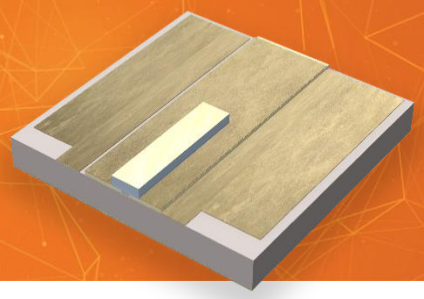
ML3307

78x nm Tapered Amplifier

ML3307 is a semiconductor optical amplifier utilizing a tapered amplifier (TA) design. Tapered amplifiers enable the amplification of output power up to several watts, while maintaining the spectral features of the seed laser. The tapered design maintains high beam quality compared to broad area lasers. The front and rear facets are low anti-reflective coated to prevent self-lasing.



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

Electro-Optical Characteristics (BOL)

Unless otherwise indicated, the parameters given in the table below are valid for the whole operating temperature range.

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Design Wavelength	λ_P	-	785	-	nm	T_c = 25°C
Optical Output Power @ max. I_{OP}	P_{OP}		2	-	W	I_{OP}= 4 A, with well coupled input seed laser beam at design wavelength
ASE Suppression		40	50	-	dB	
Laser Polarization	TM					

Recommended Operating Conditions

Conditions under which the parameters listed in "Opto-electrical characteristics" will be met.

Parameter	Symbol	Min	Max	Unit
Submount temperature	T_c	15	30	°C
Operating Current	I_{OP}	-	4	A
Input power	P_{in}	10	60	mA

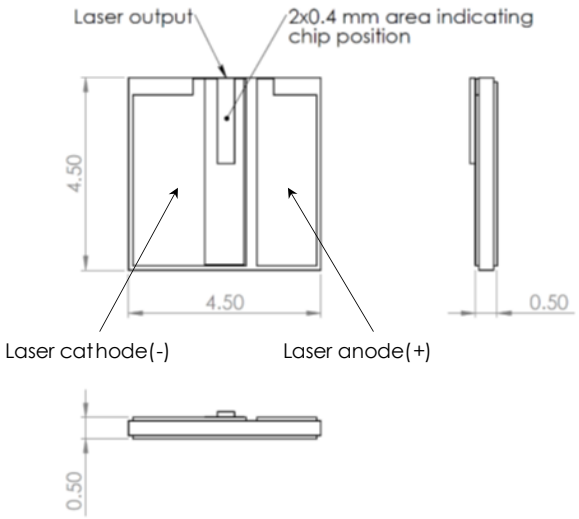
Absolute Maximum Ratings

Values should not be exceeded in any conditions to avoid permanent device damage.

Parameter	Symbol	Min	Max	Unit
Submount temperature	TC	5	45	°C
Storage temperature	TS	5	85	°C
LD forward current	ILD	-	5	A
LD reverse voltage	VRLD	-	0	V

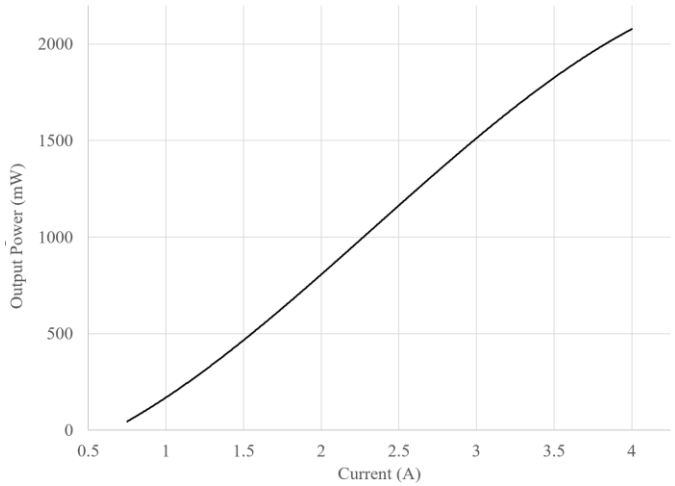
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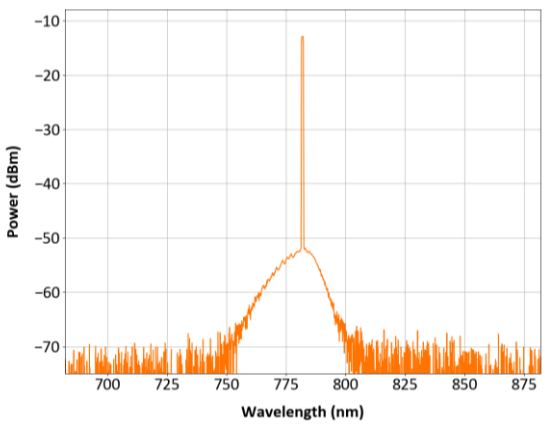
Mechanical Specification

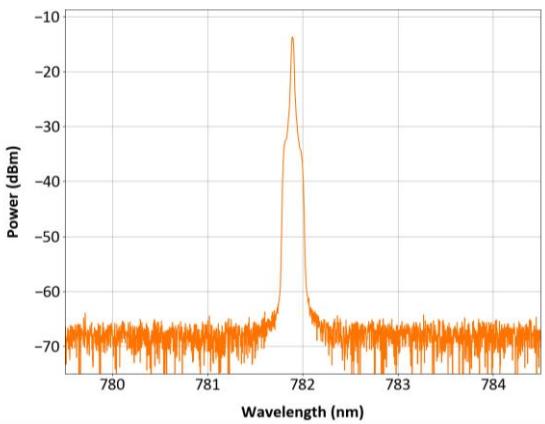


All dimensions are in millimeters (mm).

Typical Performance



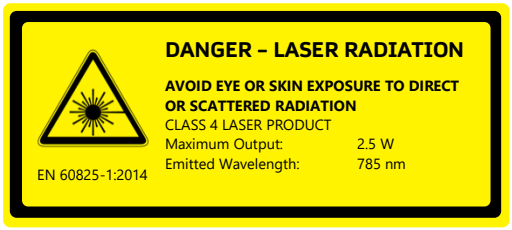




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Safety Information

- ❑ 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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