

GENERAL DESCRIPTION

Compound Photonics' "Generation C" 808 nm pump lasers offer over 55% power conversion, low threshold, high-slope efficiency, and excellent stability over temperature.

Package – Chip-on-Carrier C-mount

Key Characteristics

- 55% power conversion efficiency
- Low-threshold current and high-slope efficiency
- Up to 1.5 Watts output power
- Proven lifetime

Applications

- Micro-laser pumping
- Laser-initiated ordnance
- End-pumped DPSS lasers

| | | PART NUMBER | | | | |
|---------------------------------|------------------|-----------------|------|-----|----------------------|---|
| | | XMC-808C-05-150 | | | | |
| | | SPECIFICATION | | | | |
| PARAMETERS* | SYMBOL | MIN | TYP | MAX | UNIT | CONDITIONS |
| ELECTRO OPTICAL | | | | | | |
| Centre Operating Wavelength | λ_c | 798 | 808 | 818 | nm | $P_o = 1.5 \text{ W}, T=25^\circ\text{C}$ |
| Output Power | P_o | | 1.5 | | W | $T=25^\circ\text{C}$ |
| Spectral Width (FWHM) | $\Delta\lambda$ | | 2.0 | | nm | $T=25^\circ\text{C}$ |
| Spectral Shift Over Temperature | $d\lambda/dT$ | | 0.3 | | nm/ $^\circ\text{C}$ | |
| Slope Efficiency | SE | | 1.15 | | W/A | $T=25^\circ\text{C}$ |
| Power Conversion Efficiency | PCE | | 55 | | % | $P_o = 1.5 \text{ W}, T=25^\circ\text{C}$ |
| Beam Divergence (slow axis) | $\theta_{ }$ | | 8 | | $^\circ$ | FWHM |
| Beam Divergence (fast axis) | θ_{\perp} | | 34 | | $^\circ$ | FWHM |
| Polarization | | | TE | | | |
| ELECTRICAL | | | | | | |
| Threshold Current | I_{th} | | 280 | | A | |
| Operating Current | I_o | | 1.6 | | A | $P_o = 1.5 \text{ W}, T=25^\circ\text{C}$ |
| Operating Voltage | V_o | | 1.6 | | V | $P_o = 1.5 \text{ W}, T=25^\circ\text{C}$ |

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| MECHANICAL | | | | | | |
| Emitter Stripe Width | w_e | | 94 | | μm | |
| Emitter Height | h_e | | 1 | | μm | |
| Cavity Length | CL | | 1.5 | | mm | |
| Operating Temperature | T_c | 0 | 25 | 50 | $^{\circ}\text{C}$ | Non-condensing |
| Operating Relative Humidity | RH | 0 | | 60 | %RH | Non-condensing |

ABSOLUTE MAXIMUM RATINGS (non-operating)

| | | | | | | |
|---------------------------|----|---|--|----|--------------------|----------------|
| Storage Temperature | T | 0 | | 85 | $^{\circ}\text{C}$ | Non-condensing |
| Storage Relative Humidity | RH | 0 | | 95 | %RH | Non-condensing |

| OTHER | | | | | | |
|-----------------|------|--|--------|--|---|---|
| Lifetime Rating | MTTF | | 20,000 | | h | $T = 25^{\circ}\text{C}$, $P_o = 1.5\text{W}$, 60% CL |

*Operating conditions are 25°C submount temperature and I_o , unless otherwise noted



CONTROL DRAWINGS

