

## 795nm High Single Mode Power VCSEL in TO Can with TEC

(Part Number: VCSEL-795-1mW-SM-TOTEC)

### Applications:

1. Magnetometers;
2. Gyroscopes;
3. Quantum Sensing.

### Features:

1. High single-transverse-mode power ( $\geq 1\text{mW}$ ) under high temperature (up to  $70^\circ\text{C}$ );
2. Linear polarization with high polarization extinction ratio (up to 25dB);
3. Narrow linewidth (spectral width).

**Specification:**

<b>ELECTRO-OPTICAL CHARACTERISTICS</b>				
<b>PARAMETER</b>	<b>MIN</b>	<b>TYP</b>	<b>MAX</b>	<b>TEST CONITIONS</b>
Emission Wavelength (nm)		794.98		Vacuum
Chip Temperature (°C)	30		70	adjusted by TEC
Threshold Current (mA)	0.6	0.8	1.0	
Output Power (mW)		1		@3mA
Differential Series Resistance (Ω)		120		
Wavelength Tuning Over Temperature (nm/°C)		0.06		
Operating Voltage (V)		2.5		
Side Mode Suppression (dB)		25	30	@3mA
Polarization Extinction Ratio (dB)		20	25	@3mA
Beam Divergence (° )		10		1/e <sup>2</sup>
Spectral Bandwidth (MHz)		70		Unmodulated
Maximum TEC Current (mA)		1100		@Maximum Temperature Difference
TEC Maximum Temperature Difference (°C)		70		
Maximum Cooling Capacity of TEC (W)		0.4		
NTC Thermistor Resistance (kΩ)		10		
Beta Value of Thermistor(K <sup>-1</sup> )		3930		
<b>Thermal Parameters</b>				
Operating Temperature Range (°C)	-10		55	
Storage Temperature Range (°C)	-40		125	
<b>Package</b>				
Package Type	TO46 5pin/6pin			

**Pictures:**

