7.2um Low-Power Desktop DFB-QCL Mid-Infrared Quantum Cascade Laser (Desktop Light Source)

● Product Description

QCL7200-7.2um low-power desktop DFB-QCL mid-infrared quantum cascade laser is a domestically leading ultra-low-power QCL-DFB laser developed by Idealphotonics in the first half of 2018. The tunable range exceeds 100nm, and the output power is greater than 40mw to meet the industrial needs of customers testing gas sensors. Our laser collimated output has stable output power and high temperature and wavelength stability, which is several orders of magnitude higher than the stability of traditional high-power quantum cascade lasers. It provides an excellent test light source for our mid-infrared test customers.

● Part Number

LDC-MIR-QCL-W7200-1-DFB-040

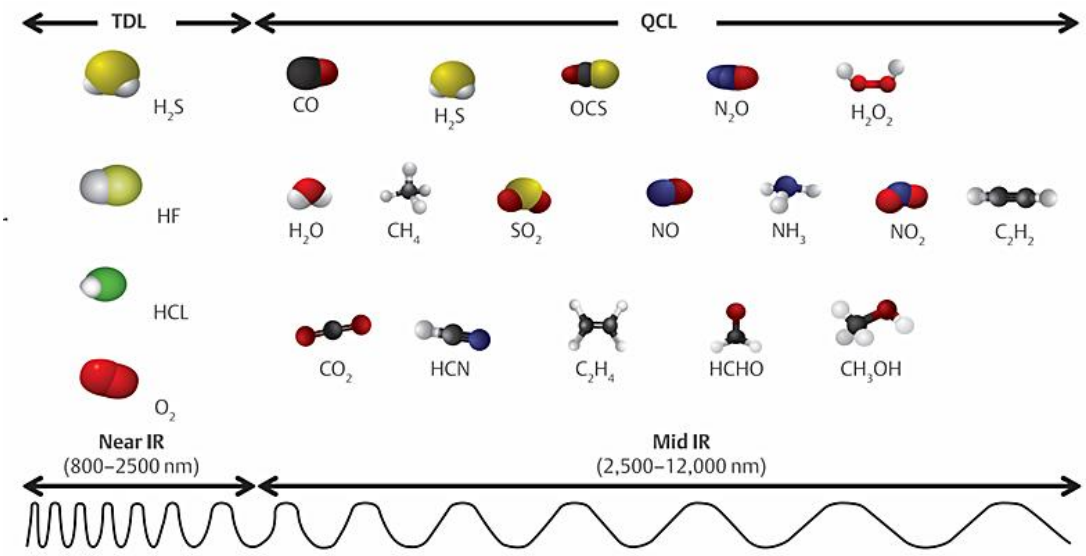
● Product features

Low power consumption, high power、Narrow line width、Compact structure、Software intelligent control、 Built-in FPGA

● Application area

TDLAS N2O High-Precision Trace Analysis 、Mid-Infrared Test Light Source 、Mid-Infrared Device Analysis

Parameters



Parameters	Unit	Technical Specification		
		Min.	Typ.	Max.
PN#			QCL7160	
Output Power (1)	mW	60	-	70
Peak Operating Wavelength (2)	um	7.1	7.2	7.3
Spectral Width (FWHM)	MHZ	-	3	-
Output Side-Mode Suppression Ratio (SMSR)	dB	20	-	-
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 Adjustment 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
Dimensions	mm	290(L)x108(W)x68(H)mm		

