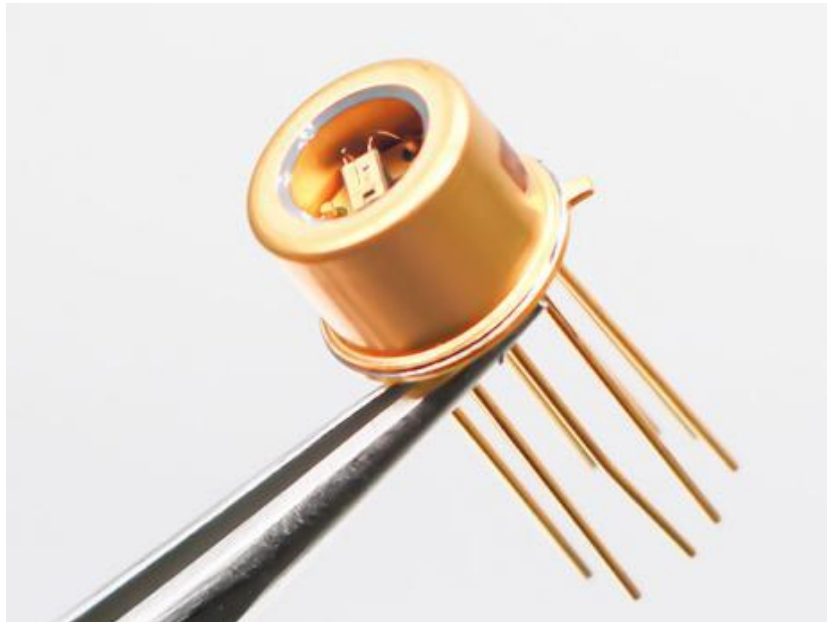


760nm 1mW TO5 SM VCSEL laser diode



● Product Description

Single-mode VCSEL lasers feature high optical output power, narrow linewidth and excellent consistency, which are highly favored by domestic research customers. Our available in-stock wavelengths include 760 nm and 764 nm. Among them, the 760 nm laser is applied for TDLAS oxygen detection; the 795 nm model is for Rb atomic clock experiments; and the 852 nm model is for Cs atomic cooling. control, it is a cost-effective option for rubidium atomic spectrum D1 transition research.

● Product features

Matched with oxygen absorption lines ; Ultra-narrow spectral linewidth ;

Low-power consumption design ; Single-mode fiber coupling ; Industrial-grade reliability

● Part Number

MP-VCS-760-1-TO5-SM-TEC

● Application area

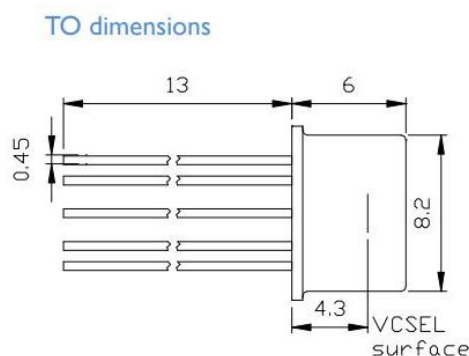
Medical respiratory monitoring | Industrial safety | Environmental monitoring |

Combustion control | Scientific research experiments

● Core parameters

Center Wavelength
760nm

● Dimension Drawing



● General Parameters

Technical parameters

Parameters	symbol	Min. value	Typical values	Max. value	unit	Note:
Emission wavelength	λ_R	Min:759nm,TPY.760nm ,MAX 761nm ,Note:T:20°C, $I_{tec}=0$, $P_{op}=0.3mW$				
Threshold current	I_{TH}		0.5		mA	
Output power	P_{opt}	0.25			mW	
Threshold voltage	U_{TH}		1.8		V	
Laser current	I_{OP}			2	mA	$P_{opt} = 0.3 mW$
Laser voltage	U_{OP}		2		V	$P_{opt} = 0.3 mW$
Electro-optical conversion rate	η_{WP}		12		%	$P_{opt} = 0.3 mW$
Slope performance	η_s		0.3		W/A	
Differential series resistors	R_s		250		Oh	$P_{opt} = 0.3 mW$
3dB modulation bandwidth	$v@3dB$	0.10			GHz	$P_{opt} = 0.3 mW$ (due to ESD protection)

