



Modulight, Inc.

Document type:		Document number:	Version:	
Product Specification		TBD	1.0	
Document name:				
ML1409 PRODUCT SPECIFICATION				
Author:	Reviewer:	Approver:	Release date:	Pages:
Vilvi			02-03-2007	3

TECHNICAL SPECIFICATION ML1409

1 SCOPE

Modulight's ML1409 is a high-performance single-mode 1550 nm bare die laser product. The laser emits ≥ 100 mW pulsed power (10 μ s PW, 1% DC) at 1550 nm wavelength. ML1409 is designed to be used as light source in fiber optic test and measurement equipment.

2 ORDERING INFORMATION

ML1409

3 ELECTRO-OPTICAL CHARACTERISTICS¹

Parameter		Conditions	Min.	Typ.	Max	Units
Optical Power	P_o	$P_w = 10 \mu\text{s}; D/C = 1\%$	100			mW
Operating Current	I_{op}	$P_o = 100 \text{ mW}; P_w = 10 \mu\text{s}; D/C = 1\%$			450	mA
Operating Voltage	V_{op}	$P_{op} = 50 \text{ mW}, \text{ CW}$			2	V
Threshold Current	I_{th}	$P_w = 10 \mu\text{s}; D/C = 1\%$		40		mA
Series resistance	R_s	CW		3		Ω
Center Wavelength	λ	$P_w = 10 \mu\text{s}; D/C = 1\%$	1525		1565	nm
Delta Lambda 25	$\Delta\lambda$	$P_w = 10 \mu\text{s}; D/C = 1\%$			7	nm

4 ABSOLUTE MAXIMUM RATINGS²

Parameter	Symbol	Rating	Unit
LD reverse voltage	V_{RLD}	2	V
LD forward current	I_{FLD}	750 ³	MA
Lead soldering temperature (<10 s)	T_{SLD}	260	$^{\circ}\text{C}$
Operating case temperature	T_c	0-60 $^{\circ}\text{C}$	$^{\circ}\text{C}$
Storage temperature	T_{STG}	-40-85 $^{\circ}\text{C}$	$^{\circ}\text{C}$

5 SAFETY INFORMATION

- The laser light emitted from this laser diode is invisible and may be harmful to the human eye. Avoid eye 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 take care of proper 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.

¹ All parameters at 25 $^{\circ}\text{C}$

² Operation in excess of any one of these parameters may result in permanent damage.

³ DC $\leq 1\%$, PW $\leq 10 \mu\text{s}$



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Peak power and wavelength are for safety analysis
only do not present device performance

6 LIABILITY NOTE

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