


795nm Single mode VCSEL in tilted cap TO46

Features:

- Single transverse and lateral mode emission
- No polarization flips in single mode current range
- Tilted window hermetic TO46 package
- Packaged with 30K Ohm thermistor
- Absorptive and AR-coated glass window
- RoHS compliant 

Applications:

- Optical pumping of atomic clocks



Electro – Optical Characteristics: (T=50±3°C unless otherwise noted)

Parameter	Symbol	Conditions	Ratings			Unit
			Min	Typ	Max	
Threshold current	I_{th}			1.1	2.8	mA
Slope efficiency	η	$I = I_{th} + 0.5mA$	0.08	0.1	0.12	mW/mA
Operating current	I_{op}	$P_{op} = 100\mu W$		2.1	4.0	mA
Maximum output power	P_{max}	$I = 4mA$			1.0	mW
Operating voltage	U_{op}	$P_{op} = 100\mu W$		2.0	3.5	V
Threshold voltage	U_{th}	$I = I_{th}$		1.75	2.5	V
Series resistance	R_s	$I = 3mA$		100	200	Ω
Emission wavelength	λ	$P_{op} = 100\mu W$	794.1		795.9	nm
Side mode suppression ratio	SMSR	$P_{op} = 100\mu W$	20			dB
Current tuning coefficient	$\delta\lambda/\delta I$		0.1		0.4	nm/mA
Thermistor resistance	R_{therm}		9.0	10.97	13.0	k Ω
Linewidth	$\Delta\nu$	$P_{op} = 100\mu W, T = 25^\circ C$			30	MHz

SMSR = side mode suppression ratio

Polarization Characteristics: (T=50±3°C)

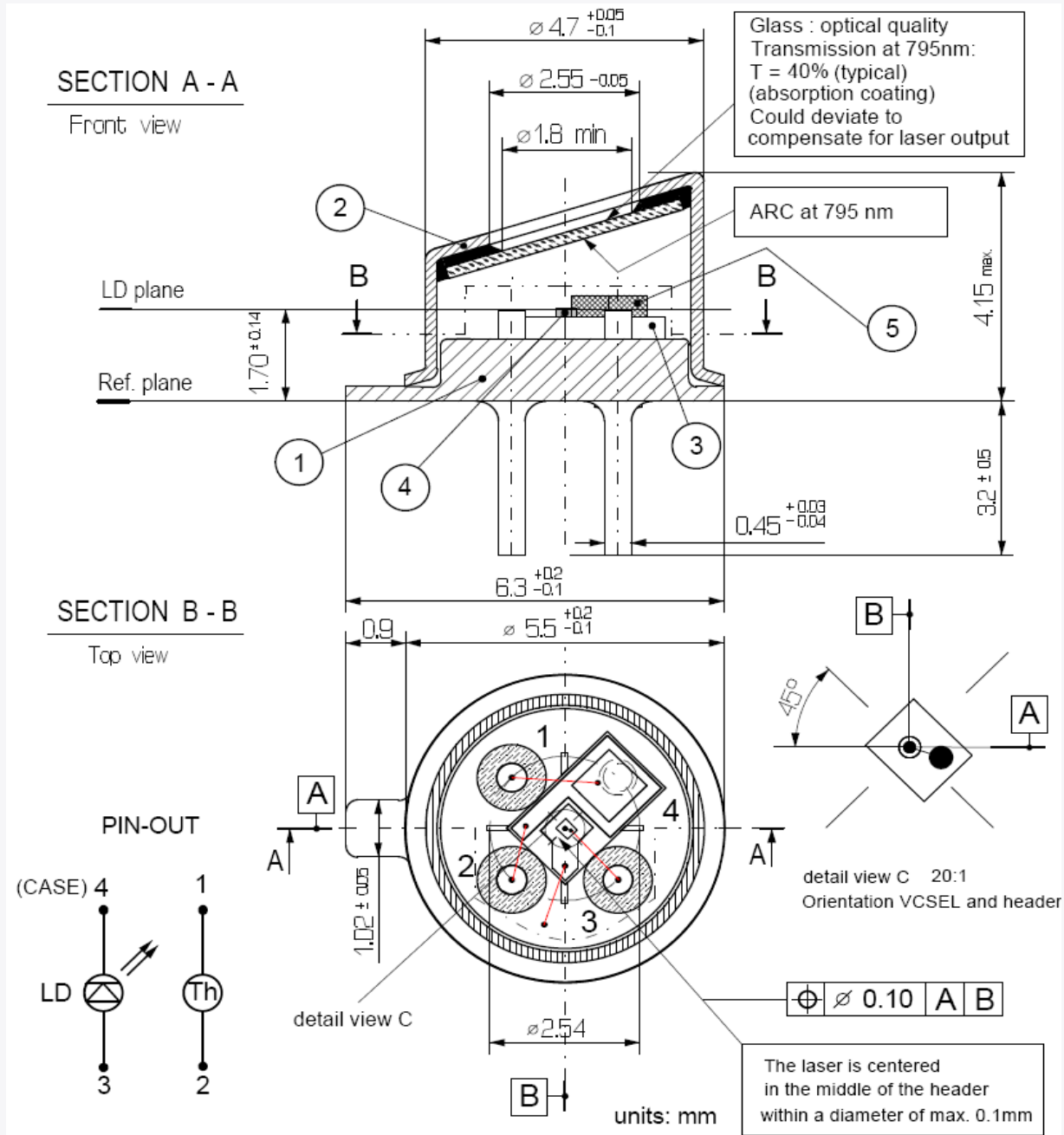
Parameter	Symbol	Conditions	Ratings			Unit
			Min	Typ	Max	
Polarization ratio	Pol_{ratio}	$Pol_{ratio} = \text{minimum of } P_{ver}/(P_{hor}+P_{ver}) \text{ and } P_{hor}/(P_{hor}+P_{ver}), P_{op} = 100\mu W$		0.05	0.15	

The device shall not have any polarization flips defined as sign changes of $P_{ver} - P_{hor}$ at 50±3°C between threshold current and the maximum single mode current below 200μW.

Absolute Maximum Ratings: (T=25°C)

Parameter	Symbol	Ratings		Unit
		Min	Max	
Optical output power	P_{max}		1	mW
Peak forward current	I_{max}		6	mA
Maximum reverse voltage	U_{max}		5	V
Operating temperature	T_{op}	-20	85	°C
Storage temperature	T_{stg}	-40	100	°C
Lead solder temperature (for 10sec)	T_{solder}		260	°C

Mechanical Dimensions and Electrical Connection



RoHS Compliance



Oclaro is fully committed to environment protection and sustainable development and has set in place a comprehensive program for removing polluting and hazardous substances from all of its products. The relevant evidence of RoHS compliance is held as part of our controlled documentation for each of our compliant products. RoHS compliance parts are available to order, please refer to the ordering information section for further details.

Ordering Information:

Product Code	Package	Description
APM2101013300	TO46	794.1...795.9nm

Contact Information

www.oclaro.com

Important Notice

Performance figures, data and any illustrative material provided in this data sheet are typical and must be specifically confirmed in writing by Oclaro before they become applicable to any particular order or contract. In accordance with the Oclaro policy of continuous improvement specifications may change without notice. Further details are available from any Oclaro sales representative.



Caution - use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

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