

OC3 Temperature Controller

version 1.0/2021



The **Covesion OC3** temperature controller is a compact stand-alone benchtop unit for use with our PPLN oven and Waveguide Module ranges.

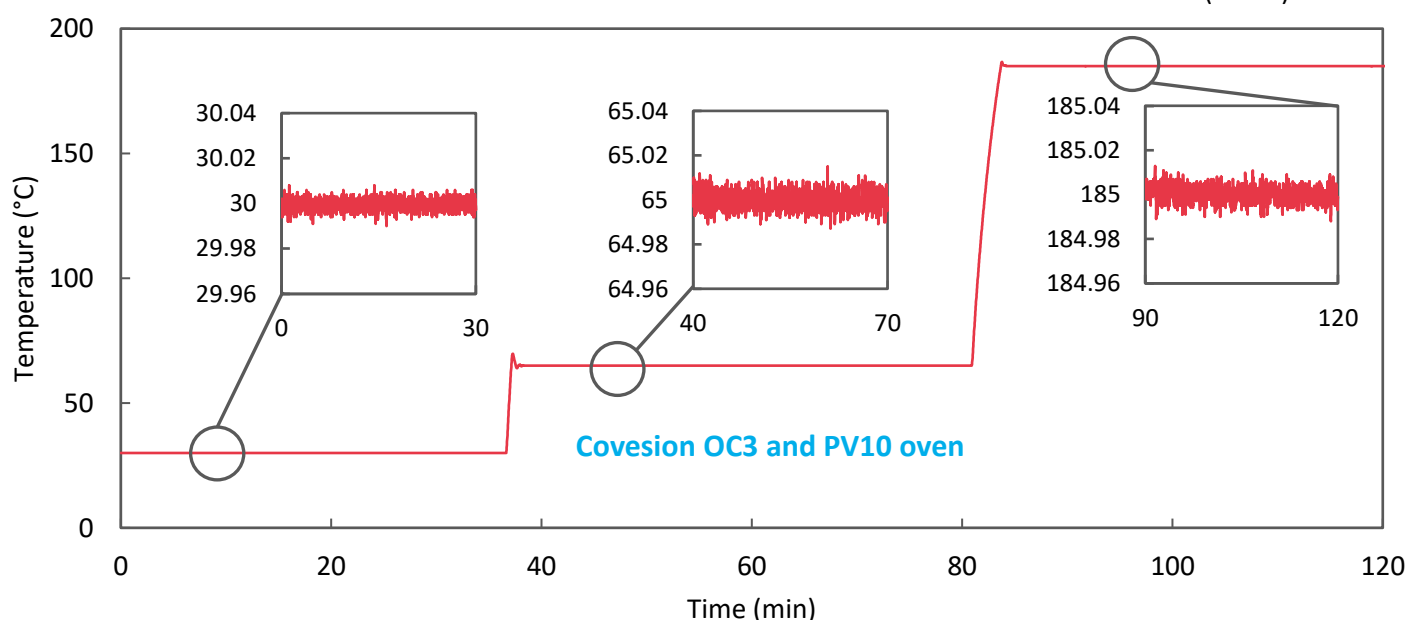
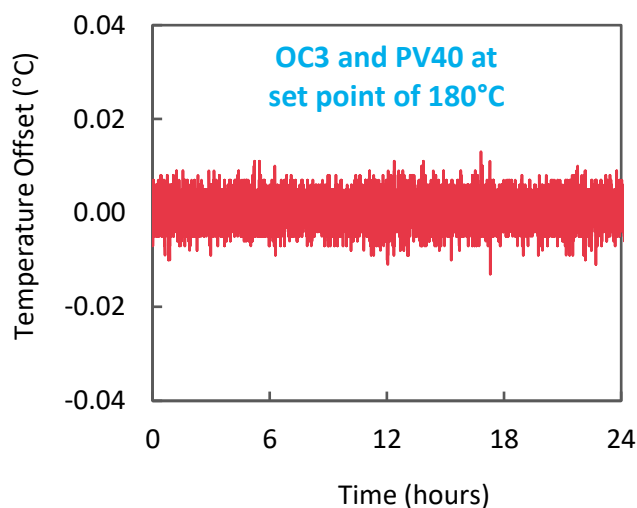
Key Features

