



PRODUCT DATA SHEET

LXP0160

Uncooled 1.25Gbps 1310nm FP Laser diode in coaxial pigtail housing

DESCRIPTION

The LXP0160 is a 1.25Gbps 1310nm FP Laser Diode in a coaxial pigtail housing, suitable for long wavelength telecommunications, data communications and local networks.

FEATURES

- Uncooled 1.25Gbps 1310nm MQW FP Laser Diode
- Minimum 400 μ W optical output power
- Flange style PCB mount housing
- Laser diode case is electrically isolated from the pigtail housing
- Laser diode is electrically isolated from the integral monitor photodiode
- 9/125/250 μ m optical fibre pigtail with E2000/APC connector
- High performance, high reliability hermetically sealed device

ABSOLUTE MAXIMUM RATINGS	SYMBOL	VALUE	UNITS
Laser diode continuous forward current	I _{FCLD}	100	mA
Laser diode reverse voltage	V _{RLD}	2	V
Monitor photodiode continuous forward current	I _{FDP}	2	mA
Monitor photodiode reverse voltage	V _{RPD}	20	V
Operating temperature	T _{AMB}	-40 to +85	°C
Storage temperature	T _{STG}	-40 to +85	°C
Soldering temperature 2mm from case for 10 seconds	T _{SLD}	260	°C

These are stress ratings only and functional operation of the devices at these or any other conditions above those indicated for extended periods of time may affect reliability or result in permanent damage to the devices.

Afonics reserves the right to introduce changes without notice. No responsibility is assumed for its use or for any infringement of the rights of third parties.

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OPTICAL/ELECTRICAL CHARACTERISTICS	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITION
Optical output power	P_O	400			μW	CW, $I_F = I_{OP}$ Defines I_{OP}
Threshold current	I_{TH}		5	15	mA	CW
Operating current	I_{OP}		20	45	mA	CW
Operating voltage	V_{OP}		1.1	1.5	V	CW, $I_F = I_{OP}$
Peak wavelength	λ_p	1290	1310	1330	nm	CW, $I_F = I_{OP}$
Spectral bandwidth (RMS)	$\delta\lambda$		1	2	nm	CW, $I_F = I_{OP}$
Rise and fall times (10% to 90%)	t_r / t_f		300	700	ps	$I_{BIAS} = I_{TH}$, $I_F = I_{OP}$
Monitor current	I_M	0.1	0.5		mA	CW, $I_F = I_{OP}$
Photodiode dark current	I_{DPD}		0.01	0.1	μA	$V_{RPD} = 10\text{V}$
Photodiode capacitance	C_{PD}		10	20	pF	$V_{RPD} = 10\text{V}$, $f = 1\text{MHz}$

All values apply at a temperature of 25°C unless otherwise stated.

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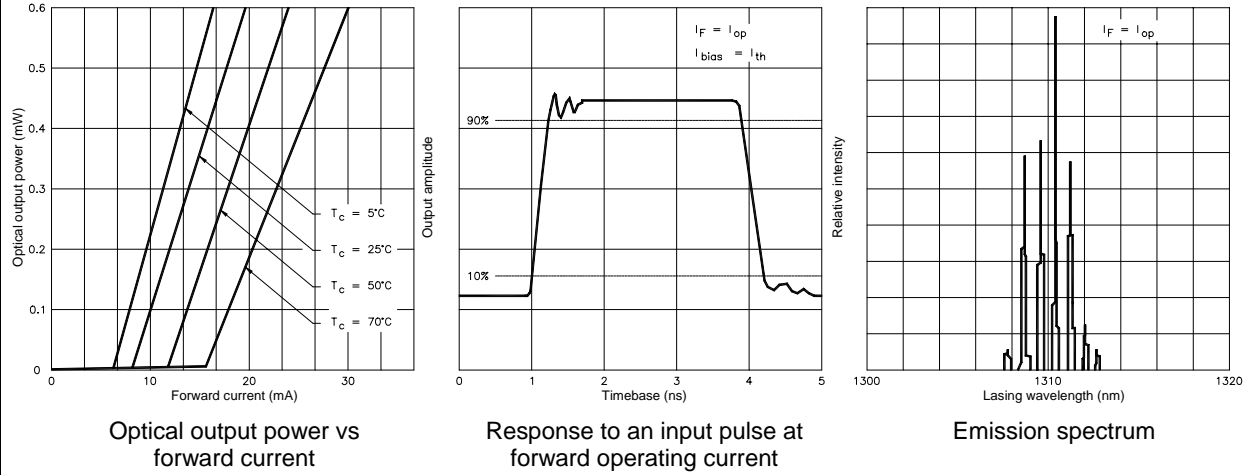
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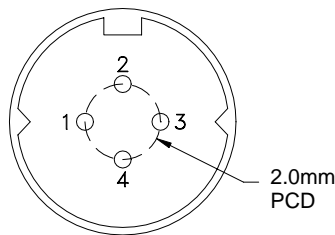
GRAPHS SHOWING TYPICAL LASER CHARACTERISTICS



PINOUT DETAILS

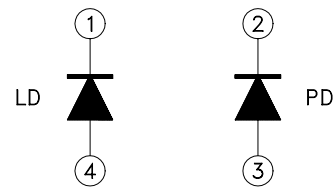
- 1 = Laser diode cathode
- 2 = Photodiode cathode
- 3 = Photodiode anode
- 4 = Laser diode anode (case)

Pin length = 18mm ± 1mm



REAR VIEW

INTERNAL CIRCUIT



NOTE: This device is very susceptible to damage by electrostatic discharge.

