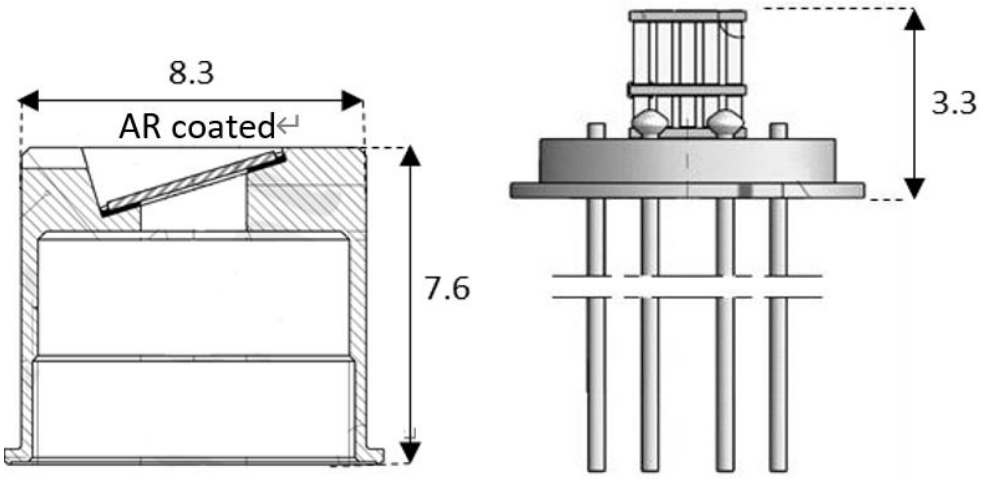
760nm 单模垂直腔面发射激光器 VCSEL TO39



产品特点

760nm 单模垂直腔面发射激光器（VCSEL）具有出光功率高，线宽窄以及良好的一致性等优点,2nm 调谐范围,专为可调谐半导体激光吸收光谱（TDLAS）应用而设计,内置防静电（ESD）保护.

产品型号

P760/01_2

应用领域

-

核心参数

760nm

型号参数

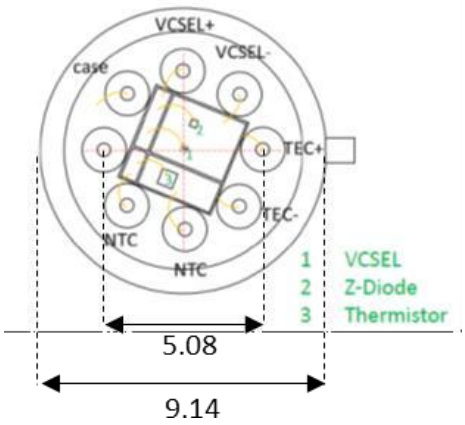
最大额定值

2.5 mA 激光正向电流

10 mA 反向电流

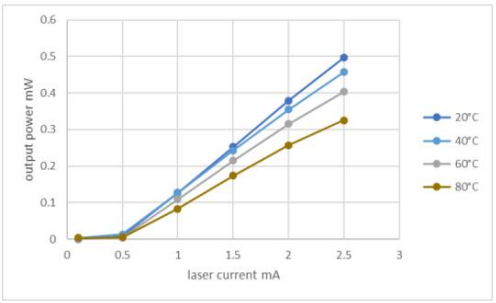
参数	符号	单位	最小值	典型值	最大值	条件
发射波长	λ_R	nm	759	760	761	T = 20°C, I_{TEC} = 0, P_{OP} = 0.3 mW
阈值电流	I_{TH}	mA		0.5		T = 20°C
输出功率	P_{opt}	mW	0.3			T = 25°C
激光电流	I_{OP}	mA			2.0	2.0 P_{opt} = 0.3 mW
激光电压	U_{OP}	V		2.0		P_{opt} = 0.3 mW
斜率效率	η_S	W/A		0.3		T = 20°C
差分串联电阻	R_S	Ω		250		P_{opt} = 0.3 mW
3db 调制带宽	ν3dB	GHz	0.1			P_{opt} = 0.3 mW (ESD 保护二极管)
波长调谐电流		nm/mA		0.6		
波长超温调谐		nm/K		0.06		
热阻(VCSEL 芯片)	$R_{thermal}$	K/mW	3.0		5	
边模抑制		dB	20			
光束发散度	θ	°	10		25	P_{opt} = 0.3 mW, 全宽 $1/e^2$
集成 TEC 和热敏电阻集成 TEC 和热敏电阻						
TEC 电流		mA			500	
NTC 热敏电阻		KΩ	10	10	11	T = 25°C
NTC 温度依赖性		KΩ				10/exp[3892·(1/298K-1/T_{op})]

