

Customer:	
Date last updated:	November 10, 2025
Version:	V4
Spec Code:	UN0674C001H200NA

Technical Specifications document



APPLICATION			
Benzene detection			
Specification #	Specification name	Specification description	mirSense Specification
1	Type of laser		DFB laser
2	Nominal wavenumber $\sigma_0$		$\sigma_0 = 674 \text{ cm}^{-1}$
3	Mode of operation		CW
4	Output power at $\sigma_0$		> 1mW
5	Tuning range		> +/- 0.5 $\text{cm}^{-1}$ around $\sigma_0$
6	Drift in wavelength		The drift in wavelength of the laser stays within the tuning range
7	Side mode suppression ratio		> 25 dB
8	Beam divergence (full beam at $1/e^2$ )		< 10 mrad
9	Beam quality		Gaussian beam
10	Quality standard		ISO 9001
11	Packaging		The product includes a single mode QCL chip, a collimating optics, a thermoelectric cooler (TEC) and a temperature sensor, in a closed HHL header. It does not include the electronic drivers nor the external heat extracting system.