

## 3.348 $\mu$ m low-power ICL-DFB tunable continuous wave laser (pure drive Benchtop light source) 5mW



### ● Product Description

The MP-ICL-3348-DFB-5-B laser is a tunable continuous-wave laser developed by Idealphotonics . It features a narrow linewidth, high power, and low power consumption, making it ideal for gas sensing tests, especially for detecting hydrocarbons and other related gases. Additionally, the desktop ICL-DFB laser module integrates a driver and temperature control module. It can be controlled via software to adjust the laser' s temperature and operating current, ensuring stable operation and



maintaining measurement accuracy. The laser module also includes an optional FPGA (available for an additional fee) to facilitate 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-3348-DFB-5-B

## ● Application area

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

## ● Core parameters

Wavelength	Output Power	Spectral Width
3.348um	5mW	3MHz

● **General Parameters**



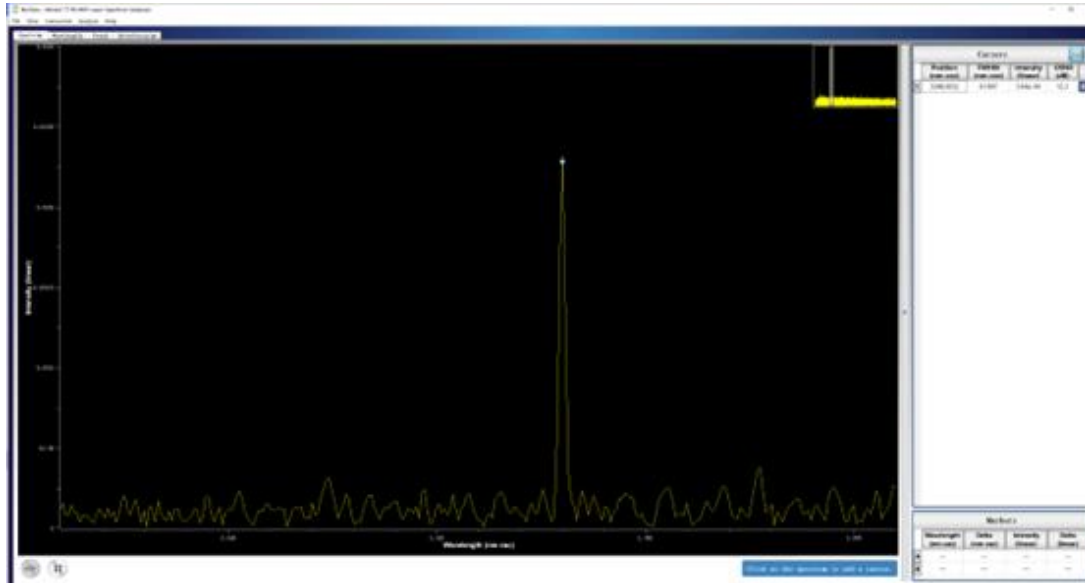
**Parameters**

Parameters	Unit	Technical Specifications		
		Min.	Typ.	Max.
Laser Output Power	mW	0.5	5	8

