

Ridge Waveguide Laser with AR coating



GaAs Semiconductor Laser Diode

Absolute Maximum Ratings

	Symbol	Unit	min	typ	max
Operational Temperature at case	T_C	°C			50
Forward Current	I_F	mA			200
Reverse Voltage	V_R	V			0

Stress in excess of the Absolute Maximum Ratings can cause permanent damage to the device. Operation at the Absolute Maximum Rating for extended periods of time can adversely affect the device reliability and may lead to reduced operational life.



Recommended Operation Conditions

	Symbol	Unit	min	typ	max
Operational Temperature at case	T_{case}	°C	15		40
Forward Current	I_F	mA			150

Characteristics at T_{amb} 25°C, CW, Standard Coating ($R_f \sim 0,06$), for reference only

Parameter	Symbol	Unit	min	typ	max	Measurement Condition
Center Wavelength	λ_C	nm	783	790	797	
Spectral Width (FWHM)	$\Delta\lambda$	nm		<1		
Temp. Coeff. of Wavelength	TC_λ	nm / K		0,3		
Output Power	P_{opt}	mW		100		
Slope Efficiency	η_d	W / A	0,8	0,9		
Threshold Current	I_{th}	mA			50	
Operational Current @ 100 mW	I_{Op}	mA		150	200	
Cavity Length	l_C	μm		750		
Divergence parallel (FWHM)	$\Theta_{ }$	°		10		
Divergence perpendicular (FWHM)	Θ_{\perp}	°		30		
Polarization				TM		
Mode Structure			Fundamental Mode			

Characteristics at T_{amb} 25°C, CW, Anti-Reflection Coating

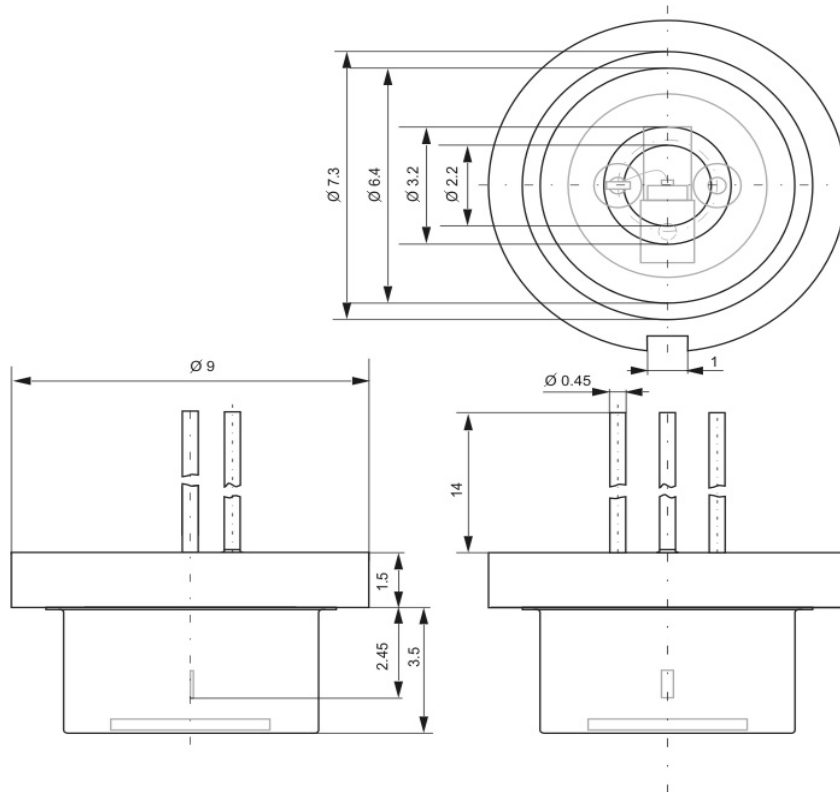
Parameter	Symbol	Unit	min	typ	max	Measurement Condition
Reflectivity at Front Facet				$3 \cdot 10^{-4}$	10^{-3}	Tuning Range is estimated from the gain profile of the laser. The actual achieved wavelength is strongly influenced by the external cavity. Therefore eagleyard photonics will give no guarantee on this parameter
Center Wavelength (max)	λ_C	nm		770		
Tuning Range	$\Delta\lambda_{tun}$	nm	750		790	
Threshold Current	I_{th}	mA	80			

Package Information

	Part No.	
SOT 9 mm x 2.45 mm, sealed cap	SOT01	available (see image)
others		on request

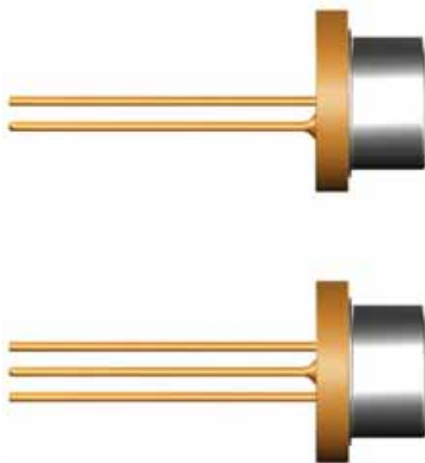
Package Dimensions

	SOT01		
Emission plane		mm	2.45
Housing Diameter		mm	9



Package Pinout

	SOT0n	Pin #
Ground		1
Laser (+)		3
Monitor Photo Diode (+)		2



- 1 ground
- 2 monitor (+)
- 3 laser (+)