

# LIMO32-F400-DL808(BASIC)

## HIGH-POWER DIODE LASER



### Optical data

CW – output power (W)	> 32
Centre wavelength $\lambda$ (nm)	808
Tolerance of $\lambda$ (nm)	$\pm 10$ (3) <sup>1</sup>
Spectral width (FWHM) (nm)	< 5 (4) <sup>1</sup>
Temperature drift of $\lambda$ (nm/K)	~ 0.3

### Fibre data

Fibre core diameter ( $\mu\text{m}$ )	400
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)	46
Max. Operation current (end of lifetime) (A)	55
Typical threshold current (A)	8
Typical efficiency (%)	40
Typical slope efficiency (W/A)	0.9
Operation voltage (V)	< 2
Reverse voltage	0

### Monitor diode

Operation voltage (V)	5
Monitor diode signal 1 (VDC)	4
Monitor diode signal 2 (VDC)	4

### Thermal conditions

Operation temperature ( $^{\circ}\text{C}$ )	+15....30
Storage temperature ( $^{\circ}\text{C}$ )	-20....+60

### Other specifications

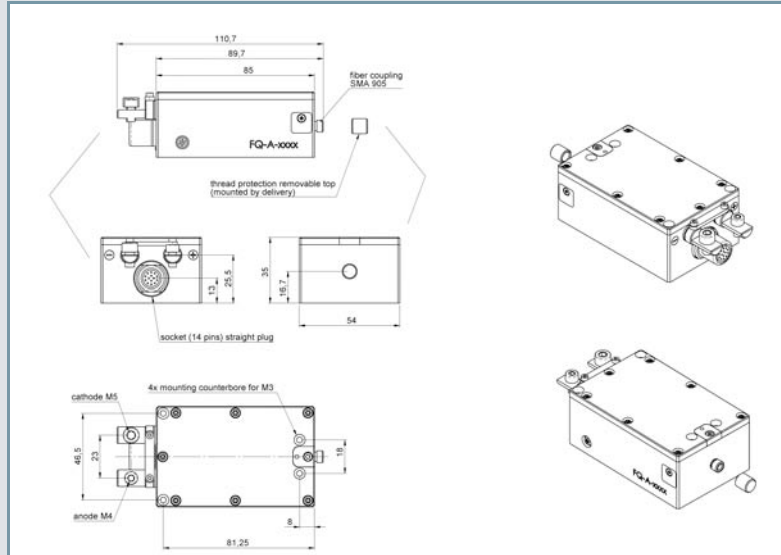
Expected lifetime <sup>2</sup> (hours)	20,000
Dimensions of laser head (connectors not included) (mm)	85x54x35
Weight laserhead (g)	400

<sup>1</sup>Optional

<sup>2</sup>According ISO 17526:2003(E)

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## Product Description

- Hermetically sealed laser head in potential-free housing
- Compact dimensions (credit card size W x L)
- SMA905 connector for optical fibres
- Exchangeable protection window at the SMA905 connector
- Laser head tested for rough mechanical and thermal conditions
- Reverse polarity protection diode
- 2 temperature sensors (NTC & PT 100)
- 2 independent power monitor diodes
- Simple connection of the internal electronics over provided special connector
- Internal hour meter
- CE compliant

### **Considerations in Safety and Operation**

The laser light emitted from this laser diode is invisible 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 heat sink temperature of 25 °C. All measurements are made with a LIMO reference fibre 400/480 µm, length 1.5 m, and non AR coated. Copyright © 2005 LIMO GmbH. All rights reserved. All LIMO products are patent pending. Subject to change without notice. May 2005