



Modulight, Inc.

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ML1340 TECHNICAL SPECIFICATION				
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TECHNICAL SPECIFICATION

ML1340

1 OVERVIEW

Modulight's ML1340 is a high-performance single-mode 1625 nm laser in a TO-56 can with flat window. The laser emits >120 mW pulsed power (10 μ s PW, 1% DC) at 1625 nm wavelength. ML1340 is designed to be used as light source in fiber optic test and measurement equipment.

2 ORDERING INFORMATION

ML1340

3 ELECTRO-OPTICAL CHARACTERISTICS¹

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Optical power	P _o	100	120	-	mW	I _f = 500 mA, PW = 10 μ s, DC = 1%
Threshold current ²	I _{th}	-	45	-	mA	PW = 10 μ s, DC = 1%
Forward voltage	V _{op}	-	1.0	1.9	V	cw, Pop = 40 mW
Slope efficiency	η	-	0.3	-	W/A	cw, Pop = 40 mW
Central wavelength	λ_c	1600	1625	1650	nm	I _f = 500 mA, PW = 10 μ s, DC = 1%
Spectral width ³	$\Delta\lambda$	-	4	7	nm	I _f = 500 mA, PW = 10 μ s, DC = 1%
Perpendicular beam divergence angle (FWHM) ⁴	θ_{\perp}	-	44	-	deg	cw, Pop = 40 mW
Parallel beam divergence angle (FWHM) ⁴	θ_{\parallel}	-	17	-	deg	cw, Pop = 40 mW

4 ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Rating	Unit
LD reverse voltage	V _{RLD}	2	V
LD forward current	I _{FLD}	1200 ⁵	mA
Lead soldering temperature (<10 s)	T _{SLD}	260	°C
Operating case temperature	T _c	-0-60°C	°C
Storage temperature	T _{STG}	-40-85°C	°C

¹ All temperatures refer to case temperature, T_c = 25°C

² 1st derivative method

³ RMS, -20 dB

⁴ Full Width at Half Maximum

⁵ DC \leq 1%, PW \leq 10 μ s



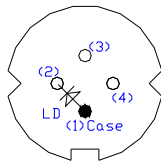
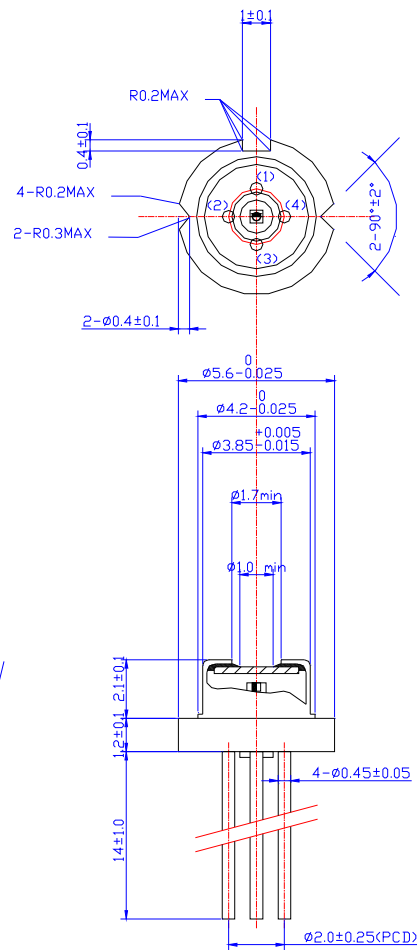
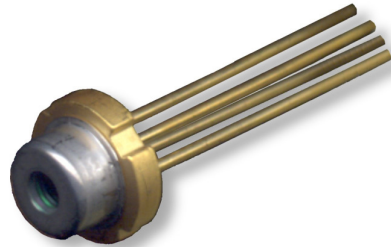
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5 MECHANICAL SPECIFICATION



