

PPKTP


The leading crystal for quantum applications





Periodically poled potassium titanyl phosphate (PPKTP) is a 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.

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



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

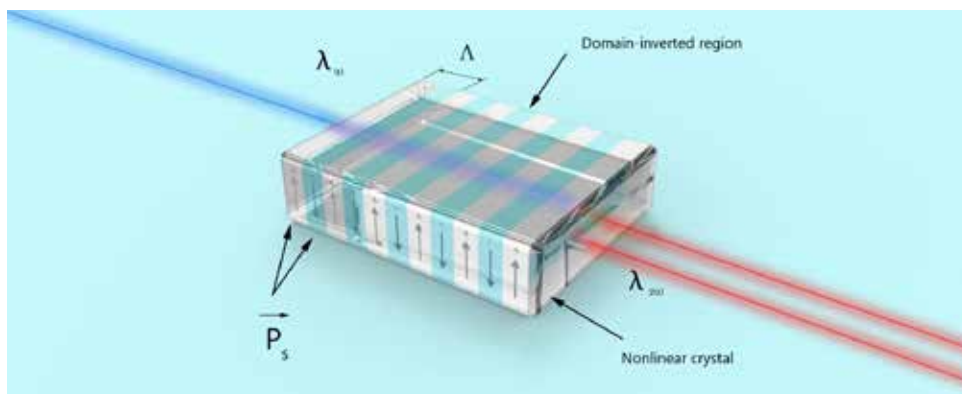
Raicol's PPKTP and APKTP crystals are prominent SPDC sources for:

1. Polarization entanglement
2. High purity heralded single photons
3. Squeezed light
4. 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.

Contact us for more information: info@raicol.com

Raicol Crystals, founded in 1995, is a global leader in nonlinear and EO crystal growth, fabrication, and assembly. Raicol offers a unique set of benefits to its customers:

- 50 years of experience in crystal growth
- Global pioneers of RTP, HGTR KTP, and PPKTP crystal growth and assembly
- A one-stop-shop, from crystal growth through to coating and EO cell assembly
- Mass production and small R&D volume capabilities
- Fast delivery times
- Unmatched crystal quality