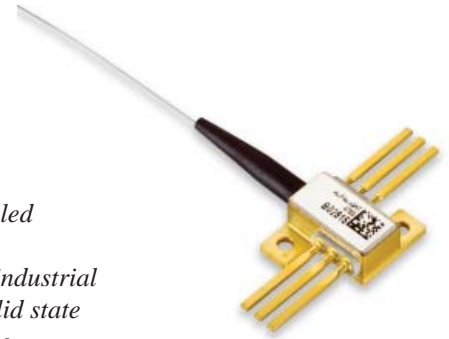




10 Watt 6-Pin 940 nm Uncooled Pumps



The Alfalight AM6-940B-20-108 (10 watt, 940 nm) is an uncooled multimode laser in a 6-pin package incorporating a thermistor for temperature monitoring. This device is ideal for numerous industrial applications, including pumping fiber lasers, diode-pumped solid state lasers, uncooled fiber amplifiers; and direct material processing.

- 940 ± 8 nm wavelength
- Up to 10 watts output power
- High brightness $105\mu\text{m}/0.22^\dagger$ NA fiber
- Hermetic, epoxy-free package
- High reliability

Device Characteristics*

AM6-940B-20-108

| Electro-Optical | Symbol | Min | Typ | Max | Units |
|-------------------|-----------------|-----|------|-----|-------|
| Center wavelength | λ_c | 932 | 940 | 948 | nm |
| Output power | P_o | | 10 | | W |
| Operating current | I_o | | 11 | | A |
| Forward voltage | V_o | | 1.85 | 2.2 | V |
| Threshold current | I_{th} | | 0.45 | 0.6 | A |
| Spectral width | $\Delta\lambda$ | | 4.0 | | nm |

Temperature

| | | | | | |
|-------------------------------|---------------|-----|------|------|------------|
| Thermistor value at 25°C | R_{th} | 9.5 | 10 | 10.5 | k Ω |
| Thermistor constant, 0 - 50°C | β | | 3892 | | K |
| Spectral shift | $d\lambda/dT$ | | 0.33 | | nm/°C |

Mechanical

| | | | | | |
|----------------------------|----|------|-------------------|-----|---------------|
| Case operating temperature | T | 0 | | 50 | °C |
| Case storage temperature | | -40 | | 85 | °C |
| Fiber core diameter | | | 105 | | μm |
| Fiber cladding diameter | | | 125 | | μm |
| Fiber NA | NA | | 0.22 [†] | | |
| Fiber length | | 1.25 | 1.5 | 1.8 | m |

* All conditions are at 25°C submount temperature unless otherwise noted.

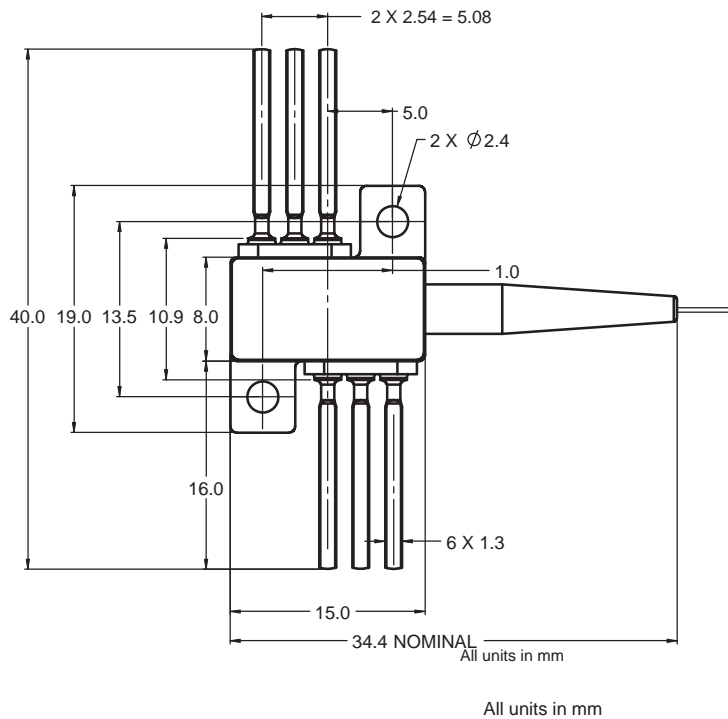
[†] 0.15 NA is also available upon request

| Absolute Maximum Ratings** | Min | Max | Units |
|------------------------------|-----|----------------|-------|
| Soldering temperature *** | | 250 | °C |
| Soldering duration*** | | 10 | s |
| Mounting torque | | 10 | in-oz |
| Short term fiber bend radius | 12 | | mm |
| Long term fiber bend radius | 25 | | mm |
| LD reverse current | | 10 | mA |
| LD current transient max | | 100ns, 1000 mA | |
| Thermistor voltage | | 5 | V |
| Thermistor current | | 2 | mA |

**These are safe short-term exposure limits, non-operating. Prolonged exposure to conditions at the absolute maximum ratings will have a deleterious effect on reliability and could shorten diode lifetime.

*** No point on the package (other than the leads) should exceed the maximum case storage temperature during soldering.

Package Dimensions



Package Pinout

