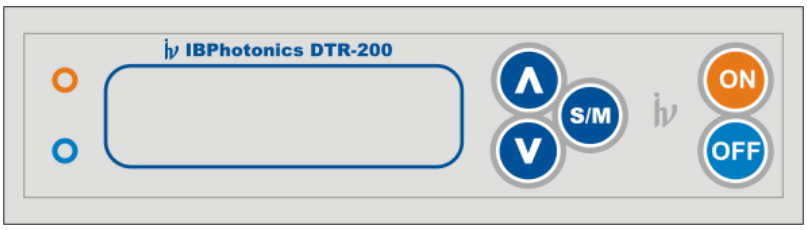
PPLN and PPSLT Ovens

The **Digital Thermo Regulator DTR** series are bench-top instruments for thermal stabilization of the nonlinear optical crystals in the range from room temperature up to 200°C. The instrument consists of thermo controller module and crystal oven.

PDF of this product overview

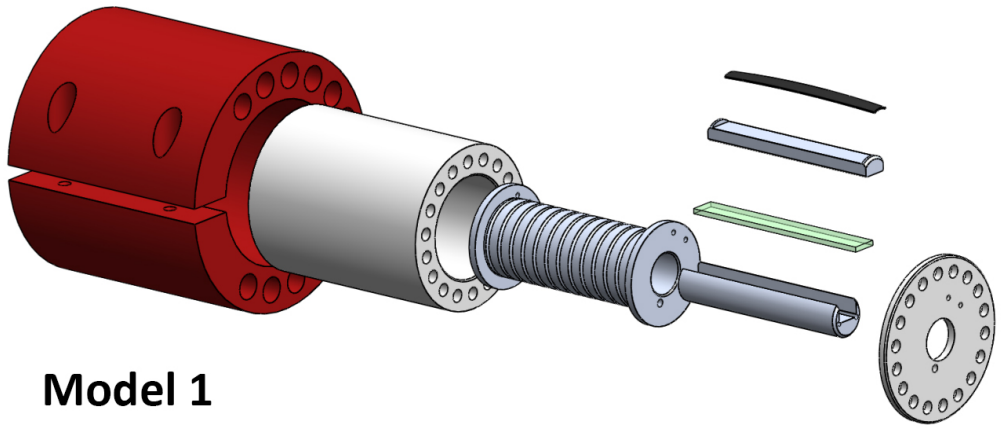
The Thermo Controller Module

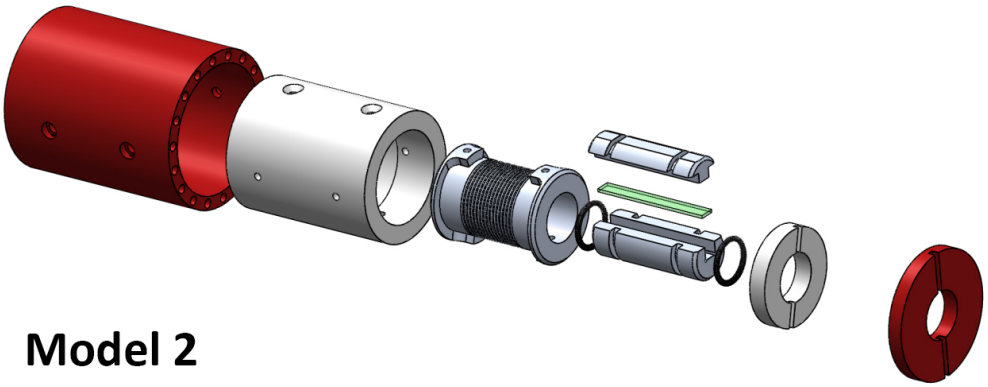
This is a digital microprocessor based unit for heating optical crystal ovens and PID control mode. The instrument has one semiconductor switch output and one input for RTD temperature probe. The module is equipped with 4 multi-function buttons, a 16x2 character LCD display and 2 LED signals. The embedded current-loop receiver and the 16bit pulse width modulator provide long-term stability of less than 0.05° rms.



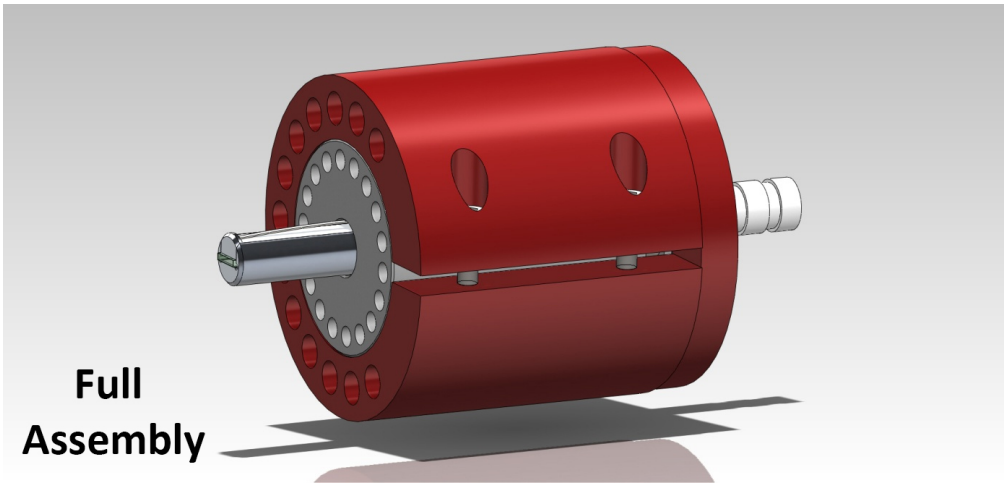
Crystal Oven

The oven consists of nonlinear crystal holder, temperature-to-current converter, coaxial heater providing homogenous temperature distribution over the crystal holder and housing of thermo isolating material. The diameter of the standard oven permits accommodation of a nonlinear crystal with dimension 5x5x(crystal length). For bigger crystal cross section please contact Deltronic Crystal Ind. Inc.





Model 2



Electrical Specifications	
Power supply	24 VDC 2A max
Power consumption	48W max

Mechanical Specifications	
Thermo Controller Module dimensions	155 x 142 x 51 mm
Crystal Oven dimensions	Diameter = 50.8 mm Length = crystal length [mm] + 26 mm
Crystal Oven mounting	2” laser kinematic mount (sold separately)

Environment	
Operating humidity	20 … 80 RH% (without condensation)

Functional Features	
Temperature range	A. 25-100 °C (DTR 100) B. 25-150 °C (DTR 150) C. 25-200 °C (DTR 200)
Heating/Cooling rate	2, 4, 6 and 8 °C/min
Temperature stability	0.02°C
Set point precision	0.1°C

Display resolution	0.1°C
Temperature Sampling rate	5 samples per second