Technical Specifications Explanation：

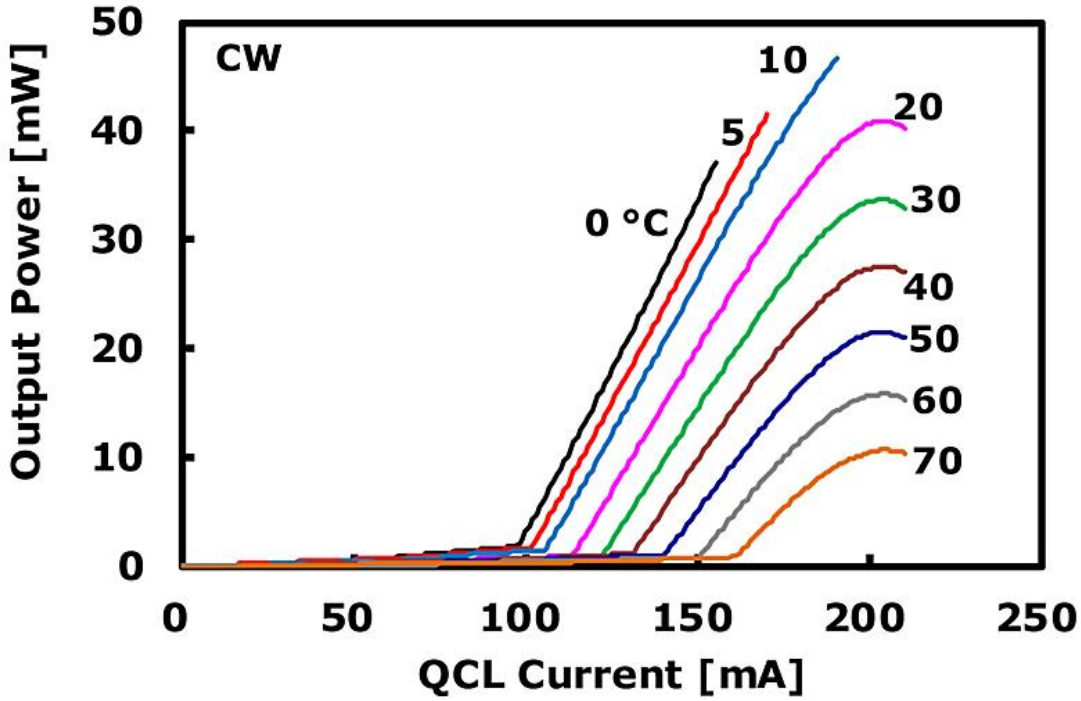
1.Output Power Options；

2.Peak Operating Wavelength Options；

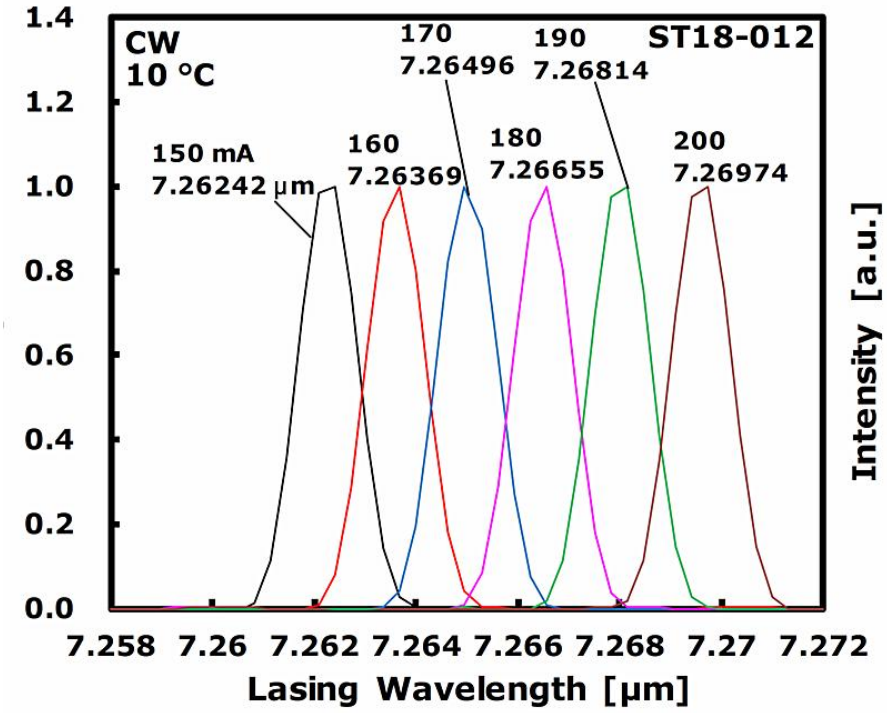
3.The output power stability test condition is at 25° C, with a 30-minute warm-up after power on

