

# ppKTP

## The leading crystal for quantum applications

Periodically poled potassium titanyl phosphate (ppKTP) is a quasi phase-matched, nonlinear crystal that was first introduced to the industry by Raicol over 20 years ago. Today, ppKTP is mostly commonly used as an SPDC source in the quantum industry.

In recent years, Raicol-Quantum, the Raicol Crystals Quantum Division, has been deepening its unparalleled expertise in the manufacture of quasi-phase-matched ppKTP crystals. By controlling the complete manufacturing process, from the initial growth of the crystal to its periodic poling, Raicol has been able to fine-tune the final product to accommodate the challenging requirements of the quantum industry, and create unique custom crystals for specific applications.

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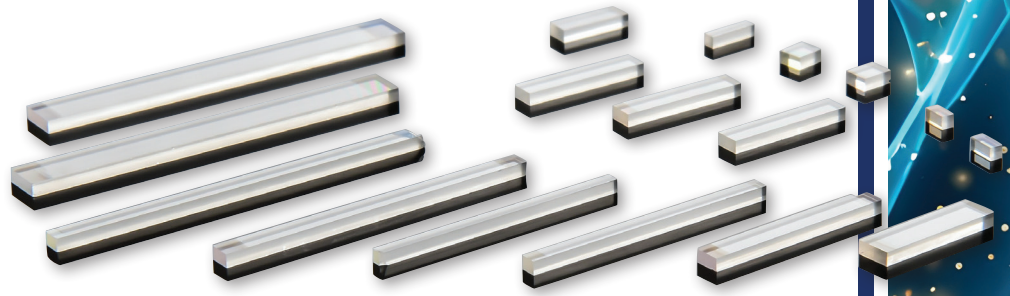
### Serving the world's leading quantum research labs, Raicol QPM crystals are the building block for the future of quantum applications:

- Quantum computing
- Quantum sensing
- Quantum encryption
- Quantum communications



 <b>Quantum Computing</b> Photonic quantum computing and multi - Q bit data transfer	 <b>Quantum Sensing</b> Next generation Microscopy and metrology systems	 <b>Quantum Encryption</b> Free space SPDC for satellite QKD & highly secured QKD	 <b>Quantum communications</b> Quantum Repeaters & Memory
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Raicol-Quantum, together with our academic partners, are working to optimize ppKTP crystals as industrial sources of entangled photon pairs for EPS (entangled photon sources), SLS squeezed light sources and HSPS (heralded single-photons sources).



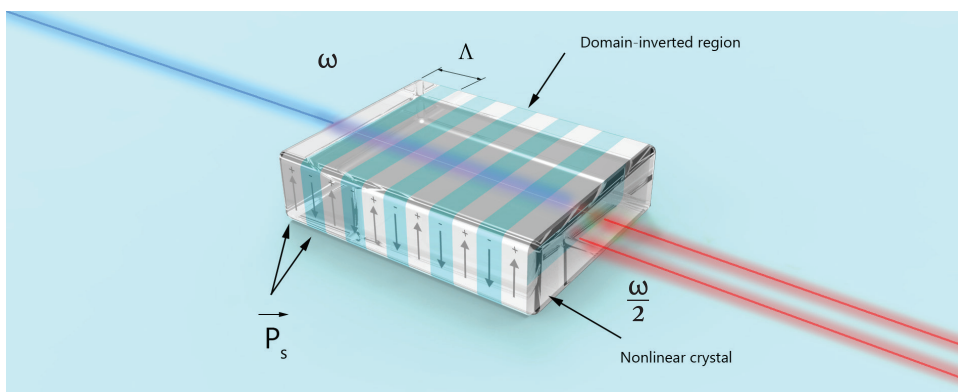
### Raicol's ppKTP crystals are prominent SPDC sources for:

- Polarization entanglement
- High purity heralded single photons
- Squeezed light
- Quantum frequency conversion

### Our ppKTP crystals are highly customizable, offering:

- Type-0 or Type-II phase matching
- Broad pumping range, including 405, 532 and 775nm
- Narrowband or broadband SPDC spectrum
- Aperiodic polling for high spectral purity
- Single or multi-period KTP

### Raicol-Quantum's typical ppKTP crystal scheme



Raicol-Quantum utilizes its advanced knowledge in QPM to help companies design and manufacture poled KTP with advanced poling schemes for specific quantum applications.