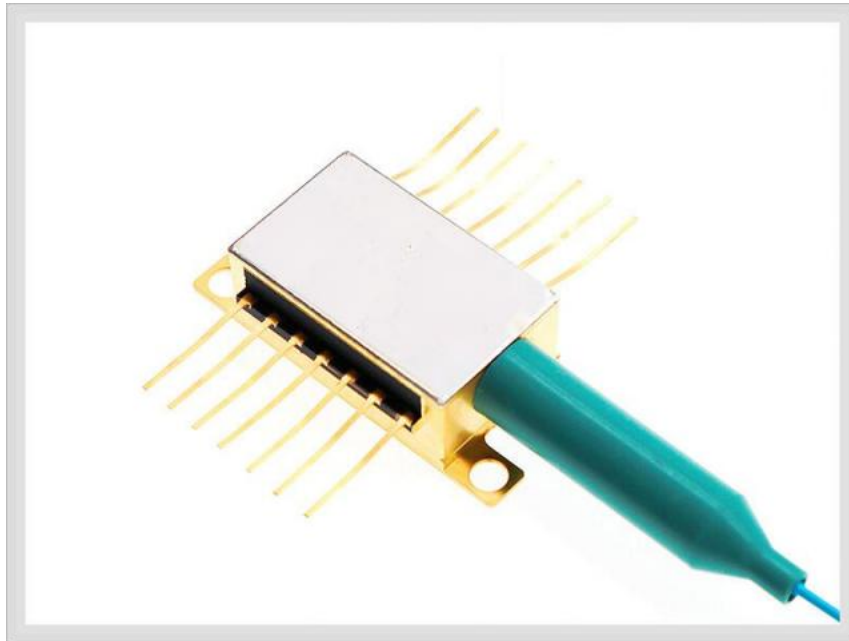




1850nm 2mW DFB Laser Diode for seed laser



● Product Description

The 1850nm DFB laser diode module is a laser source with excellent cost performance and high coherence. The DFB laser diode chip adopts the industry-standard 14-pin butterfly package. A Thermoelectric Cooler (TEC) and a Photodetector (PD) are integrated inside the package, which features hermetically sealed reliability.



● Product features

Narrow linewidth: < 2 MHz ; Excellent wavelength control and stability ;

Industry-standard 14-pin butterfly package ; Mode-hop-free tuning ;