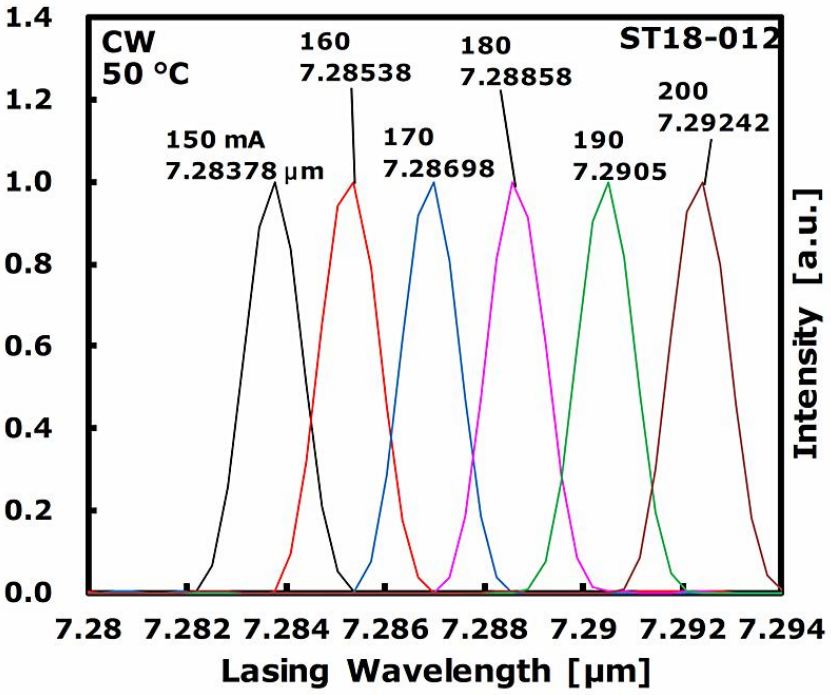
4.The maximum power consumption refers to the total power consumption under extreme operating conditions.

QCL Laser Characteristic Curve (For a Typical Wavelength of 7.2um) Output Power Characteristic Curve

