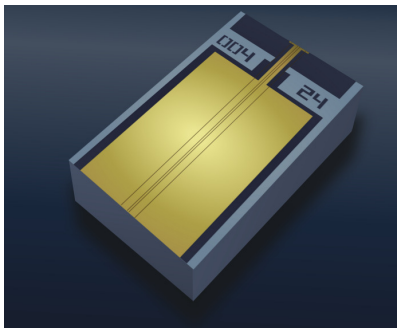
ML1954

1490 nm high-performance FP chip for pulsed applications

Overview

Modulight's ML1954 is a high-performance single transverse mode Fabry-Perot laser chip product. The laser emits ≥ 180 mW pulsed peak power (10 µs PW, 1% DC) at 1490 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} = 750 mA)	λ	1470	1490	1510	nm
Optical Output Power (Peak Power)	P_{OPT}	180	200	-	mW
Operating Current (P_{OPT} = 200 mW)	I_{OP}	-	550	750	mA
Operating Voltage (P_{OPT} = 40 mW, CW)	V_{OP}	-	1.2	2.0	V
Slope Efficiency	η	-	0.40	-	W/A
Threshold Current	I_{TH}	-	45	-	mA
Spectral Width	Δλ	-	5	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 µs 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

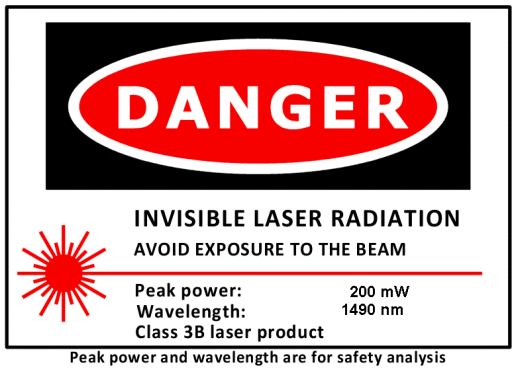
[1] A non-condensing environment should be ensured over the useful temperature range.

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.



Peak power and wavelength are for safety analysis only, not to present device performance.

Liability note

This document is sole property of Modulight, Inc. No part of this document may be copied without written acceptance of Modulight, Inc. All statements related to the products herein are believed to be reliable and accurate. However, the accuracy is not guaranteed and no responsibility is assumed for any inaccuracies or omissions. Modulight, Inc. reserves the right to make changes in the specifications at any time without prior notice.