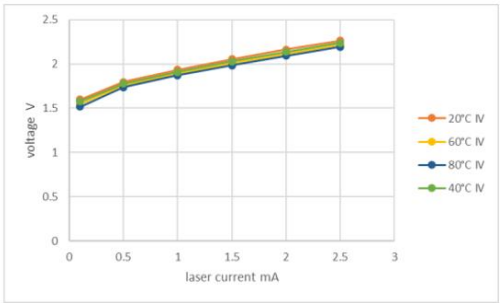
俯视图



测试表

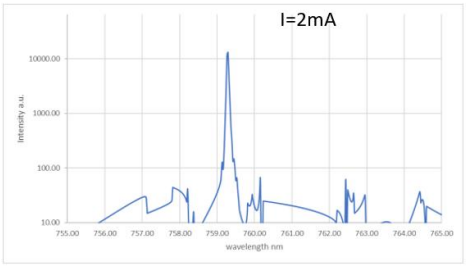
LIV(T)



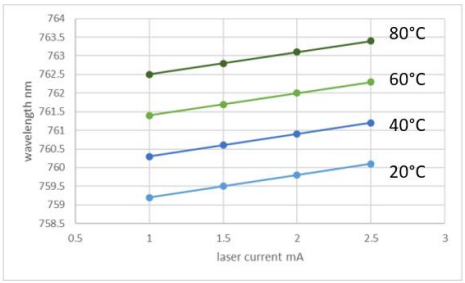


横轴：laser current 激光电流
纵轴：output power 输出功率 voltage 电压

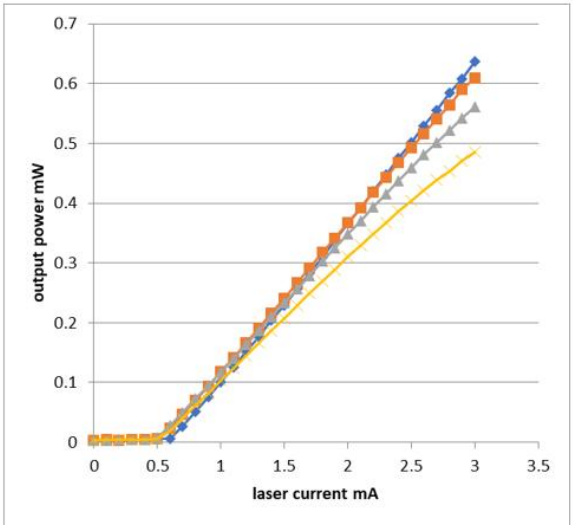
OS(T)