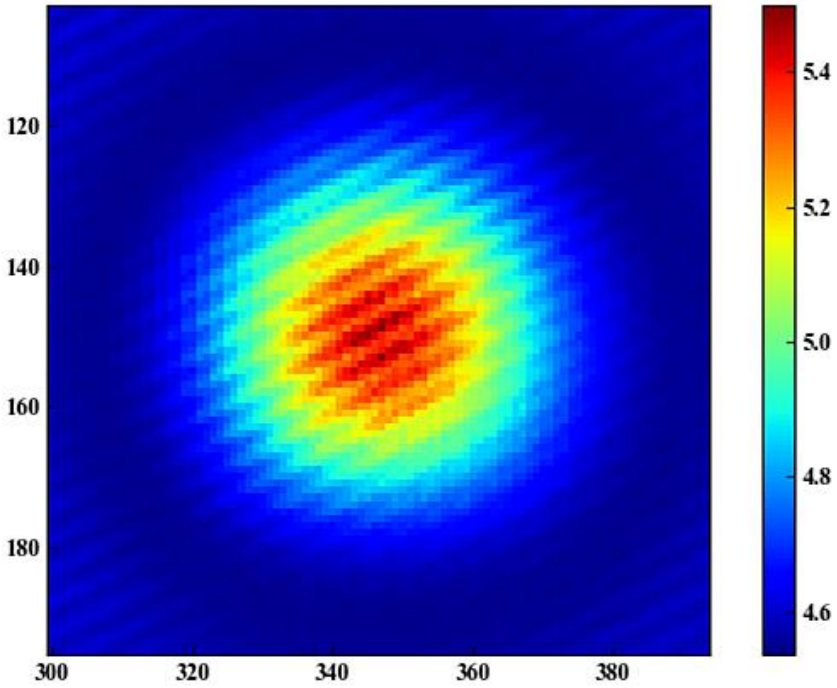


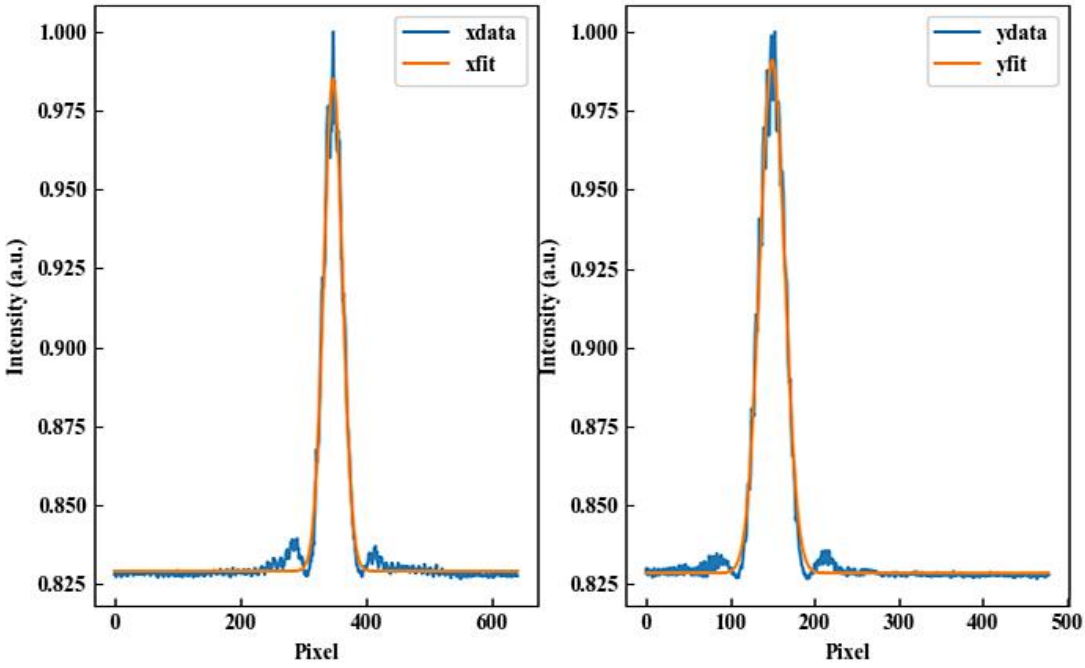
Laser Spectrum (Continuous) Laser at 10° C Operation





