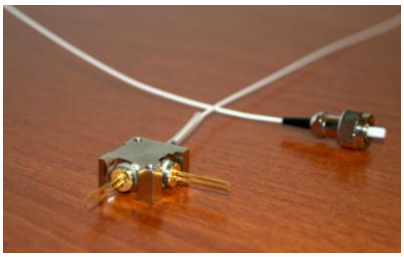
ML1965

Dual-wavelength coaxial FP laser module for pulsed applications

Overview

Modulight's ML1965 is a dual-wavelength Fabry-Pérot laser in a coaxial fiber pigtailed package. The module includes two lasers, emitting at 1310 nm and 1550 nm wavelengths. The pulsed peak powers are 85 mW @ 1310 nm, and 68 mW @ 1550 nm (10 µs PW, 1% DC). This fiber pigtailed laser 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, Typical values

Parameter	Symbol	Laser 1	Laser 2	Unit
Central Wavelength (for typical I_{OP})	λ	1310	1550	nm
Optical Output Power (Peak Power)	P_{OPT}	85	68	mW
Operating Current (for typical P_{OPT})	I_{OP}	750	750	mA
Operating Voltage	V_{OP}	1.5	1.4	V
Slope Efficiency	η	0.11	0.08	W/A
Threshold Current	I_{TH}	40	35	mA
Spectral Width	$\Delta\lambda$	4	4.5	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

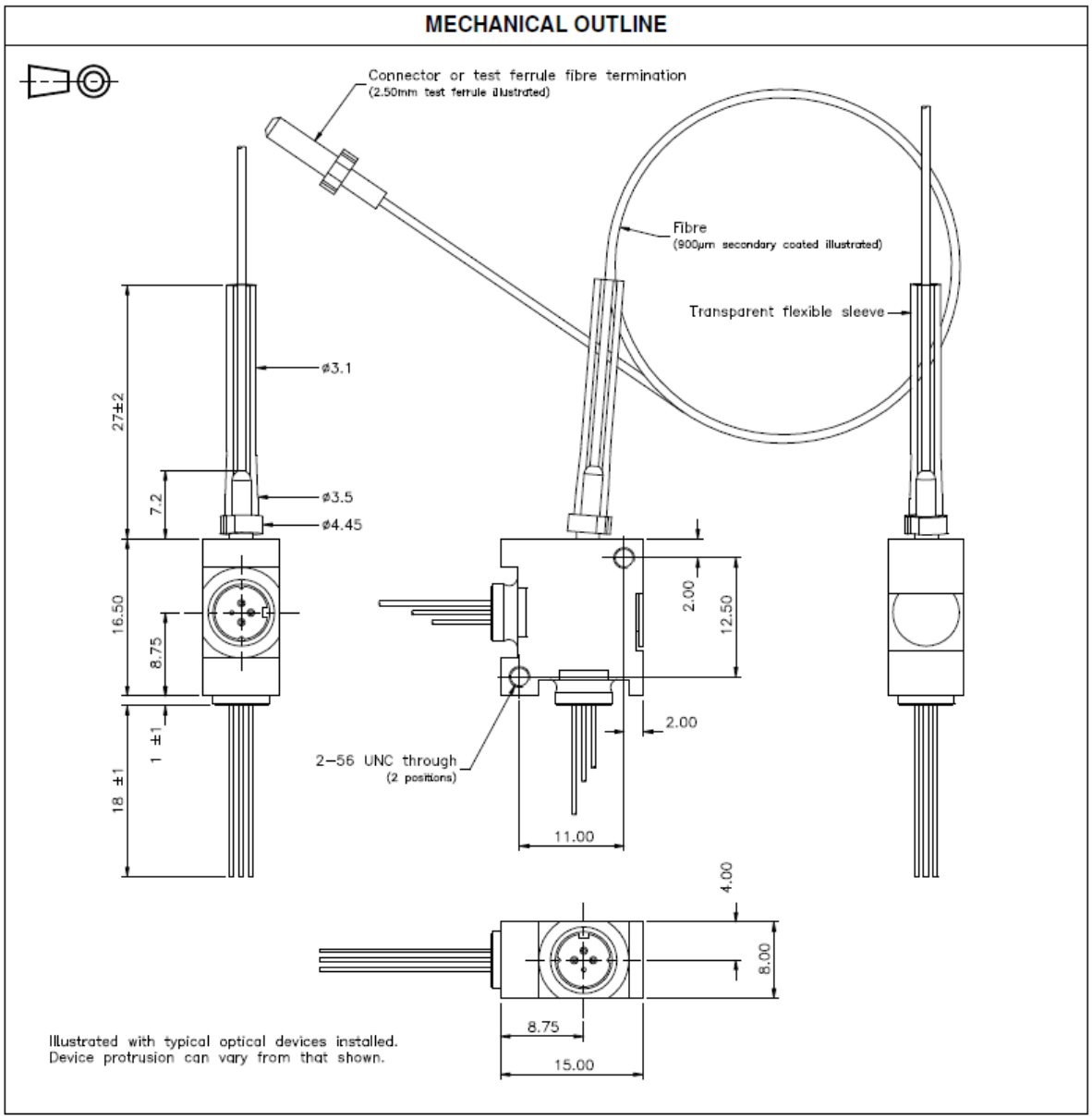
Parameter	Symbol	Laser 1	Laser 2	Unit
LD Forward Current	I_{FLD}	1000	1000	mA
Operating Temperature Range	T_{OP}	0…70 [1]	0…60 [1]	°C
Storage Temperature Range	T_{ST}	-40…85	-40…85	°C

