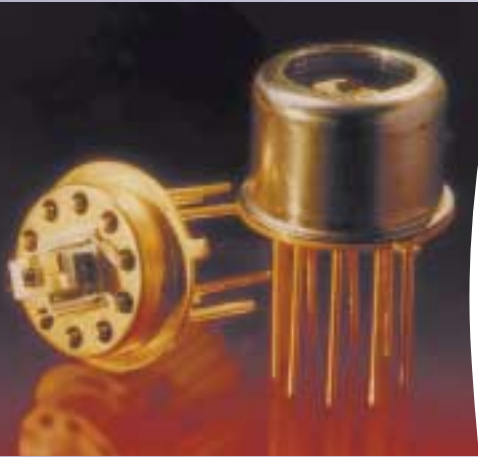


VCSEL-Peltier microsystem



Features

- VCSEL, PELTIER ELEMENT AND THERMISTOR
- CUSTOMER-SPECIFIED LASER WAVELENGTH
759 nm – 766 nm
790 nm – 795 nm
850 nm – 853 nm
- AR COATED WINDOW
- NO MODE HOPPING
- FAST TEMPERATURE TUNING
- VERY LOW SYSTEM POWER

Thermo-electric cooler characteristics

Parameter	Symbol	Conditions	Ratings			Units
			Min	Typ	Max	
Operating current	I_{op}			5		mA
Operating voltage	V_{op}			0.1		V
Max. heat absorbed	Q_{max}	$I = I_{max}, \Delta T = 0$		0.22		W
Max. heat absorbed	ΔT_{max}	$I = I_{max}$		67		°C

(T=25°C)

Thermistor characteristics (type 10K3CG3)

Parameter	Symbol	Conditions	Ratings			Units
			Min	Typ	Max	
Operating temperature range	T_{op}		-55		155	°C
Resistance @ 25°C	R	T = 25°C		10		kΩ
Resistance tolerance	dT	T = 25°C		± 5		%
α parameter	α	T = 25°C		-4.4		%/K
β parameter	β	$0^{\circ} \leq T \leq 50^{\circ}C$		± 3892		K

(T=25°C)

Laser characteristics

see data sheet for particular customer-specific laser installed

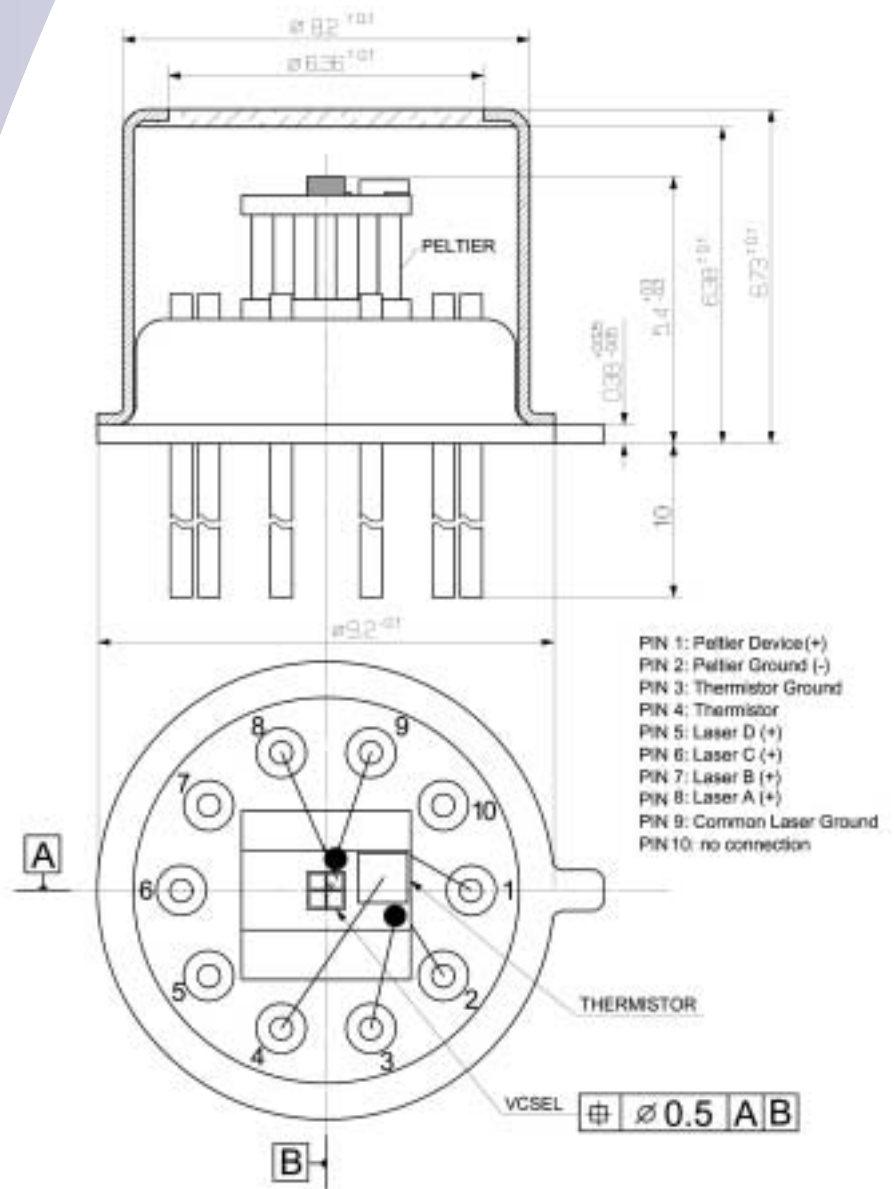
Absolute maximum ratings

Parameter	Symbol	Rating	Units
Tec peak current	$I_{max, TEC}$	800	mA
Tec peak voltage	$V_{max, TEC}$	0.48	V
System power dissipation	P_{tot}	0.45	W
Operating temperature	T_{op}	0 to +55	°C
Storage temperature	T_{stg}	-40 to +80	°C

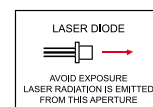
TEC = thermo-electric cooler (Peltier element), (T=25°C)

μTEC

VCSEL-Peltier
microsystem



The above specifications are subject to change without notice



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