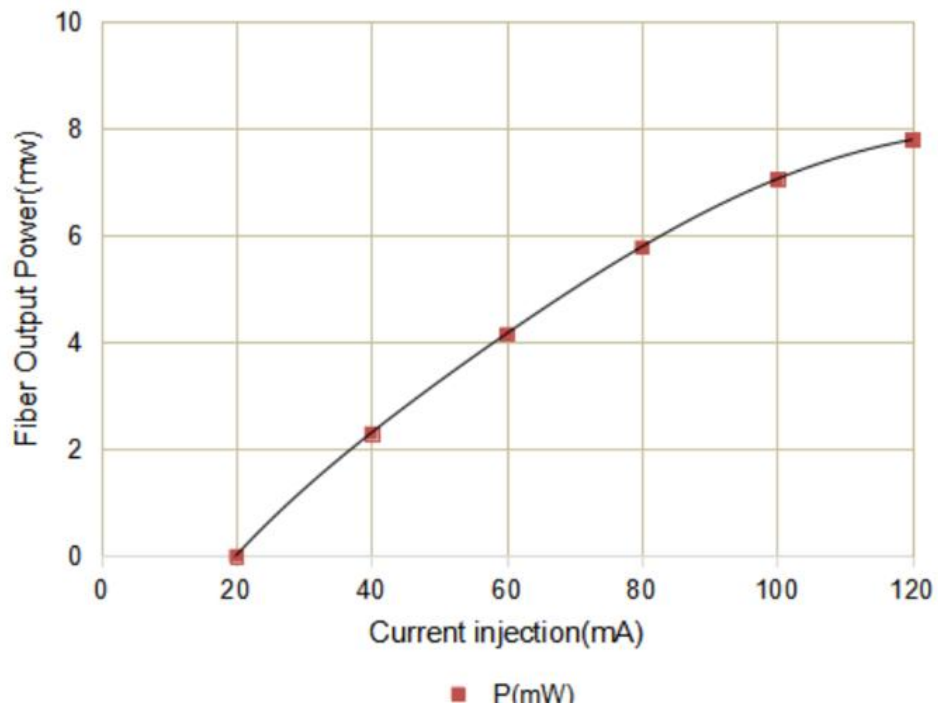


<b>Peak Operating Wavelength</b>	<b>um</b>		<b>3.348</b>	
<b>Spectral Width (FWHM)</b>	<b>MHz</b>		<b>3</b>	
<b>Output Side-Mode Suppression Ratio (SMSR)</b>	<b>dB</b>		<b>20</b>	<b>30</b>
<b>Wavelength Tuning Range</b>	<b>nm</b>	<b>6</b>	<b>10</b>	<b>25</b>
<b>Wavelength Temperature Coefficient</b>	<b>nm/°C</b>		<b>0.32</b>	
<b>Wavelength Current Coefficient</b>	<b>nm/mA</b>		<b>0.06</b>	
<b>Output Power Stability (8h)</b>	<b>%</b>		<b>±1</b>	<b>±4</b>
<b>Output Power Adjustable Range</b>	<b>%</b>	<b>0</b>		<b>100</b>
<b>Operating Current</b>	<b>mA</b>	<b>40</b>	<b>80</b>	<b>120</b>
<b>Threshold Current</b>	<b>mA</b>	<b>15</b>	<b>20</b>	<b>25</b>
<b>Operating Voltage</b>	<b>V</b>	<b>7</b>	<b>9</b>	<b>12</b>
<b>Chip Operating Temperature</b>	<b>°C</b>	<b>-20</b>	<b>10</b>	<b>40</b>
<b>Storage Temperature</b>	<b>°C</b>	<b>15</b>	<b>20</b>	<b>65</b>
<b>Dimensions</b>	<b>mm</b>	<b>340(L) × 240(W) × 100(H)</b>		

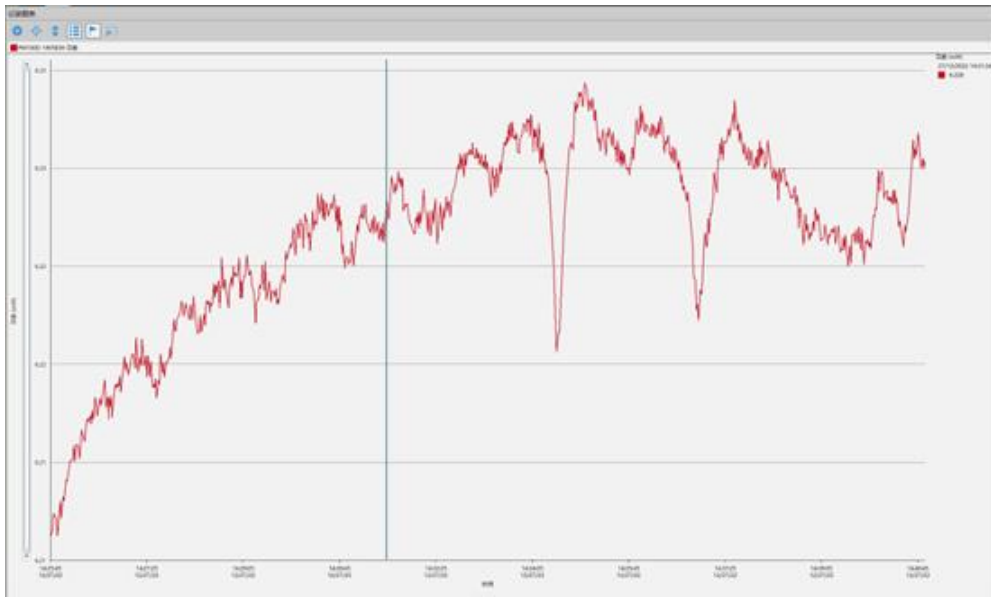
## Spectral Plot (15°C, 90mA)



