



Modulight, Inc.

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| TECHNICAL SPECIFICATION ML1392 | | | | |
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TECHNICAL SPECIFICATION ML1392

1 OVERVIEW

Modulight's high-power product ML1392 is a high-performance 1350 nm broad-area laser chip. The chip can be applied both in pulsed and CW applications and it is available as a bare die or on C-mount, per customer request.

2 ELECRO-OPTICAL CHARACTERISTICS

| Parameter | Symbol | Typ | Unit |
|-------------------------------|----------------------------|--------|---------|
| Threshold Current | I_{th} | 1 | A |
| Optical Output | P_{opt} | 1 | W |
| Operating Current | I_{op} | 5 | A |
| Slope Efficiency | η | 0.28 | W/A |
| Peak Wavelength | λ | 1350 | nm |
| Wavelength Coefficient | $\Delta\lambda / \Delta T$ | 0.5 | nm/°C |
| Spectral Width | $\Delta\lambda$ | 4 | nm |
| Parallel Beam Divergence | $\theta_{ }$ | 5...10 | degrees |
| Perpendicular Beam Divergence | θ_{\perp} | 35 | degrees |

| Parameter | Symbol | Typ | Unit |
|-----------------------|-----------|-------------|------|
| Maximum Output Power | P_{opt} | 1.5 | W |
| Storage Temperature | T_{stg} | -40 ... +85 | °C |
| Operating Temperature | T_{opt} | 0 ... +50 | °C |

All above values are typical for CW operation @ 25 °C.

3 MECHANICAL SPECIFICATION

| Parameter | Symbol | | Unit |
|--------------------------|--------|----------|--------|
| Emitter Width | W_e | 150 | micron |
| Chip Width | P_e | 500 | micron |
| Cavity Length | CL | 1000 | micron |
| Chip Thickness | t | 100 ± 10 | micron |
| p- and n-metal thickness | | 300 | nm |



4 SAFETY INFORMATION

- The laser light emitted from this laser diode is invisible and may be harmful to the human eye. Avoid eye exposure to the beam, both direct and reflected.
- Products are subject to the risks normally associated with sensitive electronic devices including static discharge, transients, and overload. Please take care of proper ESD protection prior to handling the products.
- These Modulight products are not intended for use in systems where product malfunction can reasonably be expected to result in personal injury.



Peak power and wavelength are for safety analysis only do not present device performance

5 LIABILITY NOTE

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