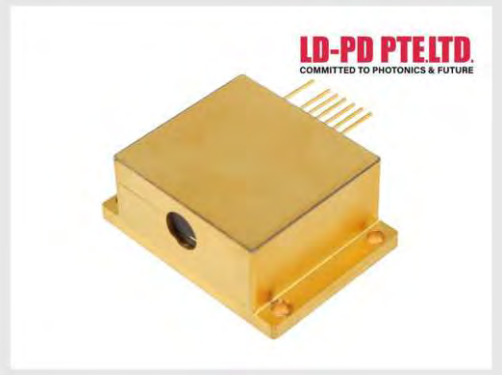
DFB-QCL Laser diode



Description

LD-PD offers single-longitudinal-mode DFB quantum cascade lasers (QCLs) operating within the wavelength range of 4-10 μm. These lasers are applicable in the field of high-sensitivity gas sensing, with their wavelength coverage encompassing the absorption lines of various gases such as carbon dioxide (CO_2) and its isotopes, alkanes, nitrogen oxides, and sulfides.

Features

- Wide wavelength coverage range
- Narrow linewidth, meeting the requirements of high-resolution spectral analysis
- High wavelength stability
- Excellent signal-to-noise ratio

Key Parameter

Parameters

Electrical Parameters	Operating Mode	CW/PW
	Laser Type	DFB
	Operating Temperature	15–50 ℃
	Thermistor	10 kΩ (@25 ℃)
Optical Parameters	Linewidth	≤ 0.2 cm^{-1}
	Tuning Range	±1 cm^{-1}
	Side Mode Suppression Ratio (SMSR)	25 dB

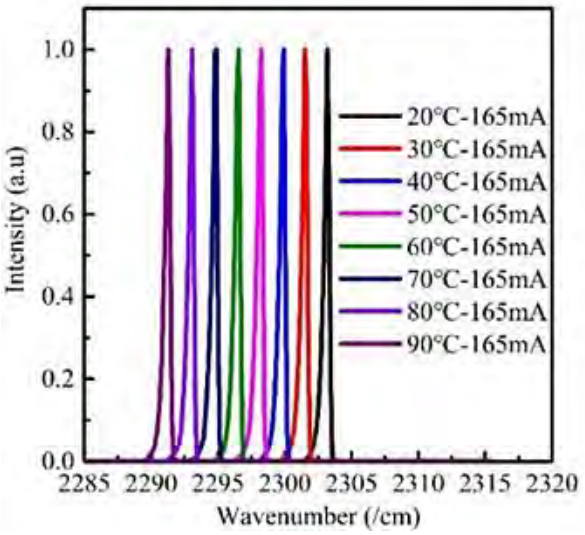
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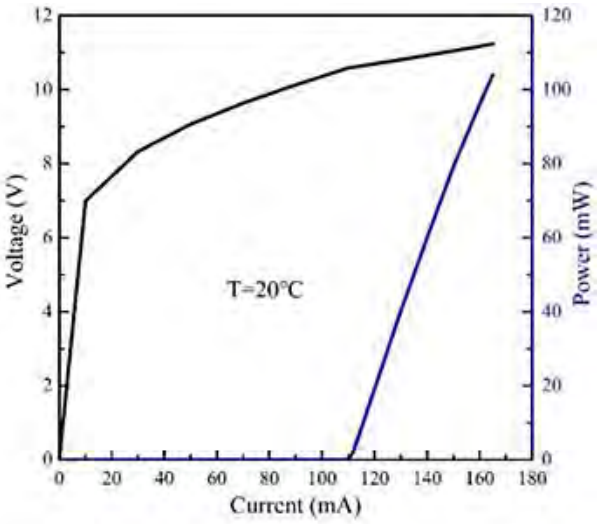
Packaging	Window Material	ZnSe
	Window Type	Circular/Parallel
	Window Diameter	9.8 mm
	Sealing Method	Dry N_2
	Package Type	HHL