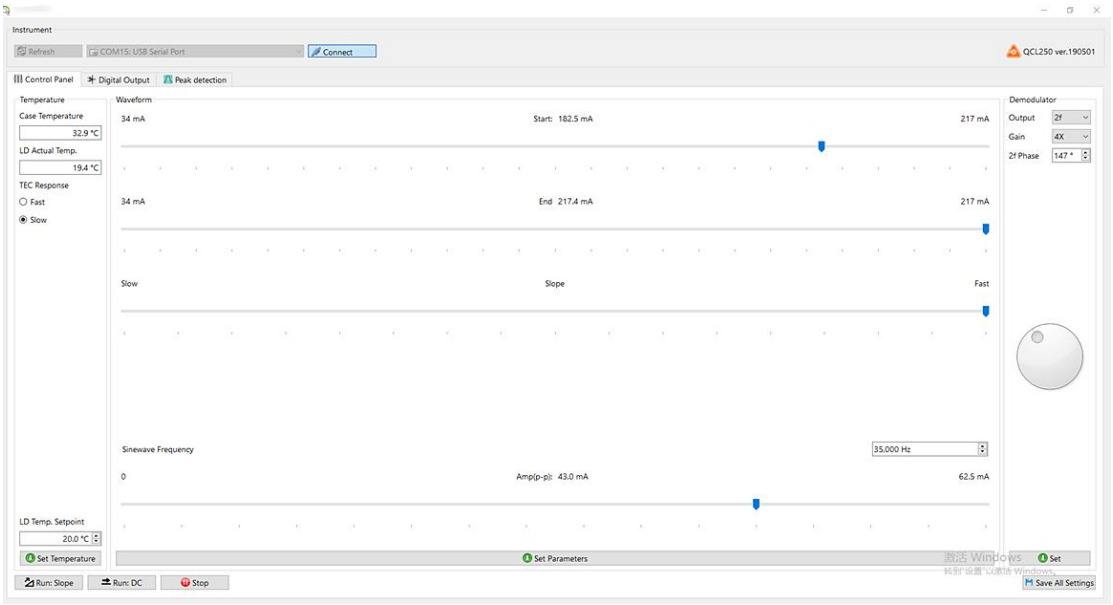
Quantum Cascade Laser Output Spot



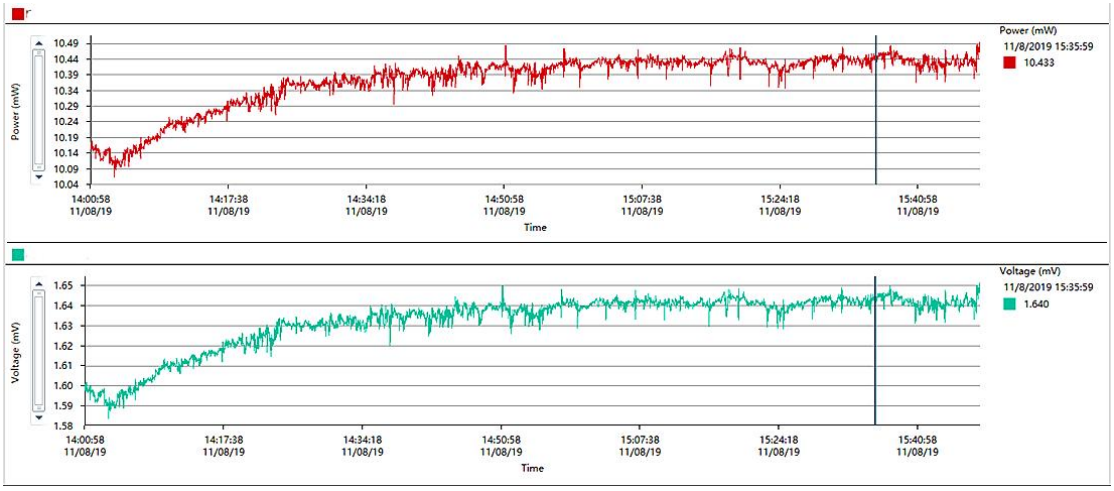


The test camera has a pixel size of 5 μm, and the Gaussian fit spot diameter is 320 μm.

Control Software



QCL Laser Power Stability Test Curve



Ordering Info

MIR-QCL- W□□□□ -☆-△-XX

W□□□□: Wavelength

5260: 5260nm

5184: 5184nm

7160: 7160nm

7400: 7400nm

10530: 10530nm

☆: Collimated output

1: With

0: Without

△: Laser type

FP: QCL-FP

DFB: QCL-DFB

XX: Output Power

001=1mw

010=10mw

400=400mw

1000=1000mw