible

Total hours=812



## TECHNICAL HIGHLIGHTS



Typical laser damage curve  
of AR-coated RTP substrates:

threshold > 10J/cm<sup>2</sup> at 1064nm,  
S on 1

## SPECIFICATIONS

Aperture	Up to 15x15mm <sup>2</sup>
Flatness	<λ/10 @633nm
Wavefront distortion	<λ/4 @ 633nm for a 20mm-long crystal
Parallelism	Down to 5"
Perpendicularity	Down to 5 arc min.
Orientation of X- and Z-axes	Better than 0.1°
Bulk absorption	<100 ppm/cm@1064nm
Scratch and dig	<2/1
Damage threshold	> 10J/cm <sup>2</sup> @ 1064nm, 10ns, 10Hz