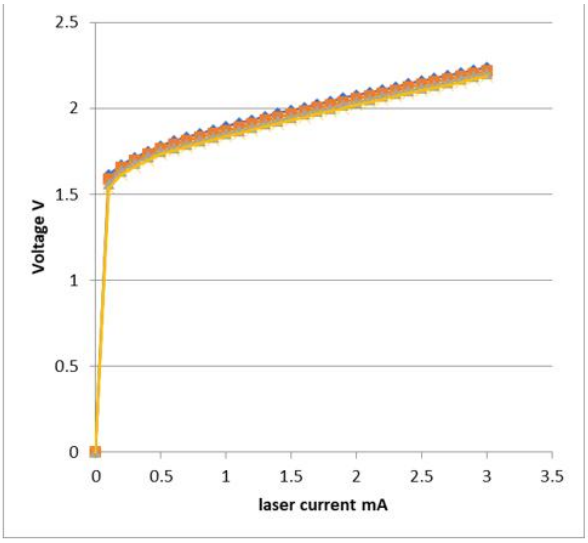


纵轴：intensity 强度　　横轴：wavelength 波长

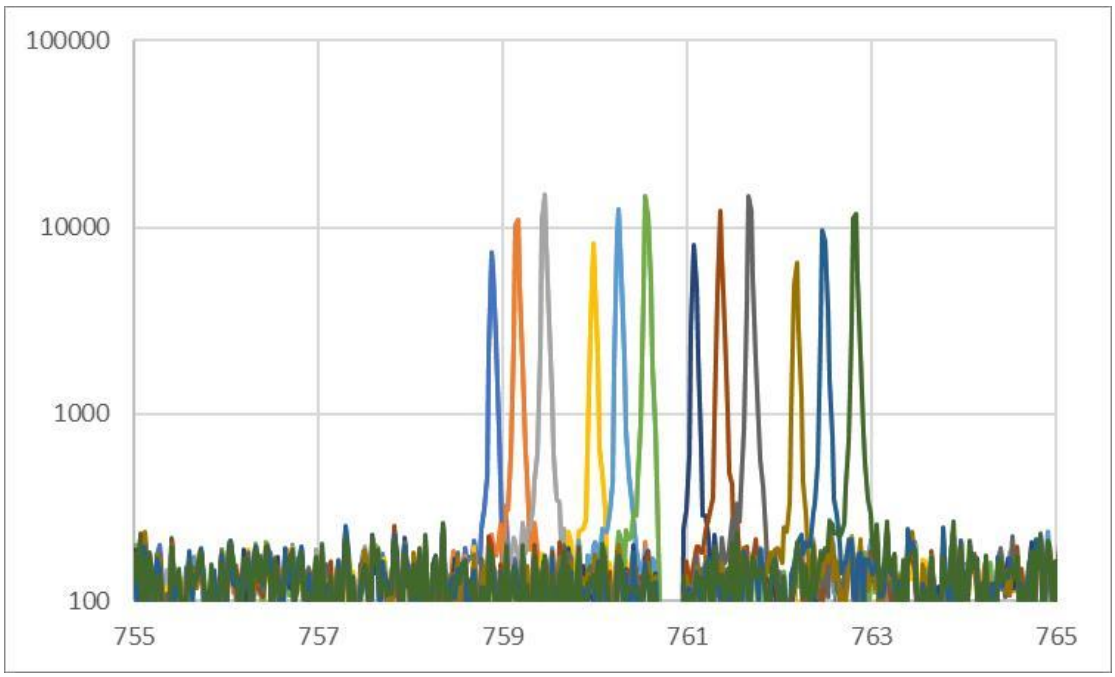


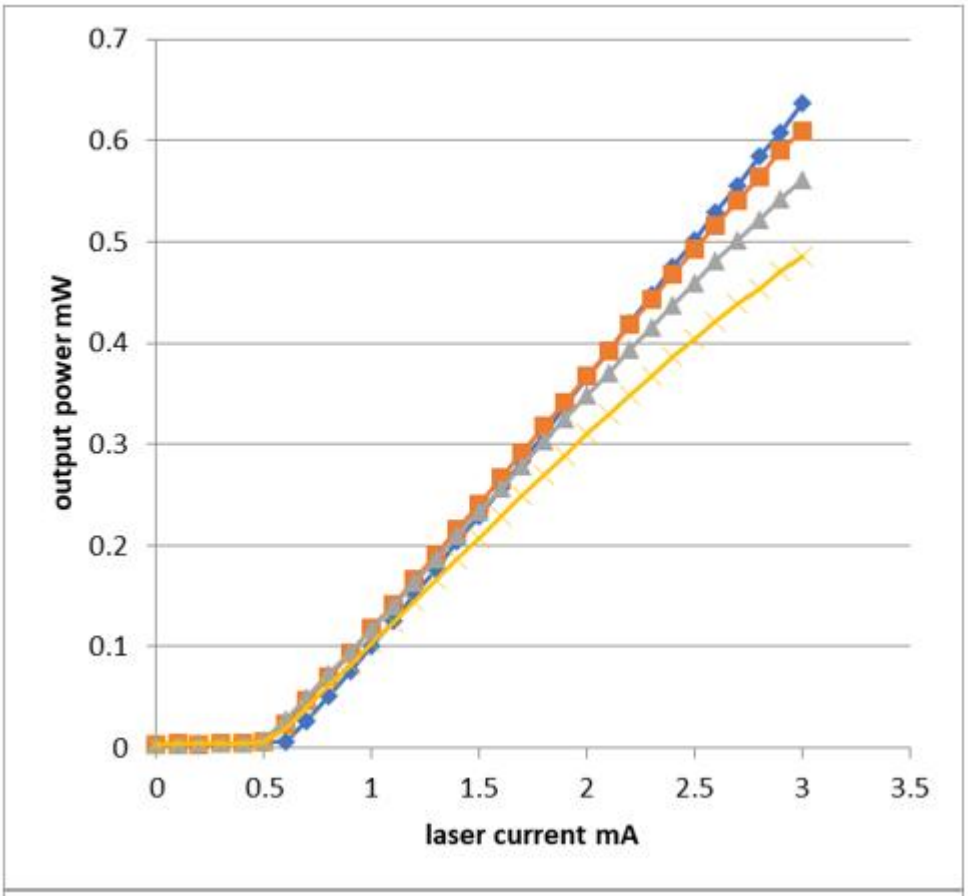
老化时间 200h@80°C, 2mA

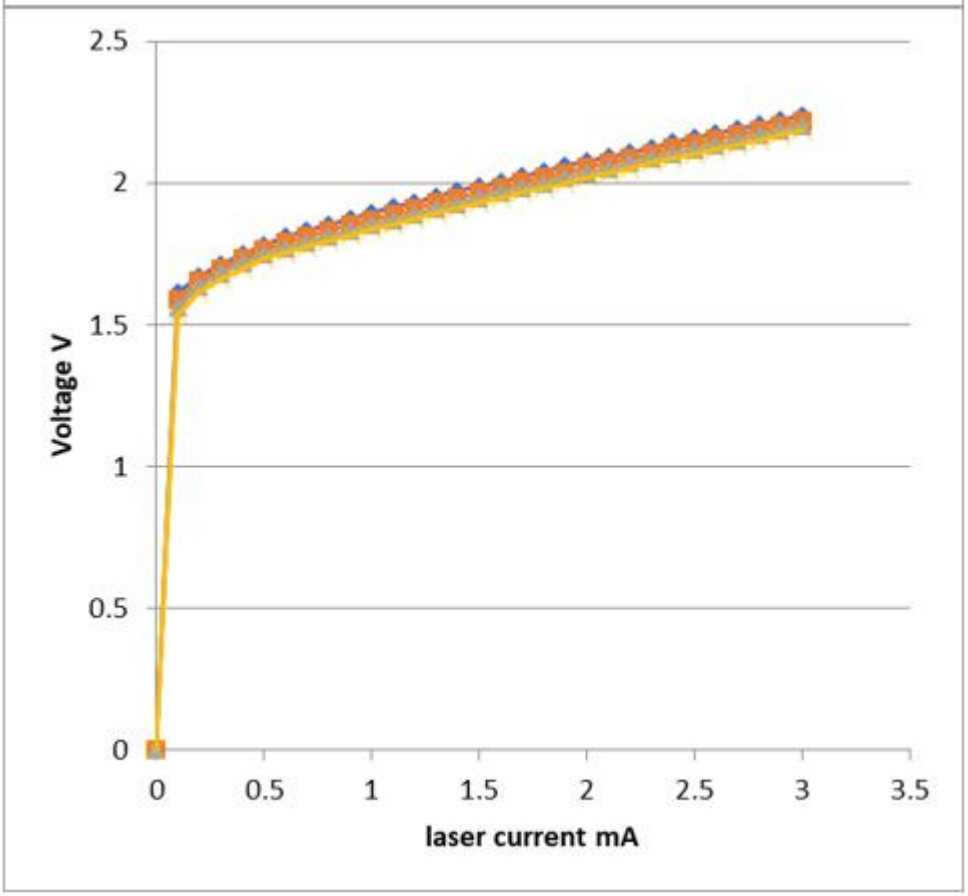




波长 nm




0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
output power mW
0
0.5
1
1.5
2
2.5
3
3.5
laser current mA


2.5
2
1.5
1
0.5
0
Voltage V
0
0.5
1
1.5
2
2.5
3
3.5
laser current mA