						diodes)
Relative noise intensity	RIN		-130	-120	dB/Hz	$P_{opt} = 0.3 \text{ mW @ } 1 \text{ GHz}$
Wavelength-tuned current			0.6		nm/mA	
Wavelength Tuning Temperature			0.06		nm/K	
Thermal resistance	$R_{thermal}$	3		5	K/mW	
Edge mode suppression		25			dB	$I = 2 \text{ mA}$
Beam divergence	θ	10		25	$^{\circ}$	$P_{opt} = 0.3 \text{ mW, full } 1/e^2 \text{ band width}$
Spectral bandwidth			100		MHz	$P_{opt} = 0.3 \text{ mW}$
TEC current				500	mA	
NTC resistor		9.5	10	10.5	k Ω	T:25 $^{\circ}$ C
NTC temperature dependence			$10/\exp[3892 \cdot (1/298k - 1/T_{op})]$		k Ω	TEC current < 200mA

Absolute maximum

Storage temperature -40~125°C

TO operating temperature -40~85°C

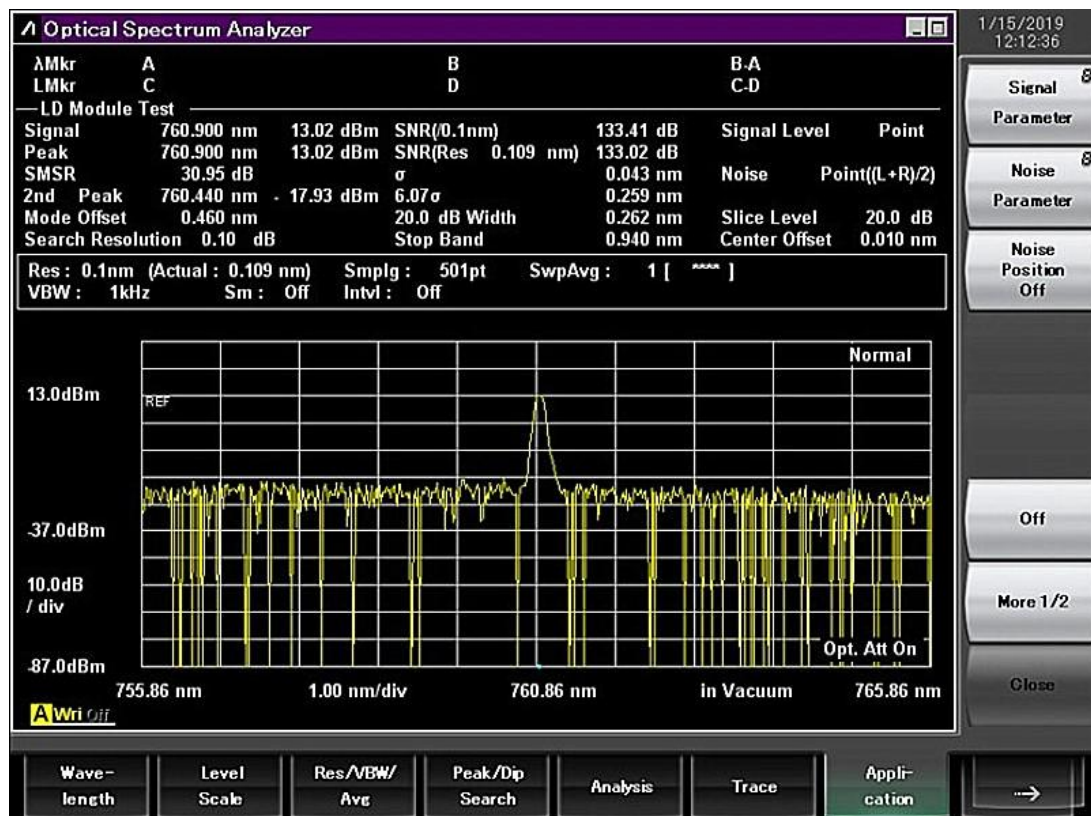
Forward laser current 3mA

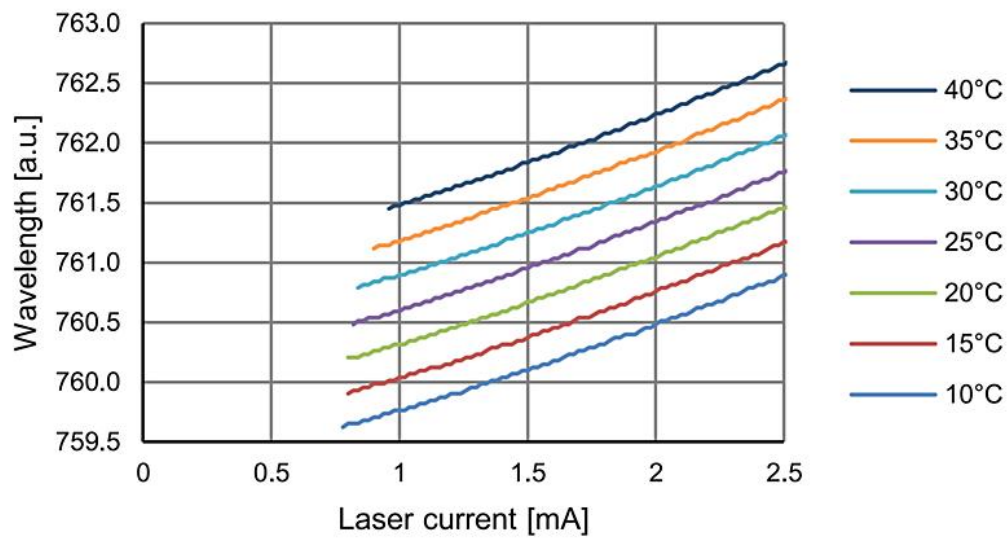
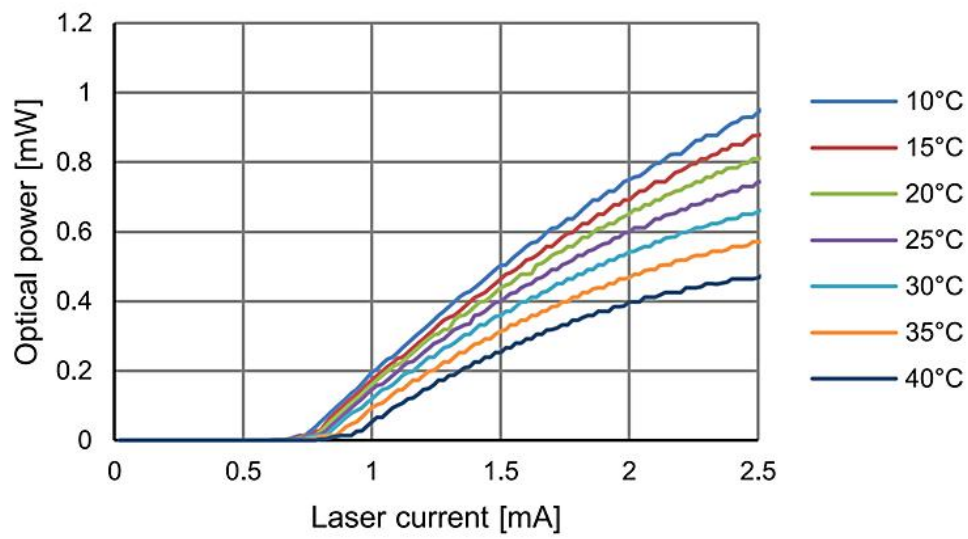
VSEL Reverse Voltage 3V

Welding temperature * 270C°

*TEC temperature must be below 150°C

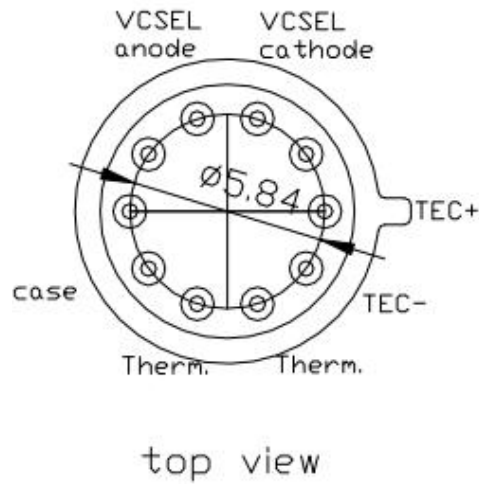
Spectral diagram





Pin definition

Pin configuration



Unit: mm

