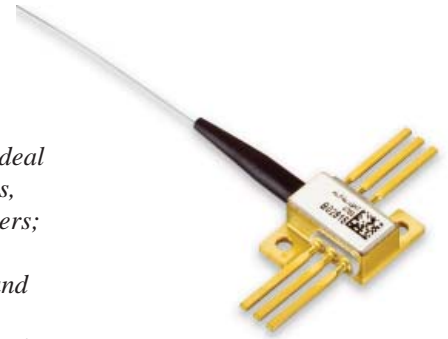




6-Pin Uncooled Industrial Pump

Alfalight's high-reliability 915 and 976 nm diode lasers are manufactured in an uncooled hermetic package. This laser is ideal for a wide range of applications, including pumping fiber lasers, diode-pumped solid state lasers (DPSS), uncooled fiber amplifiers; direct material processing; and laser-initiated ordnance (LIO). The 6-pin butterfly-style package is fully hermetic, epoxy-free and provides the ruggedness needed for a range of high reliability industrial installations. The 105- μm fiber pigtail is available with a numerical aperture of 0.15 or 0.22.



- Available in 915 nm and 976 nm wavelengths
- Hermetic, epoxy-free package
- Very high reliability
- Up to 10 watts output power
- Fiber output NA of 0.15 and 0.22 available

Device Characteristics*

Electro-Optical	Symbol	AM6-915B-10-108 AM6-915B-20-108			AM6-976E-10-804 AM6-976E-20-804			Units
		Min	Typ	Max	Min	Typ	Max	
Center wavelength	λ_c	915 \pm 8			976 \pm 4			nm
Output power	P_o	10			8			W
Operating current	I_o	11			9			A
Forward voltage	V_o	1.85			1.8			V
Threshold current	I_{th}	0.45			0.45			A
Spectral width	$\Delta\lambda$	2.7			2.0			nm
Power conversion efficiency	PCE	50			50			%

Temperature

Thermistor value at 25°C	R_{th}	9.5	10	10.5	9.5	10	10.5	k Ω
Thermistor constant, 0 - 50°C	β	3892			3892			K
Spectral shift	$d\lambda/dT$	0.32			0.32			nm/°C

Mechanical

Case operating temperature		0	50	0	50	°C		
Case storage temperature		-40	85	-40	85	°C		
Fiber core diameter		105			105			μm
Fiber cladding diameter		125			125			μm
Fiber NA	NA	0.15 or 0.22			0.15 or 0.22			
Fiber length		1.5			1.5			m

* All conditions are at 25°C submount temperature, measured in CW conditions, unless otherwise noted.

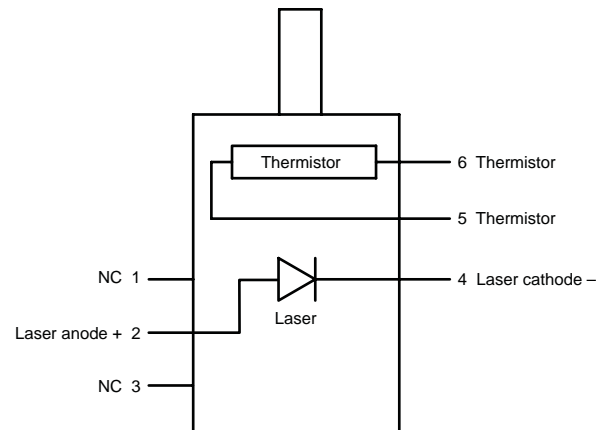
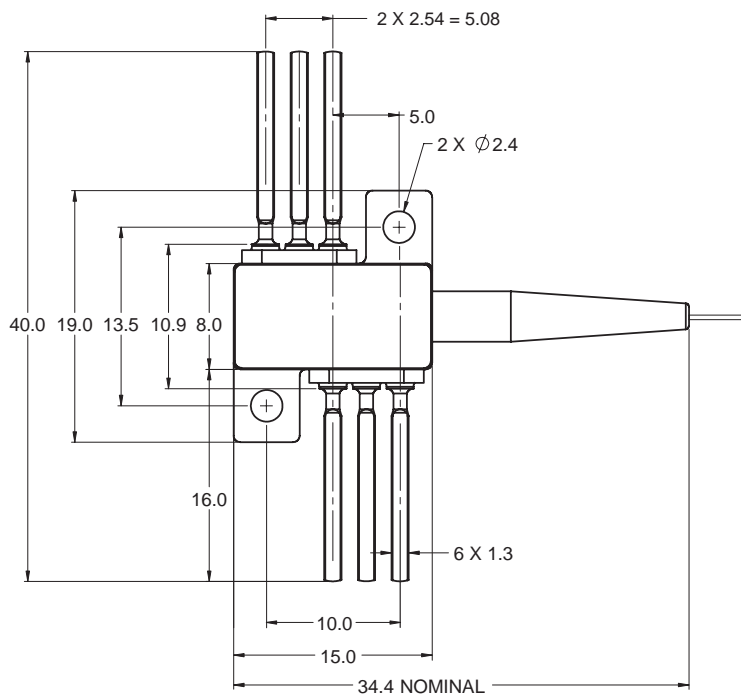
Absolute Maximum Ratings*	Min	Max	Units
Soldering temperature **		260	°C
Soldering duration**		10	s
Mounting torque		10	in-oz
Short term fiber bend radius	12		mm
Long term fiber bend radius	25		mm
LD reverse current		10	mA
LD current transient max		100 ns, 1000 mA	
Thermistor voltage		5	V
Thermistor 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



All units in mm