Bottom view
pin layout



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6 TYPICAL PERFORMANCE

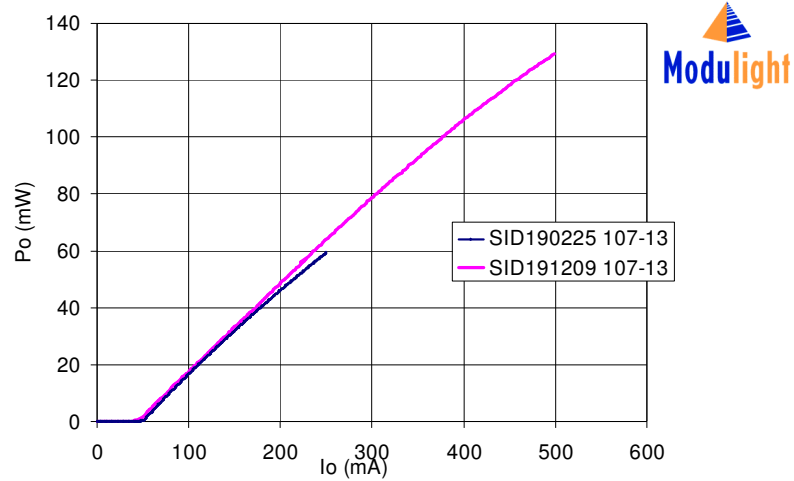


Figure 1. Chip-level LI curve in CW mode (blue) and pulsed (10 μ s PW, 1% DC) mode (magenta), 25°C fixture temperature.

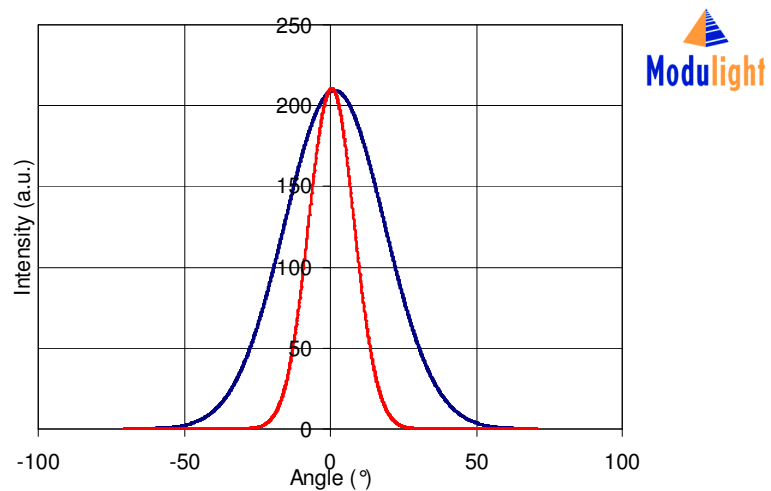


Figure 2 Chip-level perpendicular (blue) and parallel (red) far field curves in CW mode, $P_{op} = 40$ mW, 25°C fixture temperature



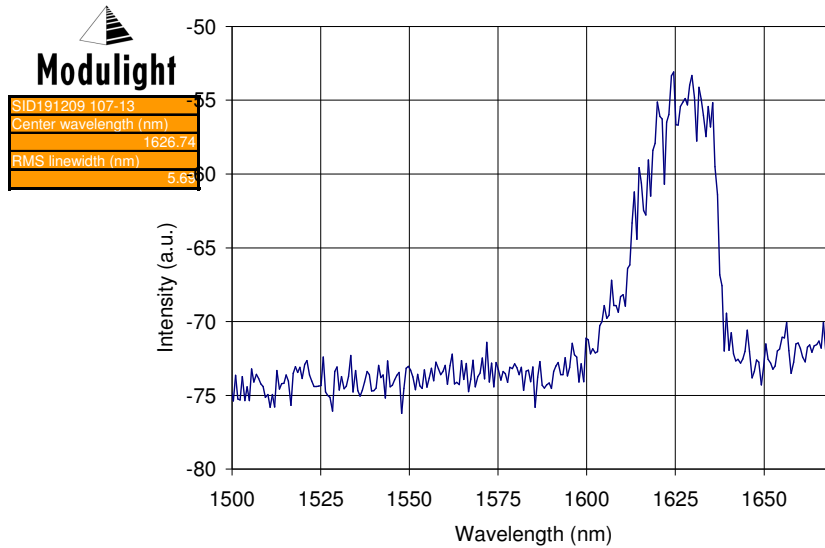


Figure 3 Chip-level spectral measurement, pulsed (10 μ s PW, 1% DC) mode, 25°C fixture temperature

7 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.



8 LIABILITY NOTE

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