

stretch.

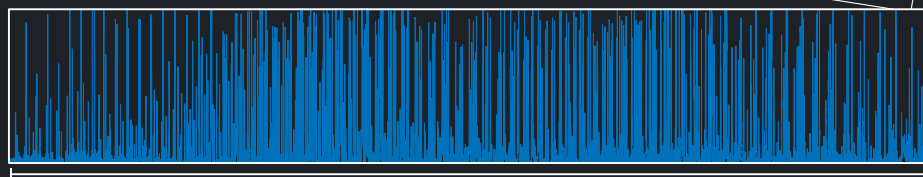
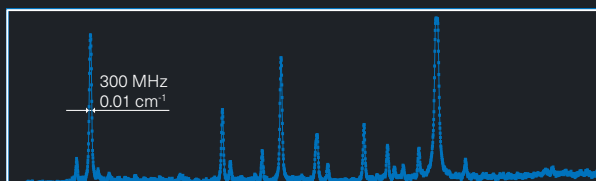
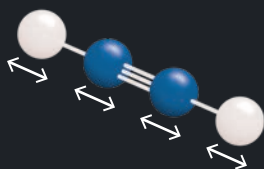
Fully-automated tuning at high resolution

2500 – 6900 cm^{-1}

CW optical parametric oscillator



For continuous molecular spectroscopy of “stretch” vibrations...



145 nm
157 cm^{-1}

... over a very wide range

learn more...



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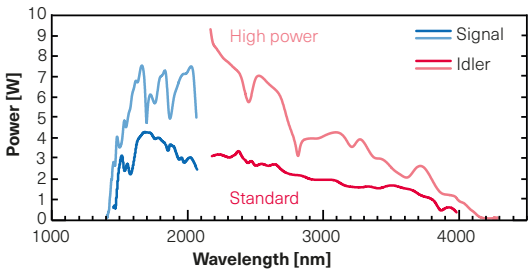
Widely Tunable CW OPO



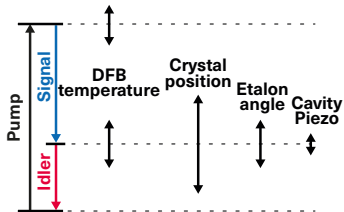
DANGER – VISIBLE AND INVISIBLE LASER RADIATION, AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION, CLASS 4 LASER PRODUCT, EN60825-1:2014

DLC TOPO	Signal	Idler
Coarse tuning range (standard system)	1.45 - 2.07 μm 4830 - 6900 cm^{-1}	2.19 - 4.00 μm 2500 - 4570 cm^{-1}
Coarse tuning range (high power system)	1.43 - 2.07 μm 4830 - 7000 cm^{-1}	2.19 - 4.20 μm 2380 - 4570 cm^{-1}
Mode hop free tuning range	--	> 30 GHz (> 100 GHz typ.)
Linewidth	< 100 kHz < $1 \times 10^{-5} \text{ cm}^{-1}$	< 2 MHz (< 100 kHz opt.) < $1 \times 10^{-4} \text{ cm}^{-1}$
Output power (standard system)	> 10 mW at > 1.45 μm > 2 W at > 1.55 μm > 4 W peak	> 10 mW at < 4.00 μm > 1 W at < 3.6 μm > 2 W peak
Output power (high power system)	> 10 mW at > 1.43 μm > 4 W at > 1.60 μm > 5 W peak	> 10 mW at < 4.20 μm > 2 W at < 3.5 μm > 5 W peak
Beam Quality Factor M^2	< 1.2 at < 3.6 μm	< 1.2 at < 3.6 μm

Characteristic tuning curve.



Energy level diagram including influence of tuning mechanisms.



System diagram