Wavelength List

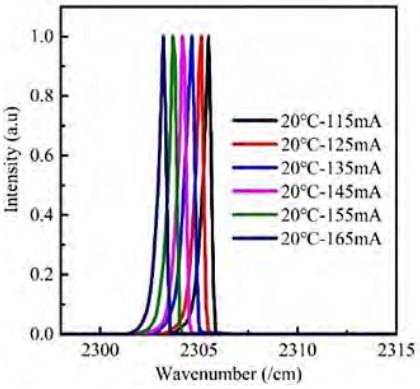
Product Model	Wavelength (μm)	Wavenumber (cm^{-1})	Output Power	Threshold Current	Detectable Gas
QCL-2310HC	4.33	2310	≥20 mW	≤0.2 A	CO_2 , CO_2 isotopes
QCL-2190HC	4.56	2191	≥20 mW	≤0.2 A	N_2O
QCL-2183HC	4.58	2183	≥20 mW	≤0.2 A	N_2O, CO
QCL-1910HC	5.24	1910	≥20 mW	≤0.2 A	—
QCL-1721HC	5.81	1721	≥20 mW	≤0.2 A	CH_2O
QCL-1505HC	6.64	1505	≥20 mW	≤0.2 A	C_2H_6
QCL-1471HC	6.79	1471	≥20 mW	≤0.2 A	C_2H_4
QCL-1377HC	7.26	1377	≥20 mW	≤0.2 A	—
QCL-1365HC	7.32	1365	≥20 mW	≤0.2 A	—
QCL-1351HC	7.4	1351	≥20 mW	≤0.4 A	SO_2
QCL-1333HC	7.5	1333	≥20 mW	≤0.3 A	—
QCL-1303HC	7.67	1303	≥20 mW	≤0.4 A	—
QCL-1080HC	9.26	1080	≥20 mW	≤0.3 A	—

