

LIMO25-F100-DL980

HIGH-POWER DIODE LASER

LIMO
Lissotschenko Mikrooptik



Optical data

CW – output power (W)	> 25
Centre wavelength λ (nm)	975 – 980 ¹
Tolerance of λ (nm)	± 10 (3) ²
Spectral width (FWHM) (nm)	< 5 (4) ²
Temperature drift of λ (nm/K)	~ 0.4

Fibre data

Fibre core diameter (μm)	100
Numerical aperture	0.22
Fibre-optic connector	SMA905

Electrical data

Typical operation current (start of lifetime) (A)	43
Max. Operation current (start of lifetime) (A)	50
Max. Operation current (end of lifetime) (A)	60
Typical threshold current (A)	6
Typical efficiency (%)	32
Typical slope efficiency (W/A)	0.7
Operation voltage (V)	< 2
Reverse voltage	0

Thermal conditions

Operation temperature ($^{\circ}\text{C}$)	+15....30
Storage temperature ($^{\circ}\text{C}$)	-20....+60
Recommended heat sink capacity (W)	> 80
Recommended heat sink thermal resistance (K/W)	< 0.1

Other specifications

Expected lifetime ³ (hours)	20,000
Warranty (years)	1
RoHS 2002/95/EC compliant	yes
Dimensions of laser head (connectors not included) (mm)	135x56x34
Weight laser head (g)	500

¹Other wavelength on request

²Optional

³According ISO 17526:2003(E)

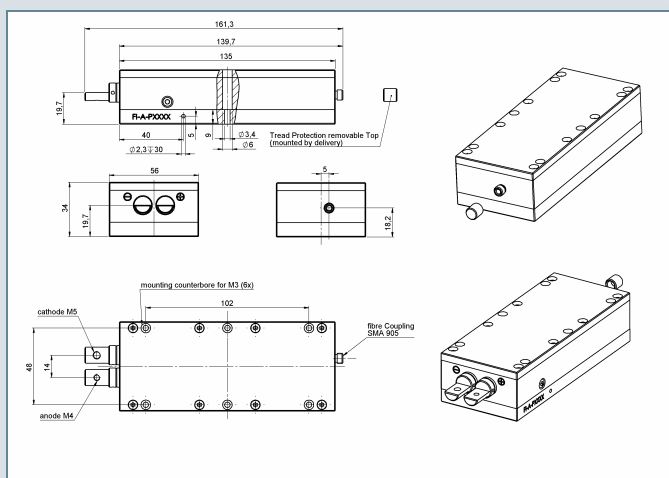
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Product Description

- High brightness laser for pump and material processing applications
- Solid industrial design
- SMA905 Plug & Play connector for optical fibres
- Temperature sensor (NTC & PT100)
- Hermetically sealed laser head in potential-free housing
- Laser head tested for rough mechanical and thermal conditions
- Compact dimensions
- Passively cooled
- Long-life laser diode bars

Accessories

- Fibre LIMO-SMA905-F100, 1.5m or 3m
- LDD100-3 diode driver with TEC-cooler
- Integrated Volume Holographic Grating for wavelength stabilization
- Different beam shaping optics (focussing, collimating, fibre-fibre) available
- Installation service and personal introduction on request
- Turn-key systems available
- Customized laser modules and fibres on request

Considerations in Safety and Operation

This is a laser class IV product regarding CDRH regulations and a Laserklasse 4 product regarding DIN:EN60825-1. The laser light emitted from this laser diode is invisible and/or visible and may be harmful to the human eye. Avoid looking directly into the laser diode, into the collimated beam along its optical axis, or directly into the fibre when the device is in operation.

ESD PROTECTION – Electrostatic discharge is the primary cause of unexpected laser diode failure. Take extreme precaution to prevent ESD. Use wrist straps, grounded work surfaces and rigorous antistatic techniques when handling laser diodes.

Operating the laser diode outside of its maximum ratings may cause device failure or a safety hazard. Power supplies used with the component must be employed such that the maximum peak optical power cannot be exceeded.

Output powers in excess of specification will accelerate device aging.

Operation at higher temperatures will accelerate device aging.

Do not use thermal contact paste! LIMO provides appropriate carbon foil.

All data provided are typically measured with a diode module base plate temperature of 18 °C. All measurements are made with a LIMO reference fibre 100/140 µm, length 1.5 m, and non AR coated. Copyright © 2006 LIMO GmbH. All rights reserved. All LIMO products are patent pending. Subject to change without notice. February 2006

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