WARNING – Radiation emitted by laser devices can be dangerous to the eyes and appropriate precautions must be taken in use.

(Ref BS EN 60825, HD 482 S1 & IEC 825)

INVISIBLE OPTICAL RADIATION



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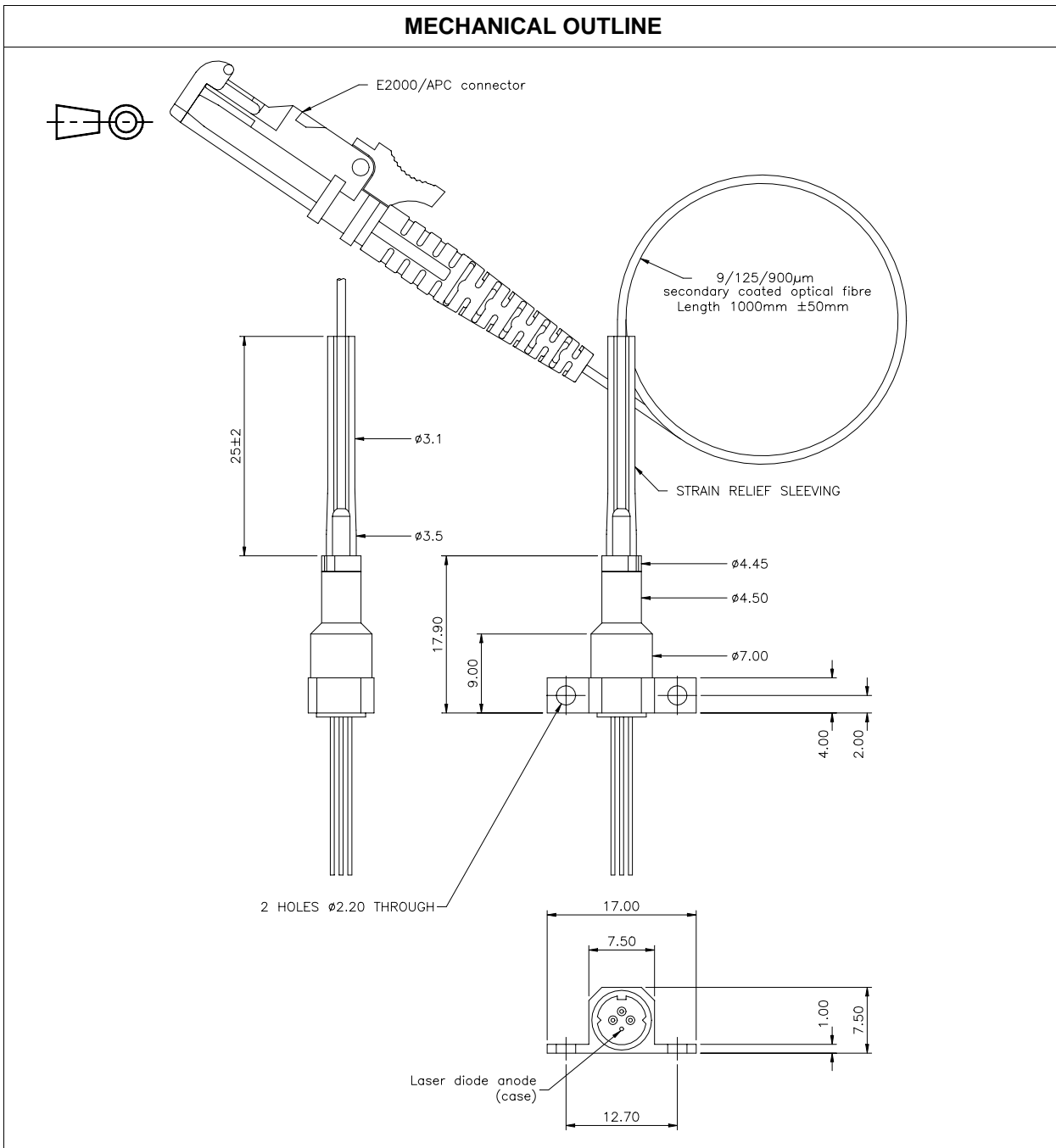
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MECHANICAL OUTLINE



Third angle projection. All dimensions are in millimetres. Tolerances are $\pm 0.10\text{mm}$ unless otherwise stated.
Connector complies with Telcordia requirements.

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