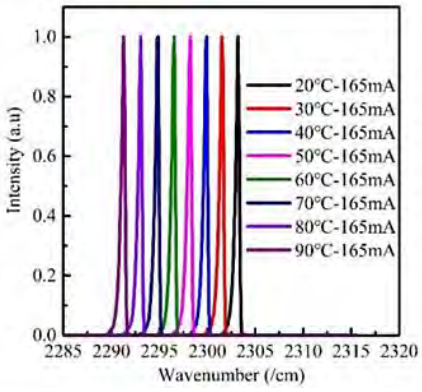
O/E Characteristics

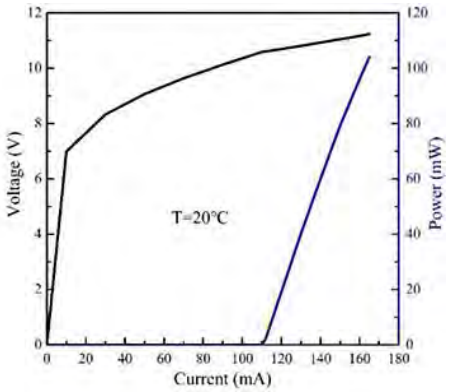




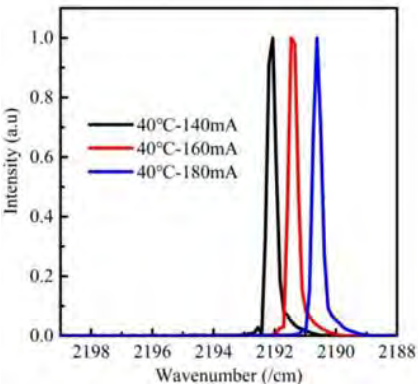
4.3 μm DFB QCL

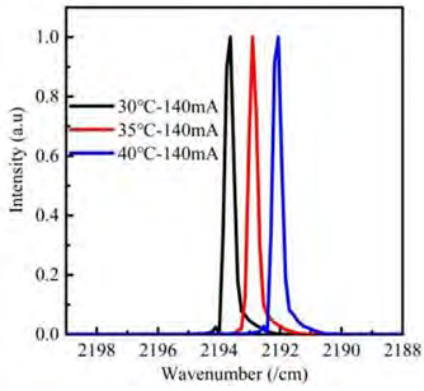


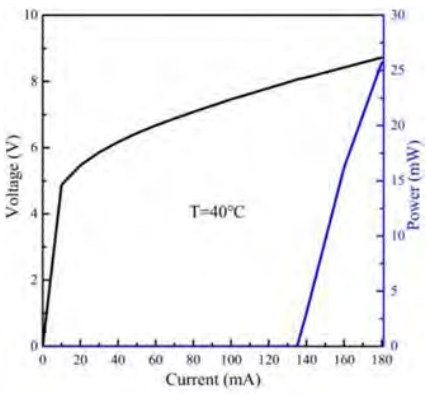




4.56 μm DFB QCL

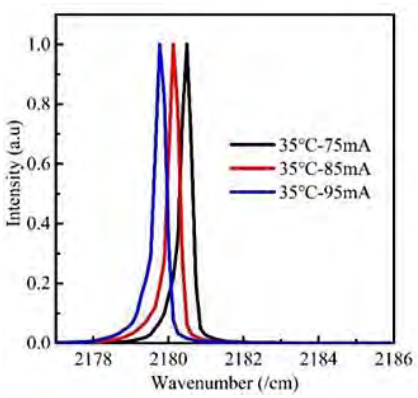


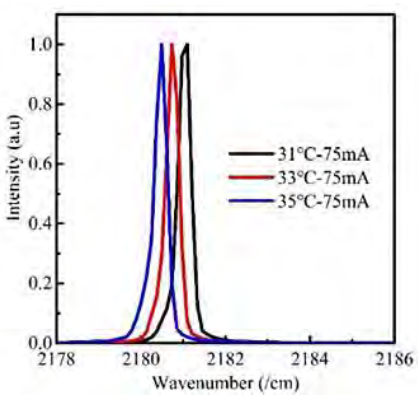


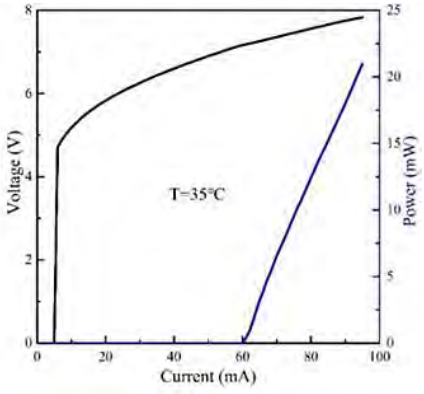


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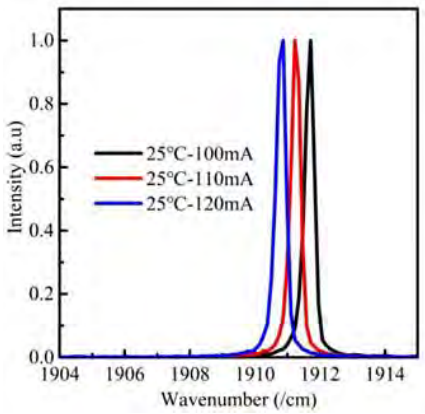
4.58 μm DFB QCL

