# LXP0060

AFONICS

- 1310nm FP laser
- 9/125µm pigtailed package
- FC/PC connector

*Preliminary Specification*

## Performance Highlights

- Minimum fibre output power of 250µW
- Electrically isolated housing
- Operating temperature -30°C to +75°C

| LIMITING VALUES | SYMBOL | VALUE | UNITS |
|---|---|---|---|
| Laser diode continuous forward current (1) | $I_{FLD}$ | $I_{TH}$ + 40, DC | mA |
| Laser diode reverse voltage | $V_{RLD}$ | 2 | V |
| Monitor photodiode continuous foward current | $I_{FPD}$ | 2 | mA |
| Monitor photodiode reverse voltage | $V_{RPD}$ | 20 | V |
| Operating temperature | $T_{amb}$ | -30 to +75 | °C |
| Storage temperature | $T_{stg}$ | -30 to +85 | °C |
| Soldering temperature 2mm from case for 10s | $T_{sld}$ | 250 | °C |

| OPTICAL/ELECTRICAL CHARACTERISTICS | SYMBOL | MIN | TYP | MAX | UNITS | TEST CONDITION |
|---|---|---|---|---|---|---|
| Fibre output power | $P_F$ | 250 | | 500 | µW | $I_F = I_{OP}$ (defines $I_{OP}$) |
| Laser threshold current | $I_{TH}$ | | 6 | 20 | mA | CW |
| Laser operating current | $I_{OP}$ | | 30 | 45 | mA | |
| Laser operating voltage | $V_{OP}$ | | 1.1 | 1.5 | V | $I_F = I_{OP}$ |
| Laser wavelength | $\lambda_P$ | 1280 | 1310 | 1340 | nm | $I_F = I_{OP}$ |
| Laser rise / fall time (10% to 90%) | $t_{Lr}$ / $t_{Lf}$ | | 0.3 | 0.7 | ns | $I_F = I_{OP}$ |
| Laser spectral bandwidth | $\Delta\lambda$ | | 1 | 3 | nm | $I_F = I_{OP}$ |
| Monitor photocurrent | $I_M$ | 0.05 | 0.5 | | mA | $I_F = I_{OP}$ |
| Monitor photodiode dark current | $I_{D(PD)}$ | | 10 | 100 | nA | $V_{R(PD)}$ = 10V |
| Monitor photodiode capacitance | $C_{PD}$ | | 8 | 20 | pF | $V_{R(PD)}$ = 10V, $I_F = I_{OP}$ |

All values apply at a temperature of 25°C

(1): Stated maximum laser operating current must not be exceeded when operated under pulsed conditions

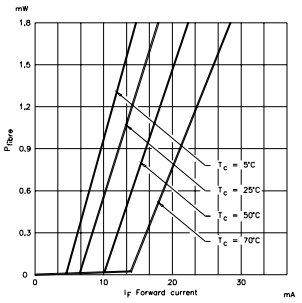


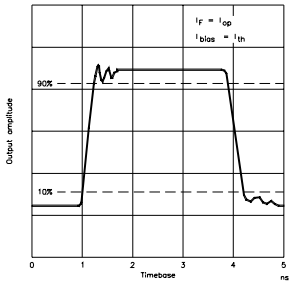
AFONICS

## Preliminary Specification

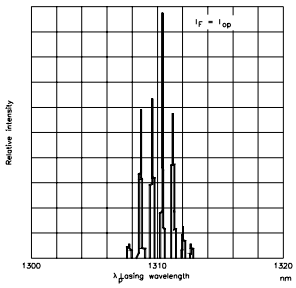
### GRAPHS SHOWING TYPICAL EMITTER CHARACTERISTICS




Relative output power from a 9µm fibre vs forward current




Response to an input pulse at forward operating current




Emission spectrum

### EMITTER PINOUT DETAILS

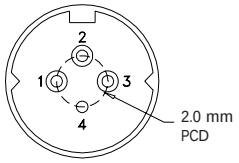
1 = Laser diode cathode

2 = Photodiode anode

3 = Photodiode cathode/ Laser diode anode

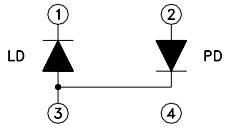
4 = Case

Pin length = 18 ± 1 mm




REAR VIEW

### EMITTER INTERNAL CIRCUIT




**NOTES:** The device is very susceptible to damage by electrostatic discharge.



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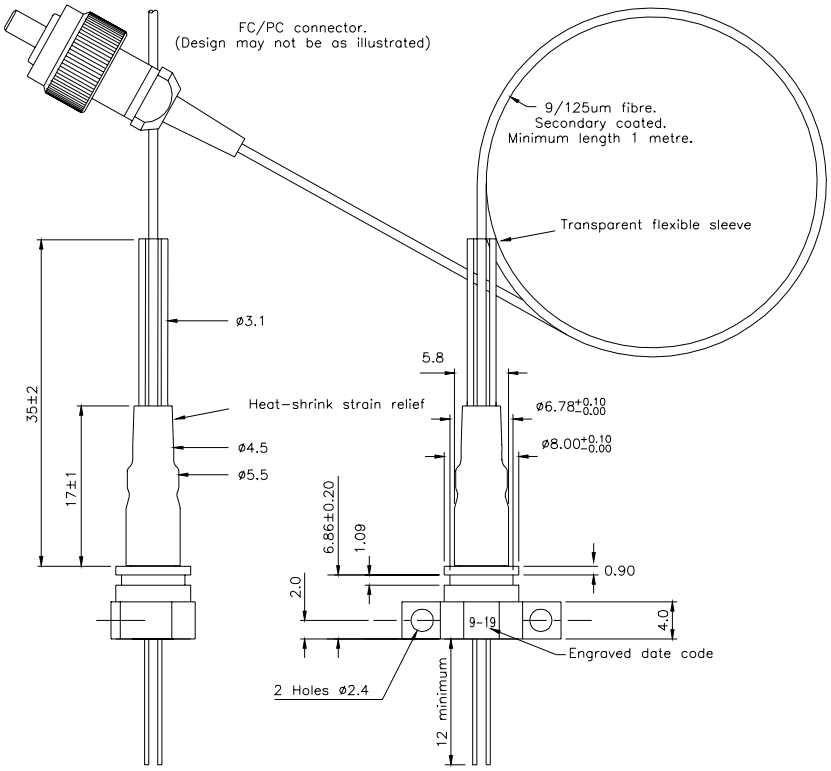


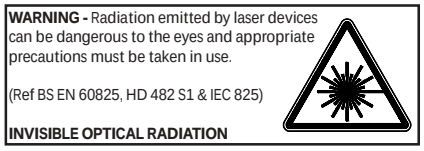


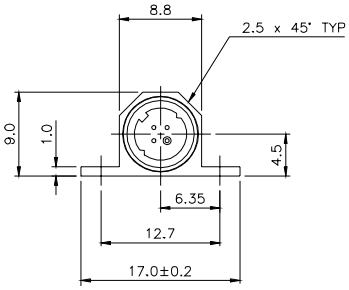


**NOTES:**

**1)** All dimensions are in mm. Tolerances are ±0.10 mm unless otherwise stated.
**2)** Other connector options available as different part numbers:
LXP0061 (SC/PC), LXP0062 (ST/PC), LXP0063(LC/PC)



 