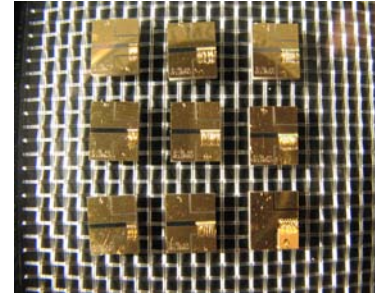


## MID IR QUANTUM CASCADE LASERS – QC-02-XXXX

### Features

- **Beam divergence at emitting facet of the Product:** Mean optical output power ( $P_m$ ) guaranteed in a full solid angle of  $60^\circ$ .
- **Single mode suppression ratio:** SMSR of the Product over the laser gain spectrum of the Product:  $\geq 25\text{dB}$
- **Mean optical output power:**  
 Optical output power ( $P_m$ ) during  $t_{\text{pulse}} \geq 100 \text{ mW}$   
 Optical output power decay ( $P_{\text{decay}}$ ) from start to end of  $t_{\text{pulse}}$  :  $\leq 50\%$



### Operating Parameters:

- **Current and Voltage:**  
 Max Pulse current ( $I_c$ ): up to 4 Amps  
 Typical Pulse voltage ( $V_c$ ): up to 16 Volts  
 Typical Current threshold ( $I_{th}$ ): up to 2 Amps
- **Duty cycle, pulse repetition frequency and reciprocal wavelength scan:**  
 Operating duty cycle ( $DC_c$ ): up to 5%  
 Pulse duration ( $t_{\text{pulse}}$ ): up to 800ns  
 Pulse repetition frequency (PRF): up to 100KHz  
 Wavenumber scan during  $t_{\text{pulse}}$  ( $\tilde{\nu}_s$ ): over  $2\text{cm}^{-1}$
- **Operating and environmental temperature:**  
 Product sub-mount temperature (T):  $-30^\circ\text{C} \leq T \leq 35^\circ\text{C}$

**Note that the typical parameters listed here are for information only. Exact specifications may vary depending on the laser of choice. Please ask our team for more details.**

### Wavelengths and associated measurable gases with strong absorption bands in these regions

Wavelength ( $\mu\text{m}$ )	Wavenumber ( $\text{cm}^{-1}$ )	Gases Detectable
4.48	2230	CO <sub>2</sub> , CO
5.25	1904	NO, H <sub>2</sub> O
6.13	1631	NO <sub>2</sub>
7.43	1345	SO <sub>2</sub> , H <sub>2</sub> S, CH <sub>4</sub>

Please note that our stock of laser continues to evolve. Please do not hesitate to contact us with inquiries for different wavelengths