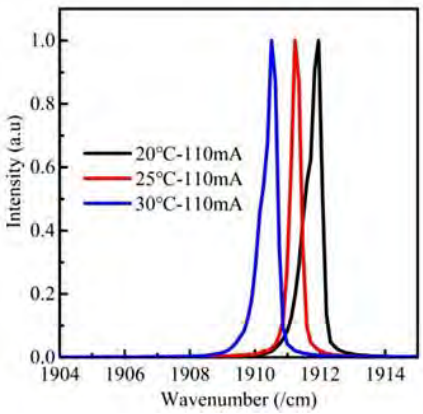


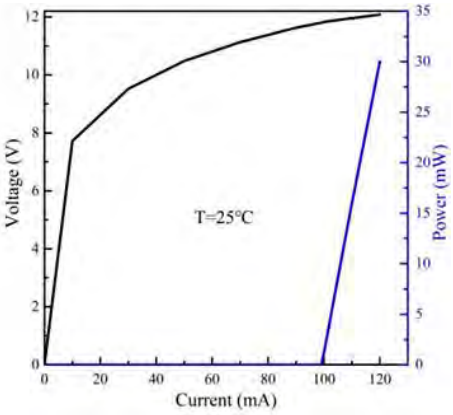




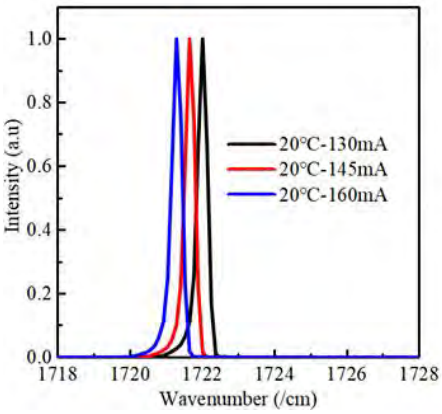
5.24 μm DFB QCL

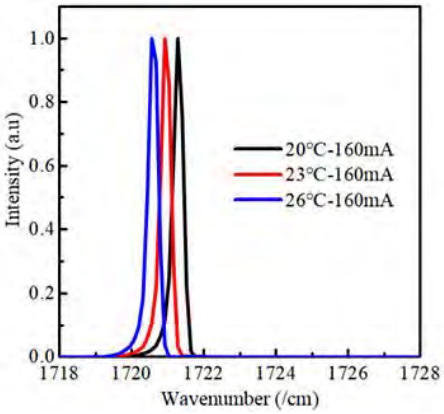


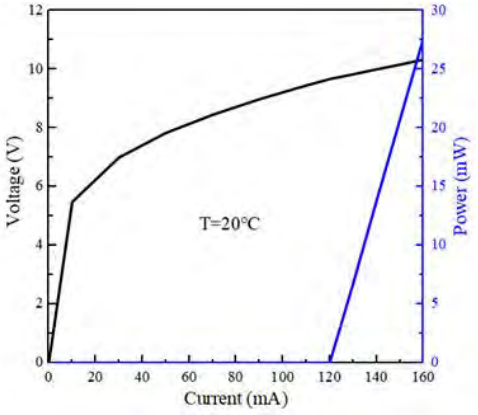




5.81 μm DFB QCL

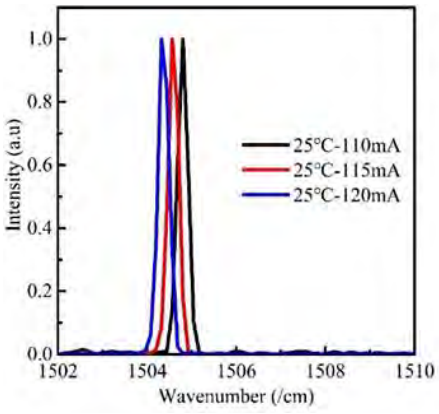


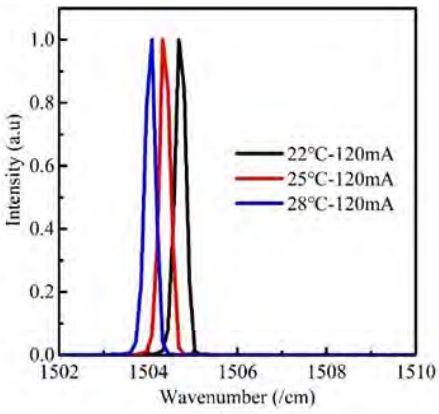


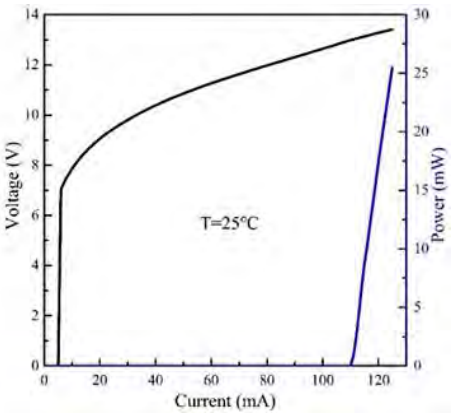


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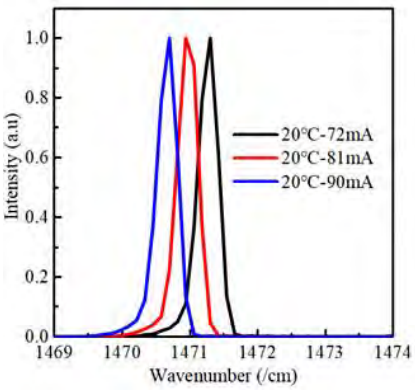
6.64 μm DFB QCL

