C-WAVE GTR (Product preview)

The CW laser light source **tunable from green to red**

- CW tunable laser light source
- 500 - 740 nm & 1000 - 1480 nm & 1.7 - 3.5 µm
- Single frequency, < 1 MHz linewidth
- Output power > 200 mW VIS or > 500 mW NIR or > 100 mW IR

Continuous-wave laser emission – from green to red

Derived from the award-winning tunable laser light source C-WAVE, the newest member of the product family C-WAVE GTR provides widely tunable continuous-wave (CW) laser light emission covering the wavelength range from green to red in the visible spectrum without any gap. Like all C-WAVE products the C-WAVE GTR combines single-frequency laser light output with outstanding beam quality and not at least user-friendly laser handling, making C-WAVE GTR a flexible tool for demanding applications.

Applications:

- Quantum optics
- Holography
- Atomic physics
- Nanophotonics
- Interferometry

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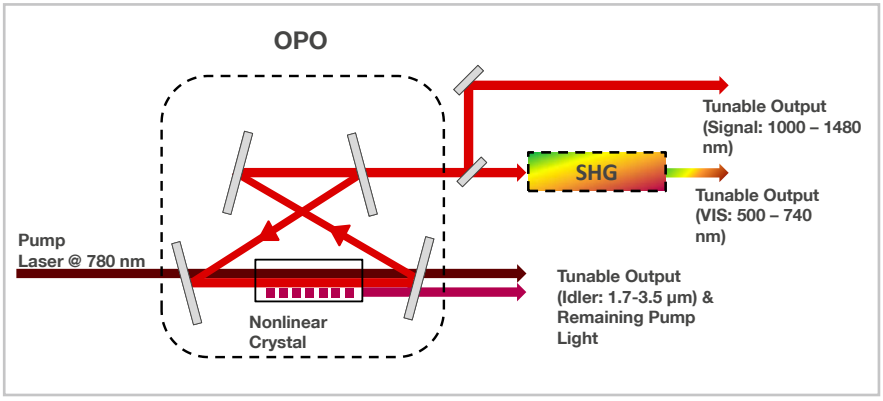
Operation principle

C-WAVE GTR combines two nonlinear processes to achieve its outstanding spectral coverage: In the first step (OPO), a 780 nm laser pumps a nonlinear periodically-poled crystal. Signal and idler photons with tunable frequencies in the near-infrared wavelength regime from 1000 nm to 1480 nm and in the infrared wavelength regime from 1.7 µm to 3.5 µm are generated. Subsequent second harmonic generation (SHG) using a frequency doubling crystal leads to conversion of the signal photons into colors from green to red (500 – 740 nm).



Specifications

	VIS	NIR (Signal)	IR (Idler)
Wavelength range	500 - 740 nm	1000 – 1480 nm	1.7-3.5 µm
Output power	> 200 mW	> 500 mW	> 100 mW
Linewidth	< 1 MHz		
Mode-hop-free tuning	> 10 GHz		

Requirements

Operating temperature range	20 - 25 °C, constant
Relative humidity	10 - 85 %, non condensing
Mounting surface	vibration-isolated optical table
Environment	free of dust

Technical data

Computer interface	Ethernet / RJ 45
Power supply	110 V / 230 V
Power consumption	< 200 W
Cooling	Closed-loop chiller

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