



# RTP<sub>EO</sub> Cells



Used for electro-optics applications, RTP crystals offer superior properties for users in the aerospace, defense, medical, industrial, civil and scientific applications.

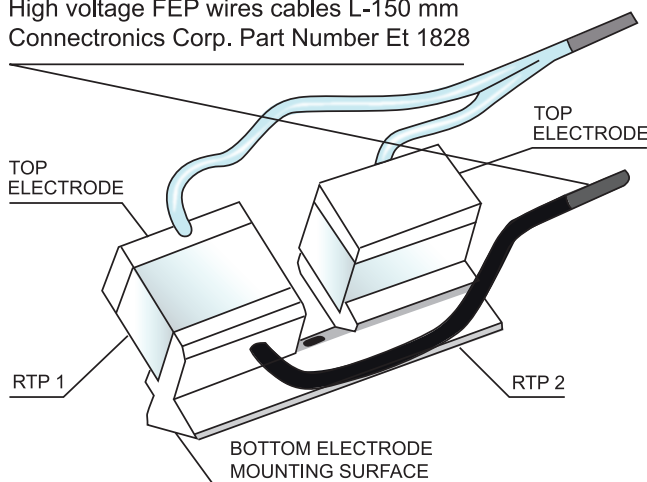
RTP EO Cells are assembled in a thermally compensated double-crystal configuration, in which two matched crystals are placed in line of the propagation axis (X or Y) with one rotated by 90 degrees (general drawing below).

## Common Applications

Q Switches | Pulse pickers  
Phase modulators | Amplitude modulators  
Cavity dumpers | Shutters  
Attenuators & Deflectors

## RTP EO Cell Structure

High voltage FEP wires cables L-150 mm  
Connectronics Corp. Part Number Et 1828



## Advantages

- Low half-wave voltage for EO Cells to enable a compact design
- Rise time, fall time, and pulse width of 1 ns to enable fast operation
- Designed to operate over wide temperature range (-50°C to 70°C)
- High laser-induced damage threshold (up to 1000 MW/cm<sup>2</sup>, at 1064 nm, 10 ns pulse)
- Minimal ringing, compatible for 1 MHz repetition rate
- Non-hygroscopic, easy handling, no cover needed
- The best material in the spectral range of 500-3000 nm for electro-optics applications
- Very low absorption losses at 1064 nm wavelength
- Extremely high homogeneity: up to 15\*15 mm EO cells as a standard size



## RTP EO Cell Product Offerings

- Thermally compensated matched pair of RTP Elements
- Single RTP Element (used for phase modulators)
- Plug in 2 crystals, Electro-optical cells assembly (with / without housing)

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## Typical Specifications

Operational range	500-3000 nm
Transmission @ 1064 nm	> 99%
Half wave voltage	3.6 kV (for EO Cell size: 9*9*10 mm*2)
Extinction ratio	Up to 30 dB
Clear aperture	1.5*1.5 mm to 15*15 mm
Crystal length	Up to 50 mm
Acceptance angle	< 4 deg.
Standard AR coating @ 1064 nm	R < 0.1%
Damage threshold	Up to 1 GW/cm <sup>2</sup> , at 1064 nm, 10 ns pulse

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

- 50 years of crystal growth know-how and experience
- The global pioneers of RTP, HGTR KTP and PPKTP crystals and assembly
- One-stop shop, from crystal growth through coating to EO Cell assembly
- Mass-production capabilities as well as small R&D quantities
- Fast delivery time
- Unmatched crystal quality
- Custom designs upon request, different housing options available