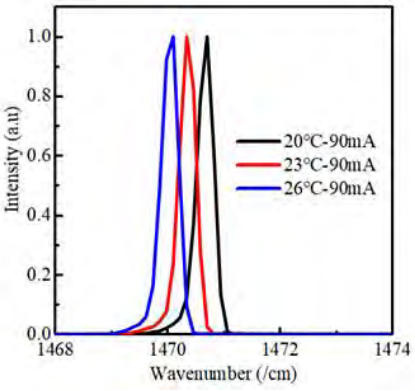


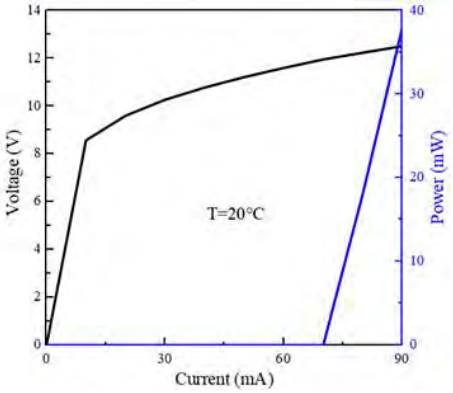




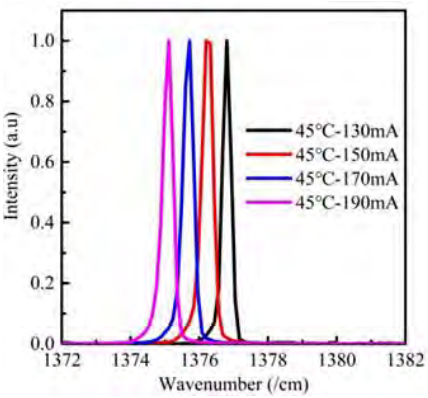
6.79μm DFB QCL

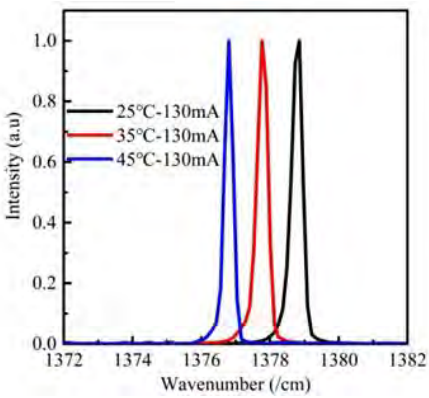


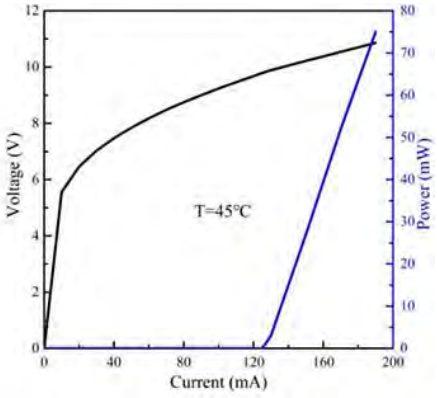




7.26μm DFB QCL

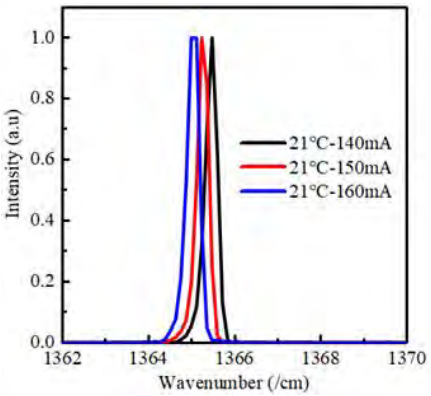


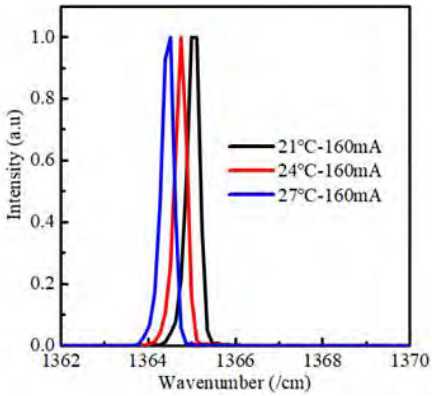


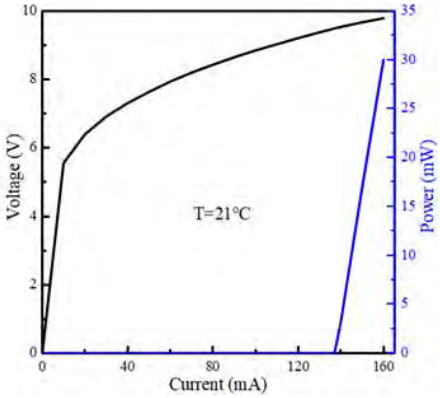


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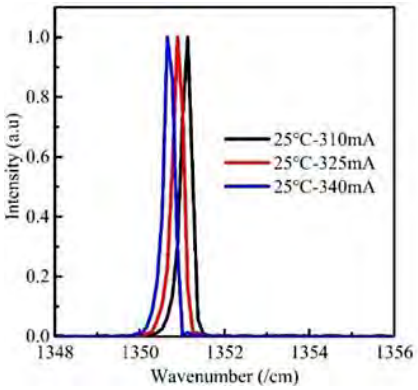
7.32μm DFB QCL

