

VCSEL in
TO package

Single-Mode

0.3 mW

763 nm \pm 1 nm



> Narrow Spectral
Bandwidth

> \pm 2 nm Tunability

> TO with TEC,
NTC and AR
coated Window

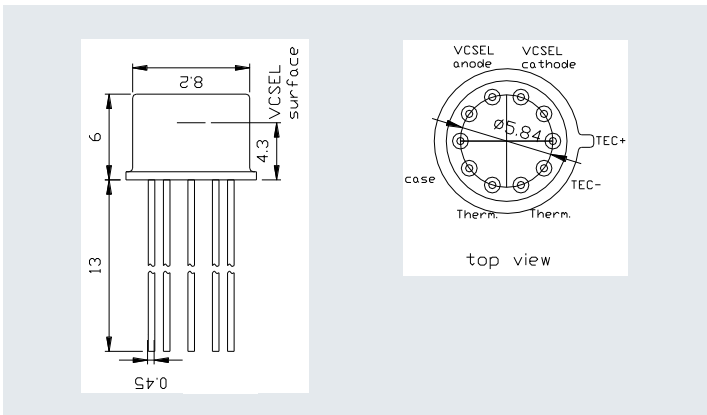
> Optimized for
O2 Sensing

Datasheet: 763 nm ± 1 nm Single-Mode VCSEL TO5

Electro-optical characteristics (T = 20°C, I _f = 1.75 mA unless otherwise stated)					
Parameter	Units	Min.	Typ.	Max.	Notes
Emission wavelength	nm	762.0		764.0	
Threshold current	mA		0.5		
Output power	mW	0.25			
Threshold voltage	V		1.8		
Average operating forward current	mA			2	P _{opt} = 0.3 mW
Forward voltage	V		2		P _{opt} = 0.3 mW
Slope efficiency	W/A		0.3		
Differential series resistance	Ω		250		P _{opt} = 0.3 mW
Relative intensity noise	dB/Hz		-130	-120	P _{opt} = 0.3 mW @ 1 GHz
Wavelength tuning over current	nm/mA		0.6		
Wavelength tuning over temperature	nm/K		0.06		
Thermal resistance (VCSEL chip)	K/mW	3		5	
Side mode suppression	dB	25			I = 2 mA
Beam divergence	°	10		25	P _{opt} = 0.3 mW, full width 1/e ²
Spectral bandwidth	MHz		100		P _{opt} = 0.3 mW
TEC current	mA	-150 (heating)		+300 (cooling)	Proper heatsink required
TEC voltage	V			0.5	I = I _{min} to I _{max}
NTC resistance	kΩ	9.5	10.0	10.5	T = 25°C
NTC alpha	%/°C		-4.39		T = 25°C
NTC beta	K		3892		T = 0°C, T = 50°C

Dimensions

*ESD damage treshold > 2 kV with integrated ESD protection diode



Type	Packaged chip
Ordering number	ULM763-01-TN-S05FTT

For more information visit
www.trumpf.com/s/VCSEL-solutions

Safety information:

- Invisible laser radiation / avoid beam exposure / class 3B laser product
- Electrostatic sensitive devices / observe precautions for handling