Ultra-high reliability; Customizable wavelength available on request

● Part Number

MP-DFB-1850-2-A81-14BF-SA

● Application area

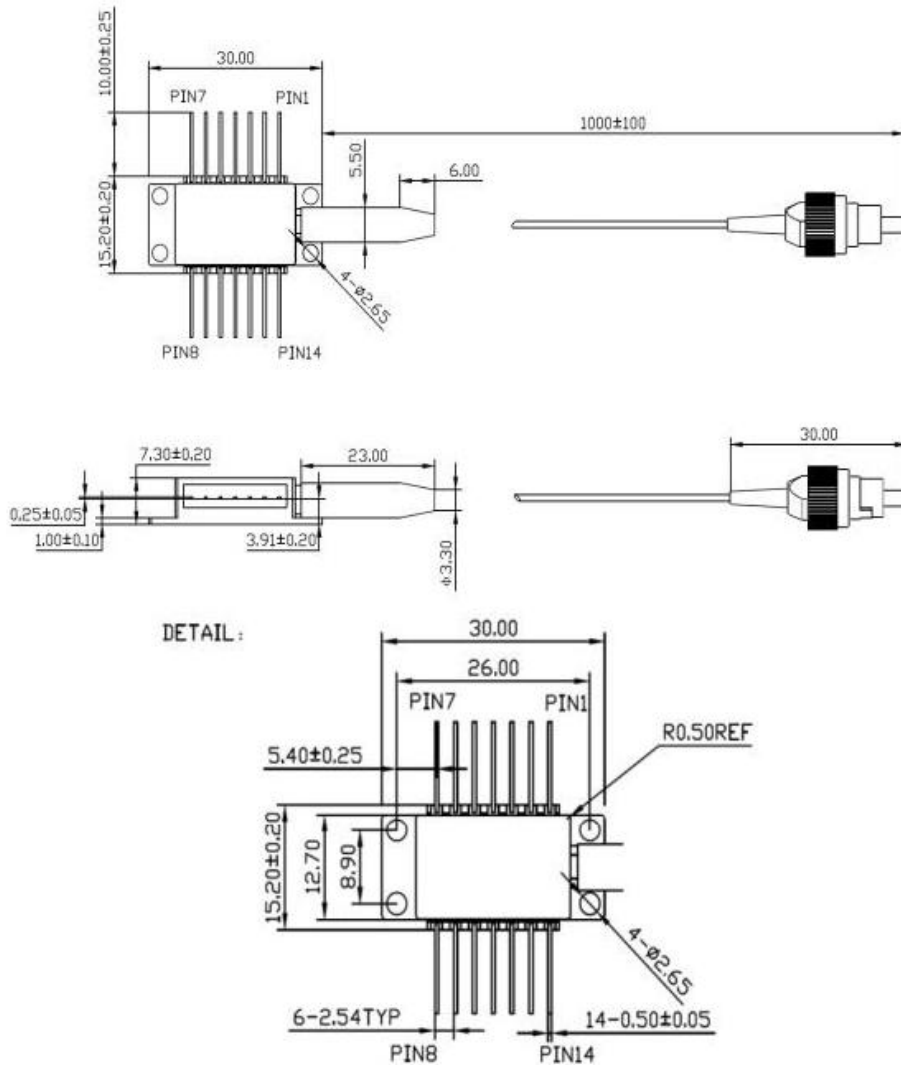
Tunable Diode Laser Absorption Spectroscopy (TDLAS) | Methane (CH₄)

Monitoring

● Core parameters

Central Wavelength	Output Power
1850nm	2mW

● Dimension Drawing



● General Parameters

Detailed Parameters

Technical Specifications

Parameter	Symbol	Min.	Typical	Max.	Unit
Central Wavelength	λ	1849	1850	1851	nm



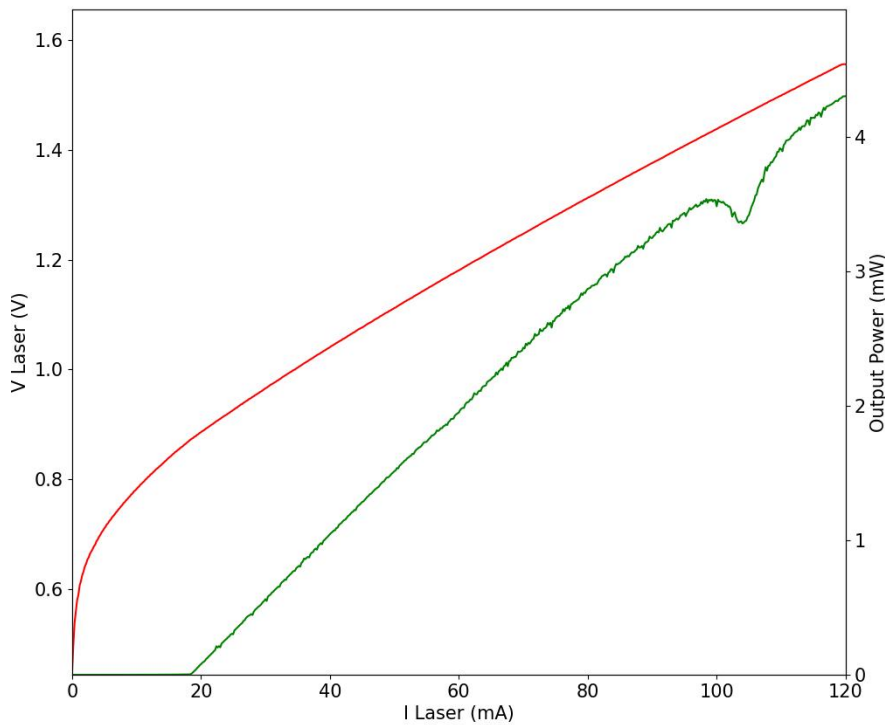
Side Mode Suppression Ratio (SMSR)	SMSR	30	40	-	dB
Threshold Current	I_{th}	-	20	30	mA
Operating Current	I_{op}	-	80	120	mA
Chip Output Power	P_f	2	3	5	mW
Quantum Efficiency	η	0.08	0.12	-	mW/mA
Current Tuning Coefficient	Δλ/ΔI	-	0.015	-	nm/mA
Temperature Tuning Coefficient	Δλ/ΔT	-	0.12	-	nm/K
Forward Voltage	V_f	-	1.3	2	V
Thermistor Resistance	R_T	9.5	10	10.5	kΩ
Thermistor Temperature Coefficient	-	-	-4.4	-	%/° C
Fiber Connector	-	FC/APC			



