8.34um Benchtop High Power FP-QCL mid-infrared Quantum Cascade Laser 80mW (TDLAS integrated control module)

Product Description

QCL8340FP-8.34um High Power Bench Top FP-QCL Mid-infrared quantum cascade laser is mid-infrared test laser developed by Idealphotonics in the first half of the year 2024. It has low atmospheric window loss, which is beneficial to space optical communication test research. Our bench top light source has high power and does not require ITAR review, making it an excellent choice for commercial mid-infrared test light sources. The tunable range exceeds 200nm, and the output power is greater than 80mW, which can meet the industrial needs of customer testing. Our laser has built-in Znse. The output is collimated and the output power is stable, and the temperature and wavelength stability are high , which is several orders of magnitude higher than the stability of traditional high-power quantum cascade lasers.

Part Number

TDLAS-MIR-QCL-W8340-1-FP-0100

Product features

High Power、 Compact structure、 Software intelligent control、 Built-in FPGA

Application area

Mid-infrared test light source、 Mid-infrared device analysis

Parameters

General parameters

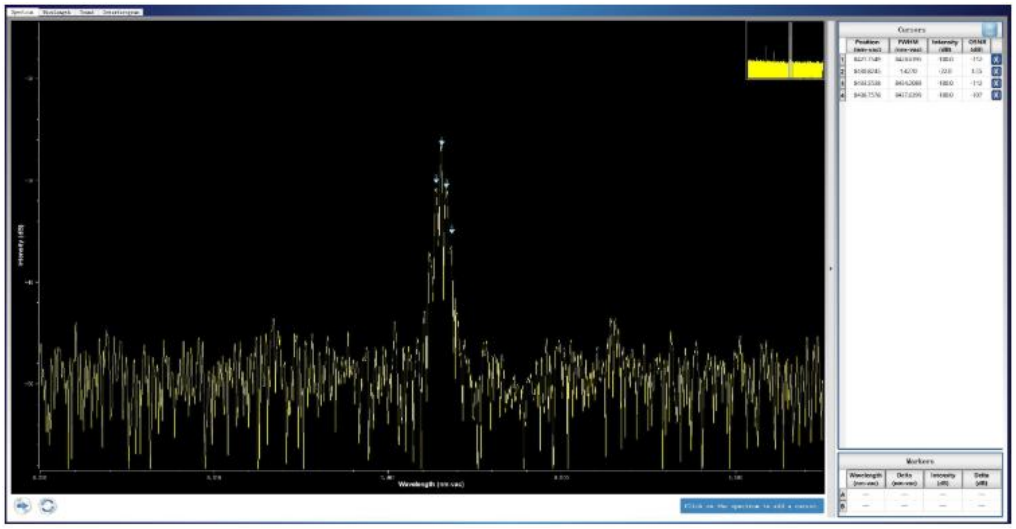
Technical Parameters	unit	Technical indicators		
		Min .	Typical	Max .
Product PN#		LDC-MIR-QCL-W8340-1-FP- 0100		
Output Power 1	mW	50	80	100
Peak operating wavelength 2	um	-	8.34	-
Spectral Width (FWHM)	nm	-	3	-
Output side mode suppression ratio (SMSR)	dB	30	-	-
M2 Factor			<1.2	
Output light divergence angle	Mrad		＜2	
Output Isolation 3	dB	-	30	-
Wavelength temperature coefficient	nm/℃		0.6	

Wavelength current coefficient	nm/mA		0.2	
Output power stability (15 minutes) 4	%	-	±0.5	±1.0
Output power stability (8 hours) 4	%	-	±1.0	±2.0
Output power adjustable range	%	0	-	100
Output power regulation mode		Software Control		
TEC stability	℃	-	±0.1	±0.2
TEC operating range	℃	0	30	50
Operating voltage	VAC	100	220	240
Electrical power consumption 5	W	-	-	2
Operating temperature	℃	0	-	55
Storage temperature	℃	- 20	-	65
Specifications and dimensions	mm	343(L)×193(W)×180(H)		Benchtop

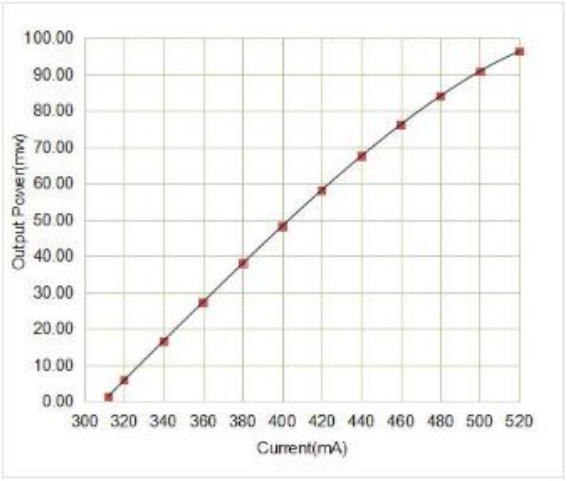
Technical indicators:
1. Output power is optional;
2.The peak operating wavelength can be specified ;
3.The output power stability test condition is 25 degrees, after 30 minutes of preheating ;
4.Max . power consumption refers to the overall power consumption under extreme working conditio

Note: The laser's Max . operating current is 520mA; the operating temperature is 0-50℃.

1.Spectrum (4 ℃, 300mA)



2. Power curve (10 ℃)



3. Power stability (10 °C, 475mA)