

## CW Single Mode Laser / CW-SM-Q-1046.3-5-1-HHL-L-V5

CW Single Mode Lasers (or CW-DFB lasers) are able to emit a single wavelength at a time. They can be tuned within a range that can reach up to 10 cm<sup>-1</sup>; there exists a variety of modulation schemes which can be used for different purposes. Single Mode Lasers are mostly used for spectroscopy. To be operated in continuous-wave (CW).

Specifications for CW-SM-Q-1046.3-5-1-HHL-L-V5	
Laser type	QCL quantum-cascade laser
Laser Far-field	TM00
Operating mode	CW continuous wave
Emission type	SM singlemode
Target frequency [cm <sup>-1</sup> ]	1046.3 ± 0.0
Avg optical power [mW]	5.0
Full Tuning [cm <sup>-1</sup> ]	1.0
Temperature Reachable Range [cm <sup>-1</sup> ]	2.0
Is Centered	No
Package Interface	HHL-L
Heatsink temperature max [°C]	25
Minimum Voltage [V]	7.0
Maximum Voltage [V]	14.0
Minimum Current [mA]	50.0
Maximum Current [A]	1.2
Fabrication time [days]	70

Definitions	
Laser far-field	Spatial mode of the laser in the far field.
Operating mode	Operating mode of the driver electronics.
Emission type	Spectral behavior of the laser.
Target frequency [cm <sup>-1</sup> ]	Target single-mode emission frequency.
Avg optical power [mW]	Average optical power at target emission frequency.
Full Tuning [cm <sup>-1</sup> ]	Emission tuning range accessible by changing the current while keeping the temperature fixed.
Temperature Reachable Range [cm <sup>-1</sup> ]	Emission tuning range from threshold at lowest temperature to maximum current at maximum temperature.
Package interface	Laser packaging: either on ceramic submount, or on copper submount, or in specific housing.
Heatsink temperature [°C]	Maximum temperature of the heatsink on which the package will be fixed.
Minimum Voltage	Low end of the potential range for the operation voltage
Maximum Voltage	High end of the potential range for the operation voltage
Minimum Current	Low end of the potential range for the operation current
Maximum Current	High end of the potential range for the operation current