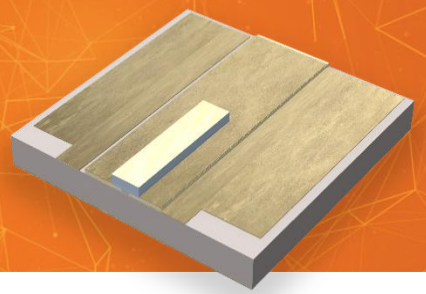
ML3308

78x nm DBR MOPA - Distributed Bragg Reflector laser with an integrated tapered amplifier

Modulight's ML3308 is a DBR laser with a monolithically integrated tapered amplifier (TA). The DBR MOPA provides Watt-level output power with a small linewidth and good beam quality, all in a very compact form factor.



This specification is valid for a chip-on-submount. For other packaging options, such as C-mount and 14-pin butterfly module, please send your inquiry to sales@modulight.com.

Electro-optical Characteristics [1]

Unless otherwise indicated, the parameters given in the table below are valid for the whole operating temperature range at the Beginning Of Life (BOL).

Parameter	Symbol	Min.	Typical	Max.	Unit
Central Wavelength [1] @ T_C = 25°C	λ	780	-	790	nm
Side Mode Suppression Ratio [2]	SMSR	25	35		dB
Optical Output Power @ I_{OP} = 4 A	P_{OPT}		1500		mW
Threshold Current	I_{TH}		900		mA
Mode Structure			TEM(00)		
Polarization			TM		

[1] The operating wavelength is defined by the DBR grating period, the desired operating wavelength is specified at time of order.
[2] Excluding mode-hops.

Recommended Operating Conditions

Parameter	Symbol	Min	Max	Unit
Submount temperature	T_c	15	25	°C
Operating Current	I_{OP}	-	4.5	A

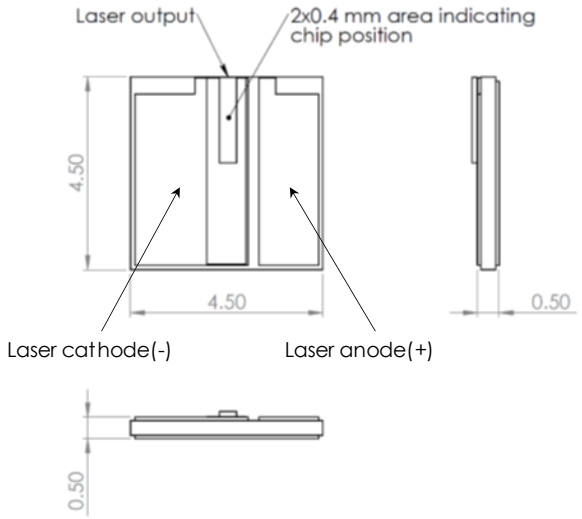
Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
LD forward current	I_{LD}	4.5	A
LD reverse voltage	V_{RLD}	0	V
Operating Temperature Range	T_C	5...45 [1]	°C
Storage Temperature Range	T_S	5...85	°C

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

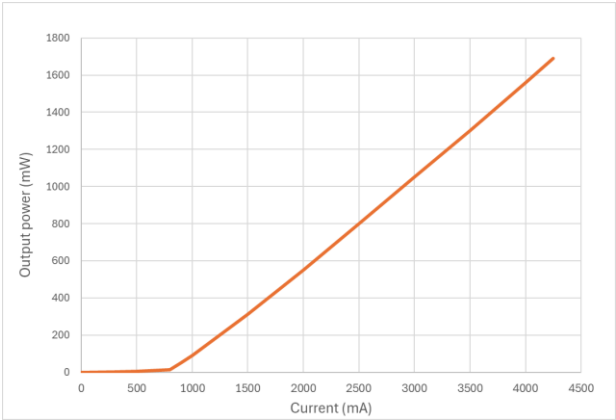
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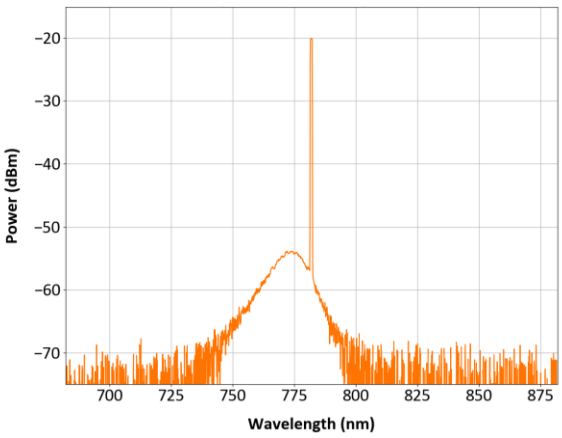
Mechanical Specification

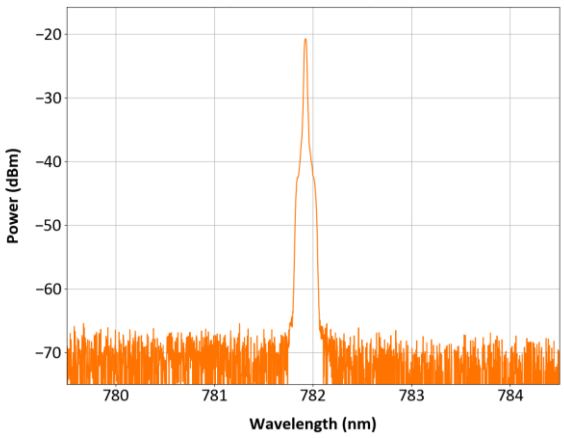


All dimensions are in millimeters (mm).

Typical Performance



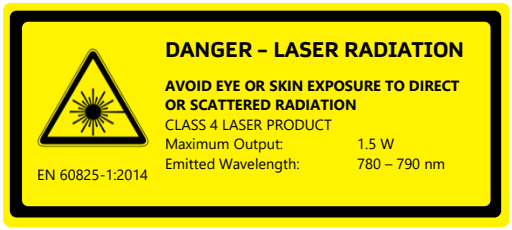




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Safety Information

- ❑ 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.

Handling



- ❑ Laser diodes are sensitive to optical feedback, thus optical isolator is recommended in order to reach the specified performance.
- ❑ Laser chips are sensitive both mechanically and electrically. Extreme care should be taken when handling the bare dies, in order to avoid any damage to laser facets and waveguide area.
- ❑ 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.
- ❑ Electrostatic discharge may cause direct or latent damage to laser diodes. During laser handling, precautions for handling electrostatically sensitive devices must be observed. Please store the product in its original package until used.
- ❑ 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.

Liability note

This document is sole property of Modulight Corp. No part of this document may be copied without written acceptance of Modulight Corp. 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 Corp. reserves the right to make changes in the specifications at any time without prior notice.

RoHS compliance

The product complies with EU RoHS 2 (Directive 2011/65/EU) and China RoHS II (Management Methods for the Restriction of the Use of Hazardous Substances in Electrical and Electronic Products)

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