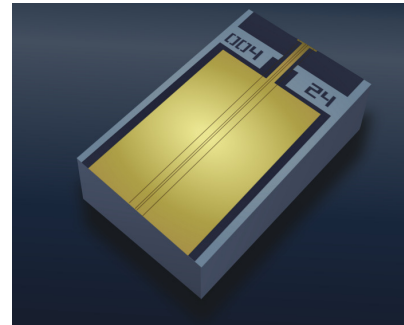


ML1009

1625 nm high-performance FP chip for pulsed applications

Overview

Modulight's ML1009 is a high-performance single transverse mode Fabry-Perot laser chip product. The laser emits ≥ 150 mW pulsed peak power (10 μ s PW, 1% DC) at 1625 nm wavelength. This bare die laser chip is designed to be used as light source in fiber optic test and measurement equipment.



Applications

Defense	Industrial	Communications
Test & Measurement	Test & Measurement	Test & Measurement

Electro-optical Characteristics

Parameter	Symbol	Min.	Typical	Max.	Unit
Central Wavelength ($I_{OP} = 500$ mA)	λ	1590	1625	1650	nm
Optical Output Power (Peak Power)	P_{OPT}	150	180	-	mW
Operating Current ($P_{OPT} = 180$ mW)	I_{OP}	-	750	900	mA
Operating Voltage ($P_{OPT} = 40$ mW, CW)	V_{OP}	-	1.2	2.0	V
Slope Efficiency	η	-	0.26	-	W/A
Threshold Current	I_{TH}	-	45	-	mA
Spectral Width	$\Delta\lambda$	-	-	7	nm

All above values are for operation @ 25°C. If not otherwise stated, the characteristics are for operation under pulse current (pulse width = 10 μ s and duty cycle 1 %).

Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
LD Forward Current	I_{FLD}	1000	mA
Operating Temperature Range	T_{OP}	0...60 ¹	°C
Operating Temperature Range	T_{ST}	-40...85	°C

¹ A non-condensing environment should be ensured over the useful temperature range.

Mechanical Specifications

Parameter	Symbol	Value	Unit
Cavity Length	L	700	µm
Chip Width	W	300	µm
Chip Thickness	H	100	µm

Safety Information

- The laser light emitted from this laser diode is invisible and potentially harmful to the human eye. Avoid eye and skin exposure to the beam, both direct and reflected.
- Products are subject to the risks normally associated with sensitive electronic devices including static discharge, transients, and overload. Please ensure ESD protection prior to handling the products.
- These Modulight products are not intended for use in systems where product malfunction can reasonably be expected to result in personal injury.



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