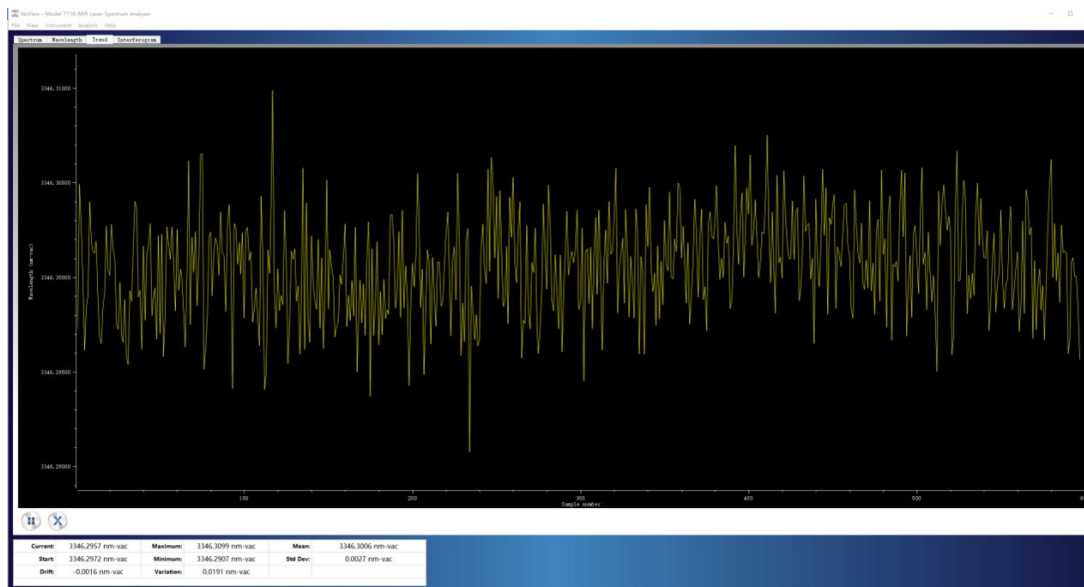
## Power Curve (15°C)



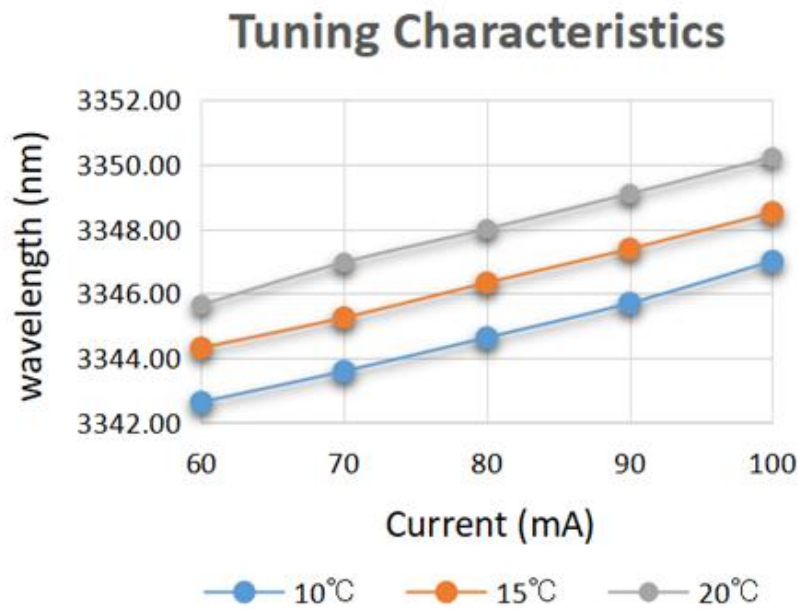
## Power Stability (15°C, 90mA)



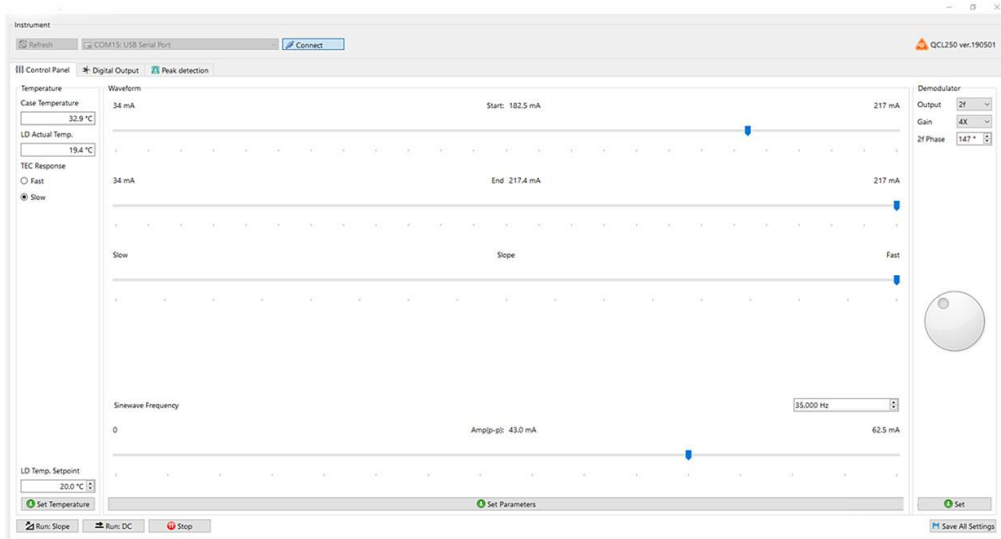
## Wavelength Stability (10°C, 90mA)



## Wavelength Tuning Curve



## Control Software





## Ordering Info

**MP-LDC/TDLAS-MIR-ICL-3348-3-DFB-05**

**LDC: Pure drive**

**TDLAS: With phase-locking**

**Central wavelength:**

**3348: 3.348um**

**Line width:**

**3: 3MHz**

**Output power:**

**05: 5mW**