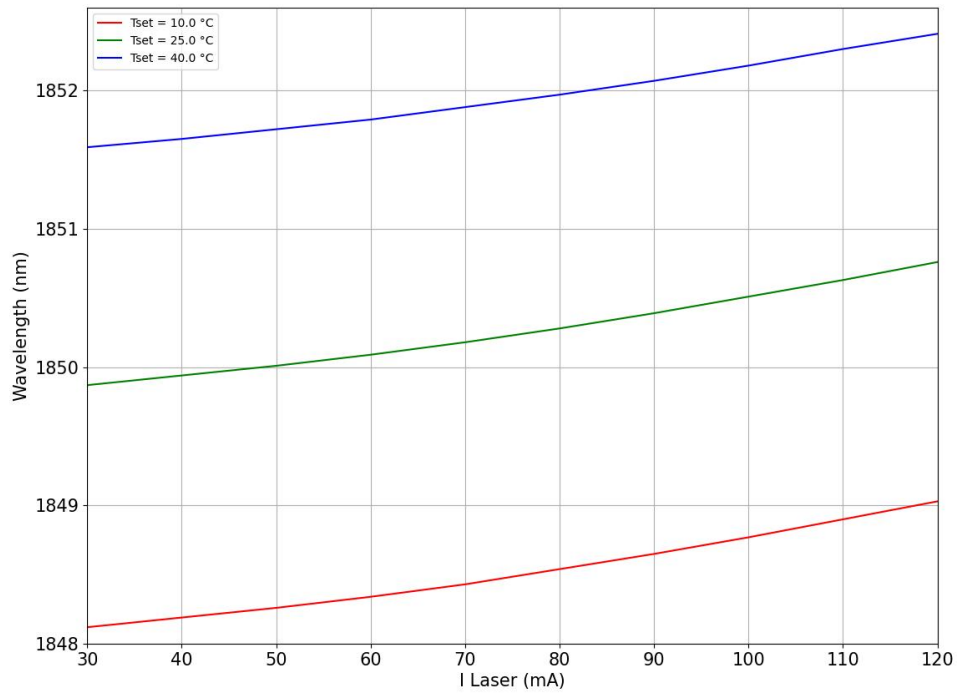
Spectrum



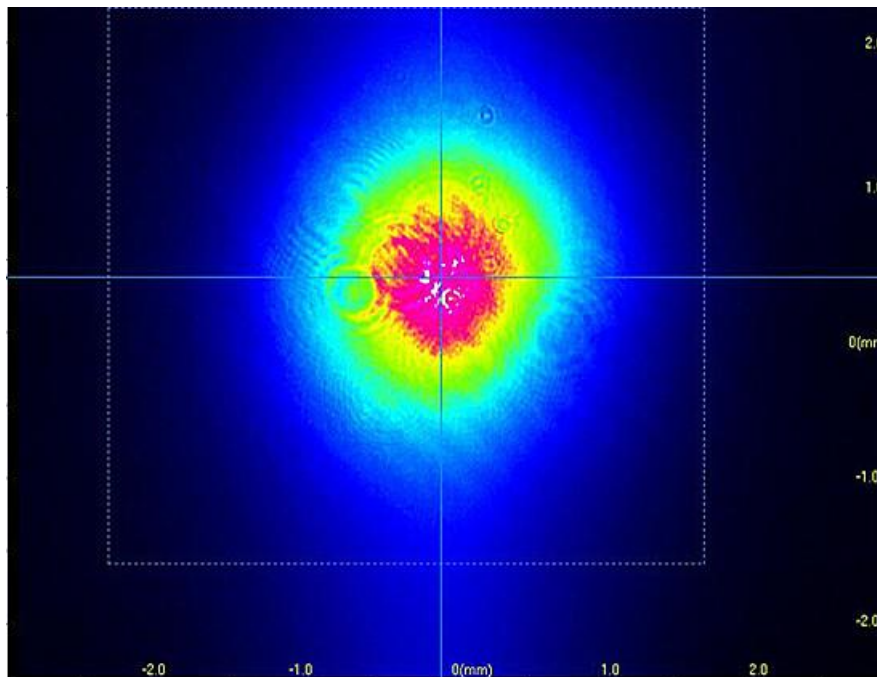
L-I Curve



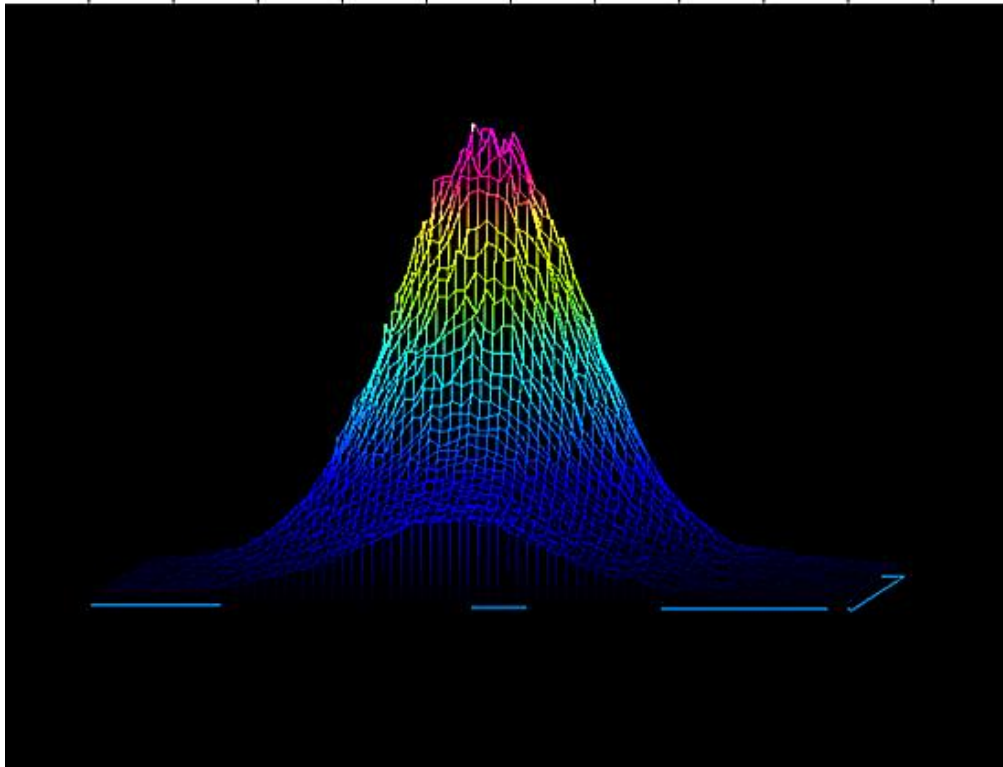
Tuning Characteristics



Wavelength Stability

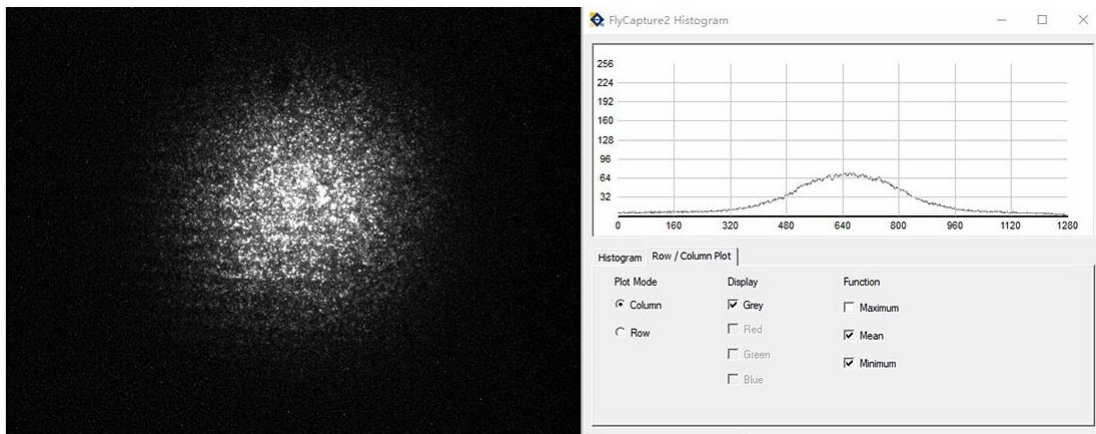


2D

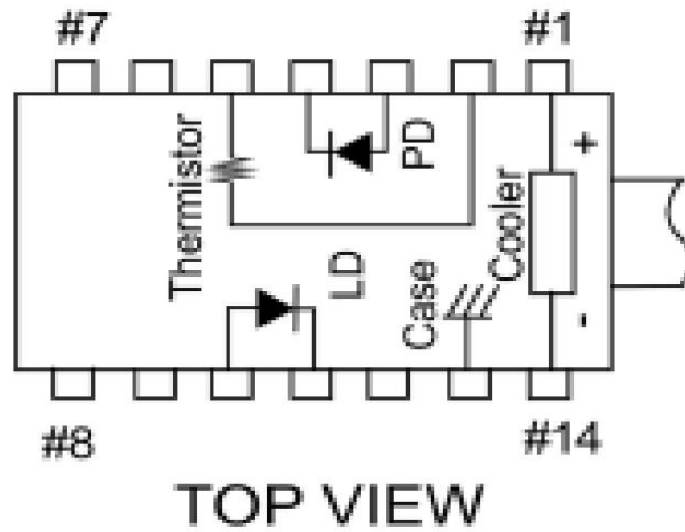


3D

Camera Analysis



Pin Definition



PIN#	Definition	PIN#	Definition
1	TEC (+)	8	N/C
2	Thermistor	9	Laser Cathode (-)
3	Detector Anode (-)	10	Laser Anode (+)
4	Detector Cathode (+)	11	N/C
5	Thermistor	12	N/C
6	N/C	13	Case Ground
7	N/C	14	TEC (-)



Absolute Maximum Ratings

Item	Unit	Min.	Typical	Max.
Case Temperature	° C	-5	25	70
Chip Temperature	° C	+10	25	40
Operating Current	mA	0	100	120
Forward Voltage	V	0.8	1.2	1.8
TEC Current	A	-	-	1.2
Reverse Voltage (LD)	V	-	-	2.0
Reverse Voltage (PD)	V	-	-	20

Order information

MP-DFB-□□□□-☆-A8▽-XX

□□□□: Wavelength

1512: 1512nm

1653.7: 1653.7nm

1850: 1850nm

☆ : Output Power



A: 2mW

B: 5mW

▽: Wavelength Tolerance

1: ±1nm

2: ±2nm

XX: Fiber and Connector Type

SA=SMF-28E+ FC/APC

SP=SMF-28E+ FC/PC

PP=PM Fiber+ FC/PC

PA=PM Fiber+ FC/APC