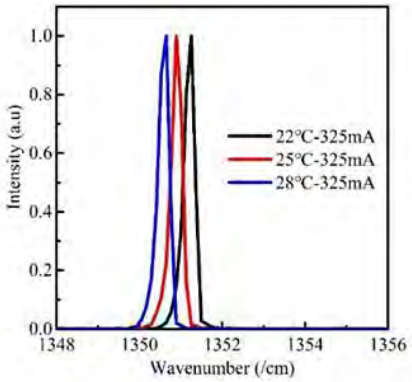


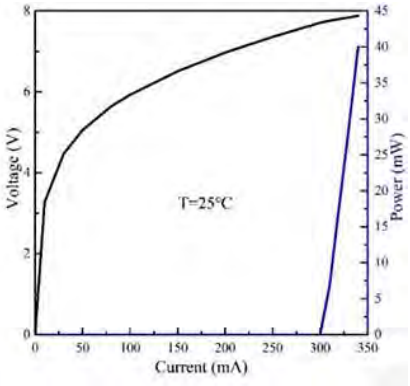




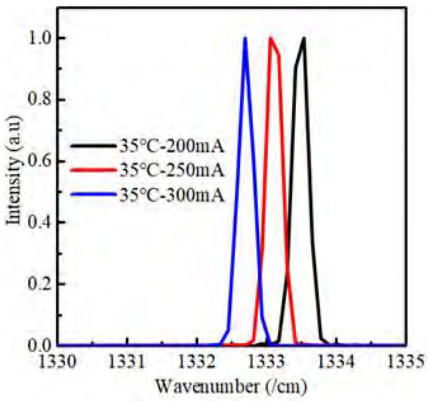
7.40μm DFB QCL

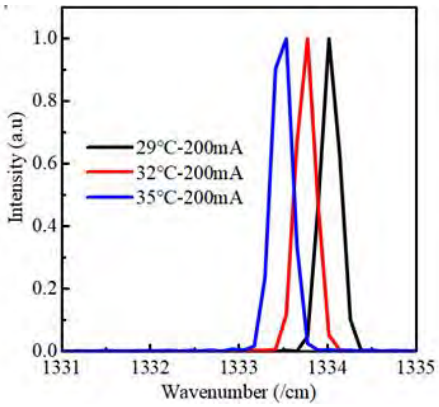


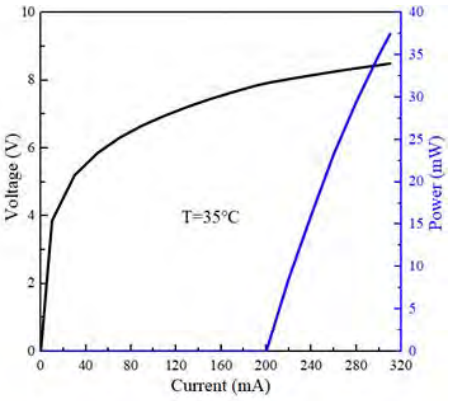




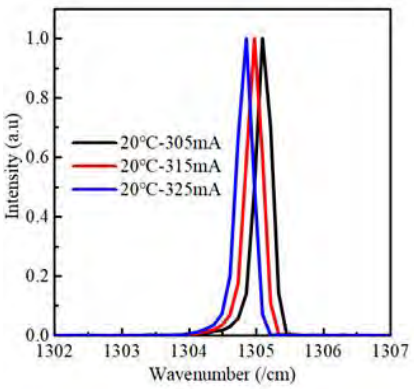
7.50μm DFB QCL

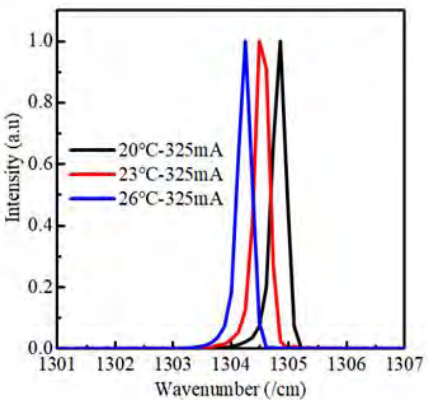


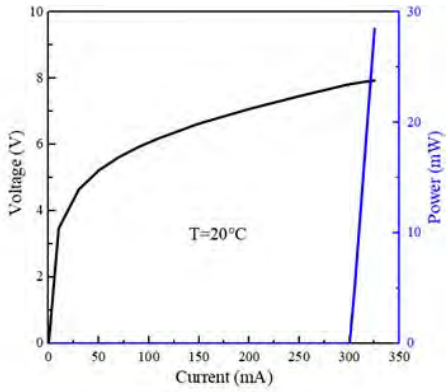




