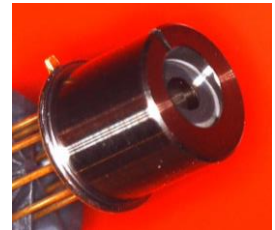
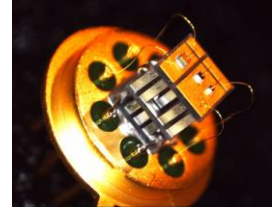


P763-VCSEL

- ✓ 763 nm single-mode VCSEL
- ✓ 2 nm tuning range
- ✓ Designed for TDLAS application
- ✓ ESD protection built in



Electro-Optical performance

ELECTRO-OPTICAL CHARACTERISTICS						
PARAMETER	SYMBOL	UNIT	MIN	TYP	MAX	CONDITIONS
Emission wavelength	λ_R	nm	758 761	760 763	762 765	$T = 20^\circ\text{C}, I_{OP} = 2.0 \text{ mA}$
Threshold current	I_{TH}	mA		0.5	1.0	$T = 20^\circ\text{C}$
Output power	P_{opt}	mW	0.3			$T = 20^\circ\text{C}$
Laser current	I_{OP}	mA			2.0	$P_{opt} = 0.3 \text{ mW}$
Laser voltage	U_{OP}	V		2.0		$P_{opt} = 0.3 \text{ mW}$
Slope efficiency	η_S	W/A		0.3		$T = 20^\circ\text{C}$
Differential series resistance	R_S	Ω		120		$T = 20^\circ\text{C}, I_{OP} = 2.0 \text{ mA}$
3dB modulation bandwidth	ν_{3dB}	GHz	0.1			$T = 20^\circ\text{C}, I_{OP} = 2.0 \text{ mA}$ (due to ESD protection diode)
Wavelength tuning over current		nm/mA	0.2	0.4	0.6	
Wavelength tuning over temperature		nm/K		0.06		
Thermal resistance (VCSEL chip)	$R_{thermal}$	K/mW	3		5	
Side mode supression		dB	20			$T = 20^\circ\text{C}, I_{OP} = 2.5 \text{ mA}$
Beam divergence	θ	$^\circ$	10		25	$T = 20^\circ\text{C}, I_{OP} = 2.0 \text{ mA}, \text{ full width } 1/e^2$
Integrated TEC&thermistor						
TEC current		mA			200	
NTC Thermistor Resistance		K Ω	9.5	10	10.5	$T = 25^\circ\text{C}$
NTC Temperature Dependence		K Ω	$10/\exp[3892 \cdot (1/298K - 1/T_{op})]$			

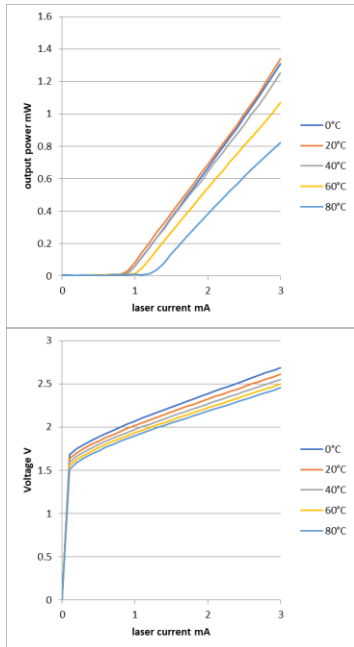
Maximum ratings

- 3 mA laser forward current
- 10 mA reverse current

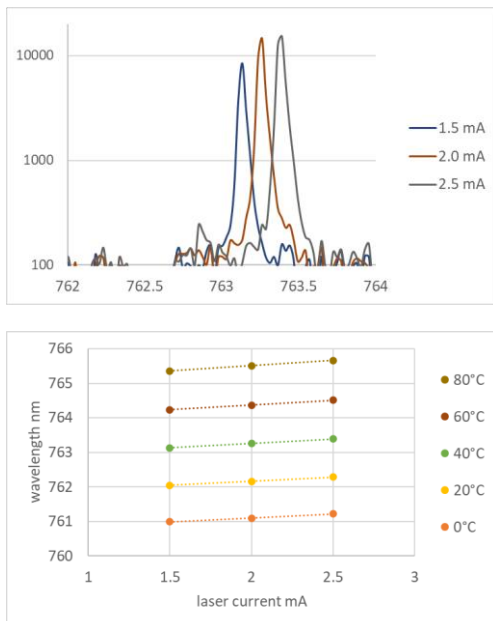


Laser class 1M

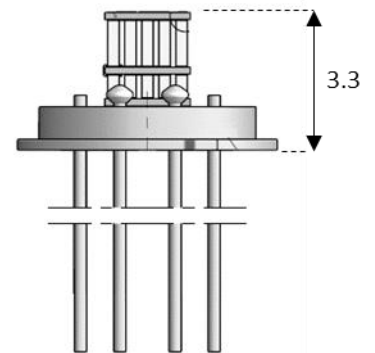
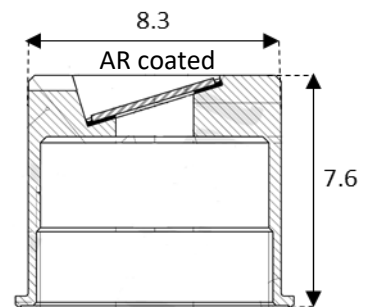
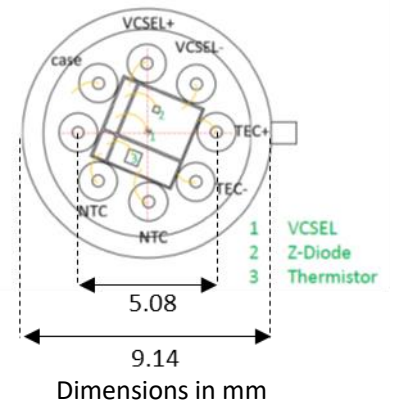
LIV(T)



OS(T)



Top view TO39



Product ID: P763-VSCEL

TO39 w/ TEC, thermistor & ESD protection