- Simple push button interface
- Set point stability $\pm 0.01^\circ\text{C}$
- Set point resolution 0.01°C
- Maximum temperature 200°C
- PC control interface via USB
- Auto-detect feature for all Covesion PPLN crystal ovens and Waveguide Modules

Covesion's user-friendly OC3 is specially designed for use with our PPLN crystal ovens and waveguide modules. The auto-detect feature provides hassle-free, plug-and-play functionality. The user can simply dial in the required temperature and allow the oven to reach optimum stability.

The OC3 provides high long term thermal stability of $\pm 0.01^\circ\text{C}$ for all temperatures from 30 to 200°C (see data below). This level of stability is typically achieved within only a few minutes of reaching the set point temperature.

The combination of long term stability and low set point resolution of 0.01°C ensures that optimised conversion efficiency can be maintained with our PPLN products.



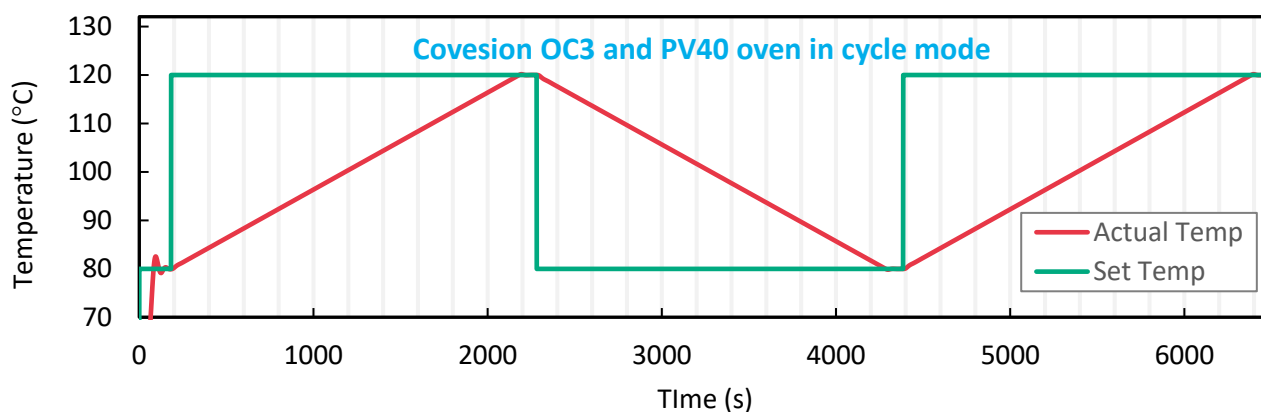
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PC control

The OC3 offers direct control from a PC via a software application or through LabVIEW drivers. This will enable Covesion MgO:PPLN crystals to be fully integrated into an optical system for automated control.

- Standard USB type B connector
- Covesion OC2 software application with GUI
- Data saved to .csv format
- Features slow ramping via the Cycle Mode for finding SHG phase matching peak.
- LabVIEW drivers



Specifications

Parameter	Min	Typ	Max	Unit
Input voltage	88		264	VAC
Output power			35	WDC
Output voltage			24	VDC
Temperature control range ¹	15		200	°C
Set-point resolution	0.01			°C
Absolute temperature accuracy ²		±0.1		°C
Temperature stability (24 hour) ³		±0.01		°C
Heating time from ambient to 200°C		7		minutes
Cooling time from 200°C to 60°C ⁴		20		minutes
Cooling time from 60°C to 30°C ⁴		20		minutes
Operating temperature (external)	10		50	°C
External Dimensions (L x W x H)		199 x 158 x 74		mm
Weight		1.1		kg

1. Covesion oven types are suitable for heating only. The external oven temperature must be lower than the set-point temperature.

2. Does not account for sensor tolerances.

3. From 5°C above ambient temperature to 200°C

4. Room temperature at 25°C.

