

4.240 μ m low power benchtop ICL-DFB tunable continuous wave laser 5mW (with TDLAS phase-locking control module)



● Product Description

The MP-ICL-4240-DFB-5-T laser is a tunable continuous-wave laser developed by Ideal Photonics. It features a narrow linewidth, high power, and low power consumption, making it ideal for gas sensing applications, particularly for testing hydrocarbons and other related gases. The benchtop ICL-DFB laser module integrates a driver and temperature control module,



and also allows software-based control of the laser's temperature and operating current, ensuring stable operation and maintaining the accuracy of measurement values. Additionally, the module includes an FPGA (optional, at extra cost), facilitating the processing of gas concentration measurements.

● Product features

Continuous wave、 Single-mode spectrum、 Tunable light source、 Low power consumption、 High-quality beam、 Narrow linewidth、 Software intelligent control、 Compact structure

● Part Number

MP-ICL-4240-DFB-5-T

● Application area

TDLAS gas system measurement setup、 Mid-infrared system light source、
Mid-infrared device analysis

● Core parameters

Wavelength	Output Power	Spectral Width
4.240um	5mW	3MHz

● General Parameters



Parameters

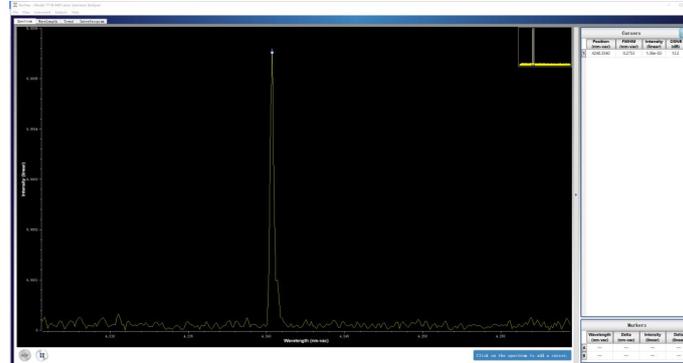
Parameters	Unit	Technical Specifications		
		Min.	Typ.	Max.
Laser Output Power	mW	0.5	5	8
Peak Operating Wavelength	um		4.240	



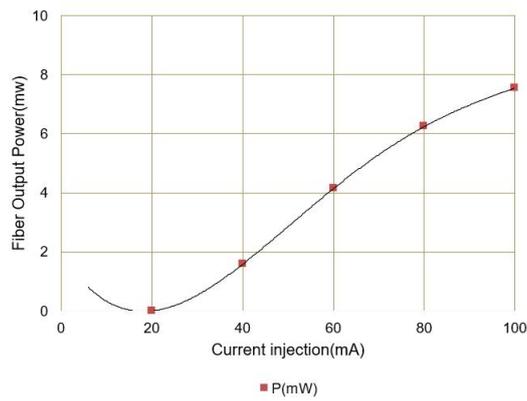
Spectral Width (FWHM)	MHz		3	
Side Mode Suppression Ratio (SMSR)	dB		20	30
Wavelength Tuning Range	nm	6	10	25
Wavelength Temperature Coefficient	nm/°C		0.32	
Wavelength Current Coefficient	nm/mA		0.06	
Output Power Stability (8h)	%		±1	±4
Output Power Adjustable Range	%	0		100
Operating Current	mA	40	80	140
Threshold Current	mA	25	40	80
Operating Voltage	V	7	9	12
Chip Operating Temperature	°C	-20	10	40
Storage Temperature	°C	15	20	65
Dimensions	mm	340(L) × 240(W) × 100(H)		



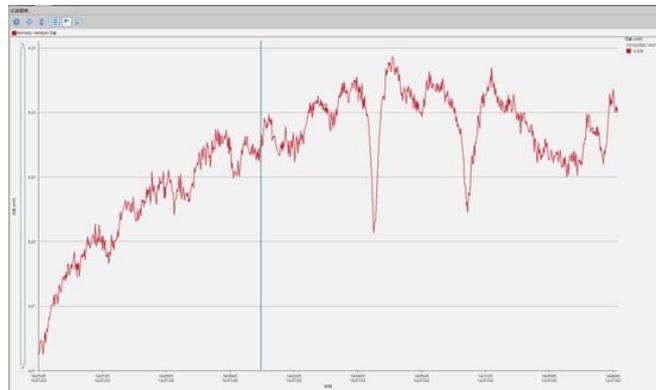
Spectral Plot (15°C, 90mA)



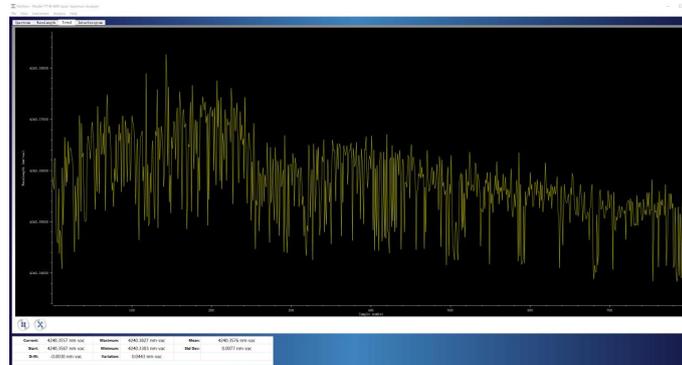
Power Curve (15°C)



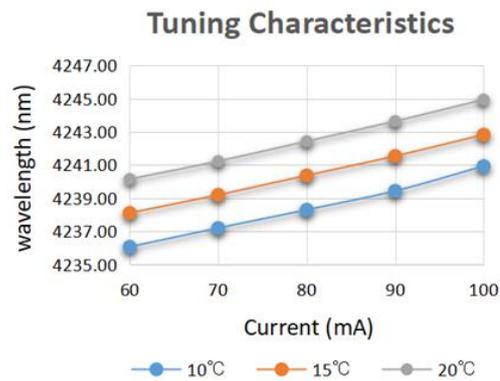
Power Stability (15°C, 90mA)



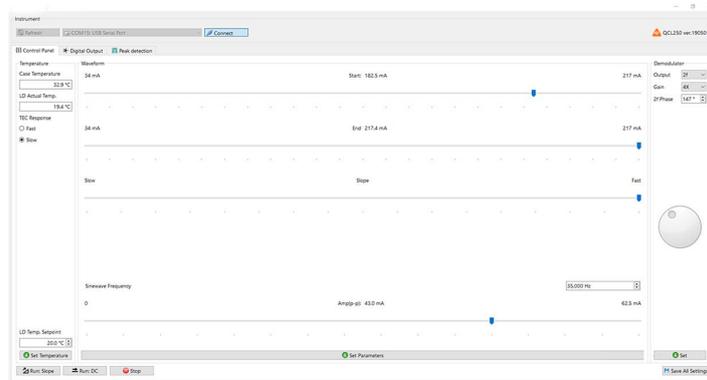
Wavelength Stability (10°C, 90mA)



Wavelength Tuning Curve



Control Software





Ordering Info

MP-LDC/TDLAS-MIR-ICL-4240-3-DFB-05

LDC: Pure drive

TDLAS: With phase-locking

Central wavelength:

4240: 4.240um

Linewidth:

3: 3MHz

Output power:

05: 5mW