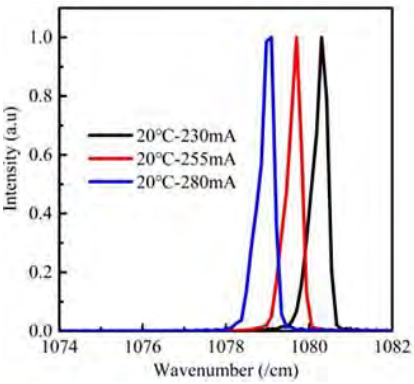
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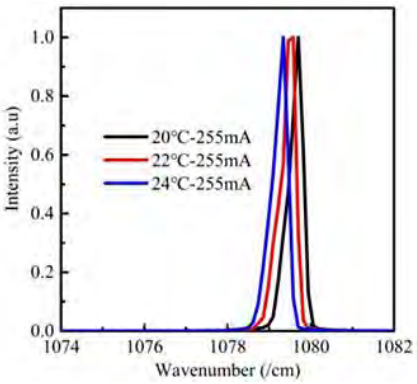


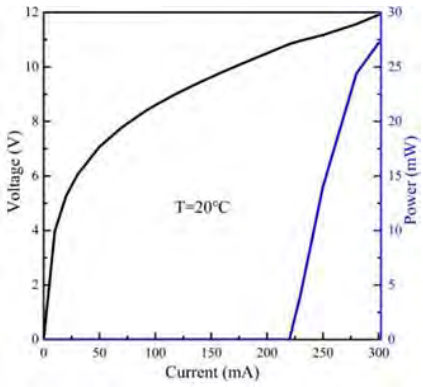




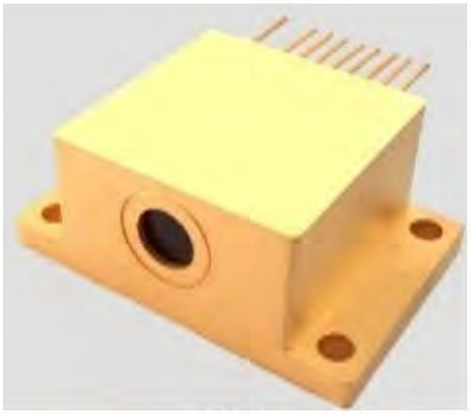
9.26μm DFB QCL



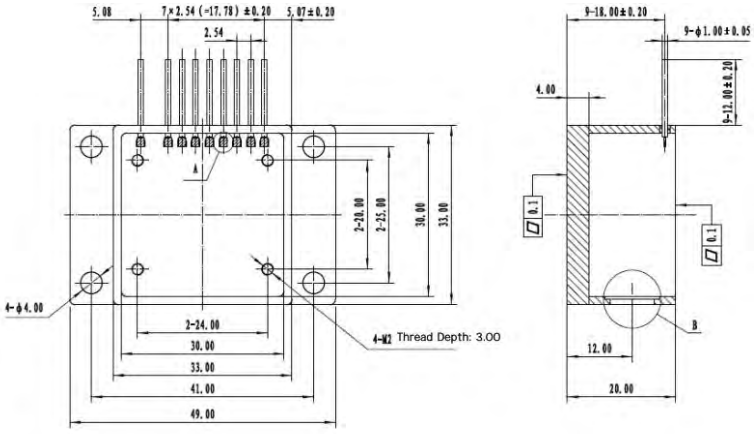




Package Size



HHL



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