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

Optical Fiber Specification

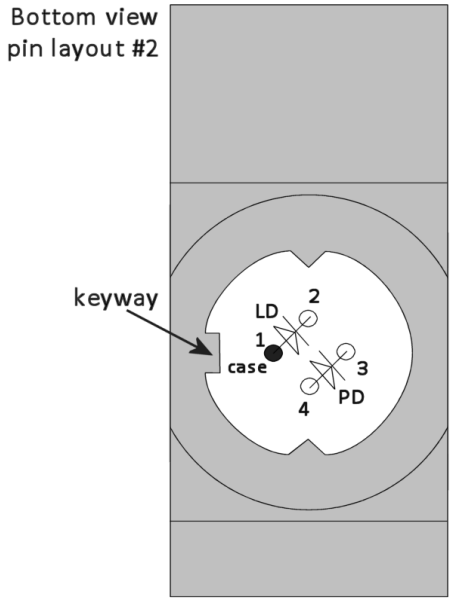
Parameter	Symbol	Value	Unit
Fiber Length	L	100	cm
Mode Field Diameter	$\varnothing_{CORE}$	9	µm
Cladding Diameter	$\varnothing_{CLAD}$	125	µm
Outer Diameter	$\varnothing_{OUT}$	900	µm
Minimum Fiber Bending Radius	d	30	mm
Connector type		FC/PC	

Mechanical Specification, dual-wavelength laser module



Third angle projection. All dimensions are in millimetres. Tolerances are ±0.10mm unless otherwise stated.

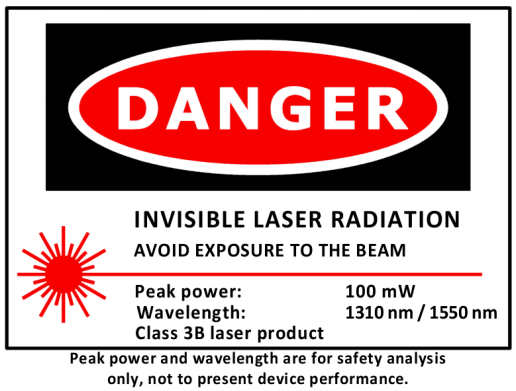
Pin layout



The pin layout is the same for lasers 1 and 2. Please pay attention to the placement of the keyway.

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.



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