Senschip Technologies

SensChip™

# FP-1310HP10-C
# 1.31μm 10G FP Laser Chip

## Features

- 10G operation - Operation temperature: -40°C – 85°C - AlInGaAs MQW design - Proven reliability

## Specification

| Item | Symbol | Minimum | Typical | Maximum | Unit | Conditions |
|---|---|---|---|---|---|---|
| Centre wavelength | $\lambda_c$ | | 1310 | | nm | 25°C, 50mA |
| Threshold current | $I_{th25}$ | | 8.5 | 12 | mA | 25°C |
| | $I_{th85}$ | | 17 | 22 | mA | 85°C |
| $T_{zero}$ | $T_0$ | | 85 | | K | 25°C -85°C |
| Operation Current | $I_{op25}$ | | 25 | 30 | mA | 5mW, 25°C |
| | $I_{op85}$ | | 36 | 41 | mA | 5mW, 85°C |
| Operation Voltage | $V_{op25}$ | | 1.15 | 1.4 | V | 25°C |
| | $V_{op85}$ | | 1.20 | 1.6 | V | 85°C |
| Slope Efficiency | $dL/dI_{25}$ | 0.26 | 0.30 | | mW/mA | $I_{th}$+5mA, 25°C |
| | $dL/dI_{85}$ | 0.20 | 0.25 | | mW/mA | $I_{th}$+5mA, 85°C |
| Resistance | R | | 7 | 12 | ohm | 25°C, 50mA |
| RMS Spectral Width | $\lambda_{RMS}$ | | 2 | 3 | nm | 25°C, 50mA |
| dλ/dt | dλ/dt | | 0.5 | 0.55 | nm/C | 25°C -85°C |
| Modulation bandwidth | | 10 | 14 | | GHz | 25C, $I_{th}$+50mA |
| Horizontal divergence angle | $\theta_{\parallel}$ | | 21 | | deg | 50mA, FWHM |
| Vertical divergence angle | $\theta_{\perp}$ | | 32 | | | 50mA, FWHM |
| Length | L | 245 | 250 | 255 | μm | |
| Width | W | 195 | 200 | 205 | μm | |
| thickness | T | 95 | 100 | 105 | μm | |

## Absolute Maximum ratings

| Item | Symbol | Min | Max | Unit |
|---|---|---|---|---|
| Operation temperature | $T_{op}$ | -40 | 85 | °C |
| Laser Forward Current | $I_F$ | | 150 | mA |
| Laser Reverse Voltage | $V_R$ | | 2 | V |
| Storage temperature | $T_S$ | -50 | 100 | °C |
| Solder temperature | $T_s$ | | 320 | °C |




*Version A, issued on 01/08/12*