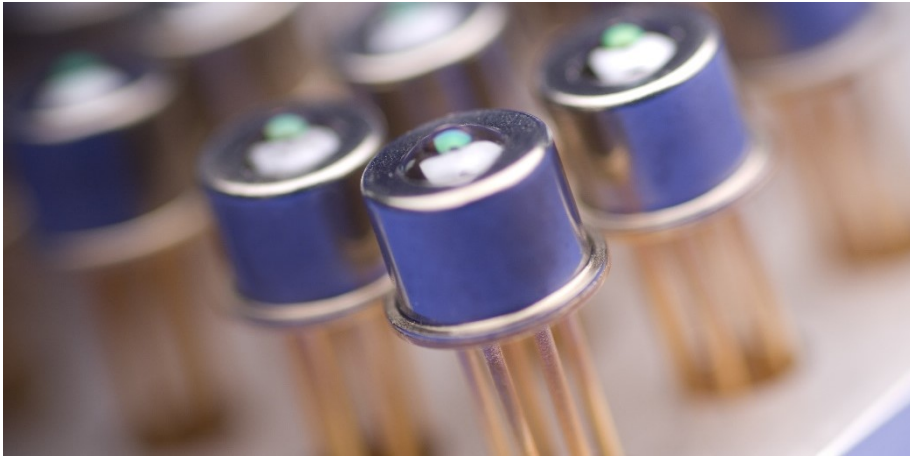


DIODE LASER MODULES FOR ALL APPLICATIONS



DEWAR

TO Can Devices

TO CAN FREE SPACE VCSEL

Free-space TO can VCSEL for OEM's and system integrators who require specifications and performance not available from off-the-shelf devices on short lead time and at low cost.

The Dewar from Alter Technology can accommodate various single mode chip structures from numerous chip manufacturers over multiple wavelengths. With this approach we can offer defined, optical, electrical, thermal and mechanical performance specs in a range of industry standard packages in both prototype and volume quantities.

Key Features

Symmetrical collimated or focused beam with active alignment

Manufactured using qualified processes

Available for volume applications

HIGH VOLUME CAPABILITIES

The Dewar Module enables off the shelf VCSEL chips to be package and collimated in an industrial package.

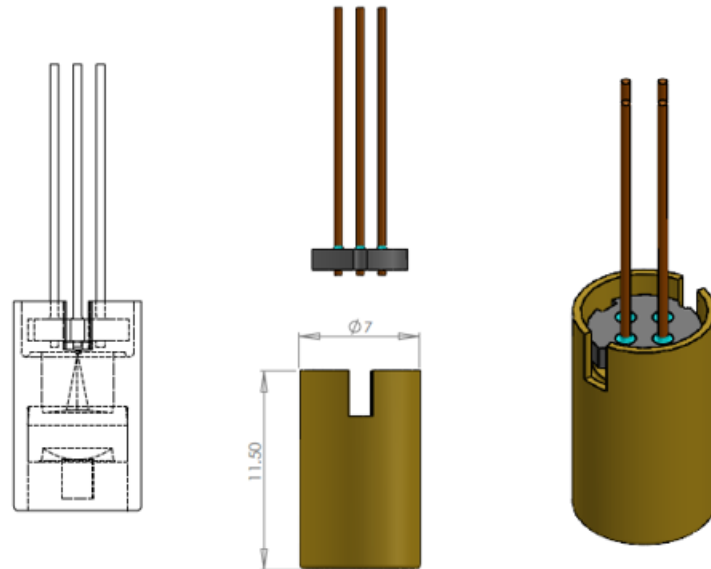
Typical Output Specifications

Chip Type	VCSEL	VCSEL	VCSEL
Mode	Single mode	Single mode	Single mode
Wavelength (nm)	680	850	940
Output Power (mW)	5	6	20
Slope Efficiency	0.7	0.8	0.87
Forward Voltage (V)	2.5	1.9	2.0
Threshold Current (mA)	2.6	2.0	4
Beam Pointing Accuracy	0.1°	0.1°	0.1°
Beam Centralization	0.15 mm	0.15 mm	0.15 mm
Collimation	20 mRad	20 mRad	20 mRad
Beam Diameter	3.8 mm	3.8 mm	3.0 mm

Dewar Chip Design Boundaries

DEWAR		LENSED TO PACKAGE - Characteristics/ Specification*				
Description	Symbol	Min	Typical	Max	Comment	
Chip Parameters						
Wavelength (nm)	λ	400	850	1550		
Optical Output Power (mW)	P_o	0.1 mW	5mW	1W	Higher powers will require TEC	
Chip Beam Divergence (deg)	Θ	1°	8°	20°	Half angle	
Chip size		0.1mm	0.25mm	2.5mm	Overall size including any submounts	
Generic Package Parameters						
Optical Transmission			90%		2 surfaces on lens.	
Operating Temperature (°C)	T_{op}	-20	25	85		
Storage Temperature (°C)	T_{st}	-40	25	100		

Typical Dewar package



Custom Capability

- Higher power versions using optimised AR coatings
- Hermetic sealing
- Temperature controlled via TEC and thermistor
- Low power multi-mode
- Space qualification
- Custom optics
- Non-magnetic package
- SM/MM Fibre output

NOTES

Please note that Alter Technology provides no reliability or life span data or and a limited workmanship warranty on these modules. Alter Technology follows a policy of continuous product improvement and thus specifications are subject to change without notice. All values are subject to Laser Diode availability.

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