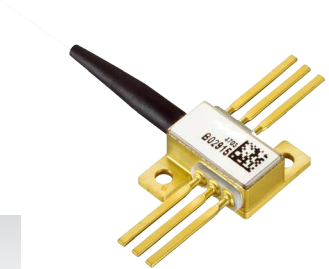


940 nm Uncooled Pumps for Telecommunications

Compound Photonics' telecommunications-qualified pump lasers offer exceptional reliability and low FIT for use in uncooled high-power distribution amplifiers. The fiber-coupled devices offer up to 6 watts ex-fiber in high-reliability packages with high-brightness 105 μm , 0.15 or 0.22 NA fiber. Fully-qualified to GR-468. Lifetime and full qualification reports available upon request.



Key Characteristics

- Hermetic, epoxy-free package
- Qualified to all GR-468 requirements to 6 watts
- High-brightness low NA fiber
- Exceptional uncooled lifetime & reliability

Applications

- CATV distribution
- PON and GPON networks
- High-rel cladding pumped amps

Device Parameters*

Electro-Optical	Symbol	AM6-940B-20-608			AM6-940C-10-458 AM6-940C-20-458			Units
		Min	Typ	Max	Min	Typ	Max	
Center wavelength	λ_c	940 \pm 8			940 \pm 8			nm
Output power	P_o	6.0			4.5			W
Operating current	I_o	6.4	7.3		5.4	6.2	A	
Forward voltage	V_f	1.7			1.6			V
Threshold current	I_{th}	0.45	0.6		0.4	0.7	A	
Spectral width, FWHM	$\Delta\lambda$	3			2			nm

Thermal

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 with submount temperature		0.32			0.4			nm/°C

Mechanical

Case operating temperature		-40	70		-40	70	°C	
Case storage temperature		-40	85		-40	85	°C	
Fiber core diameter		105			105			μm
Fiber numerical aperture	NA	0.22			0.15 or 0.22			
Fiber length		1.5			1.5			m
Fiber pull strength		1.0			1.0			kg-f

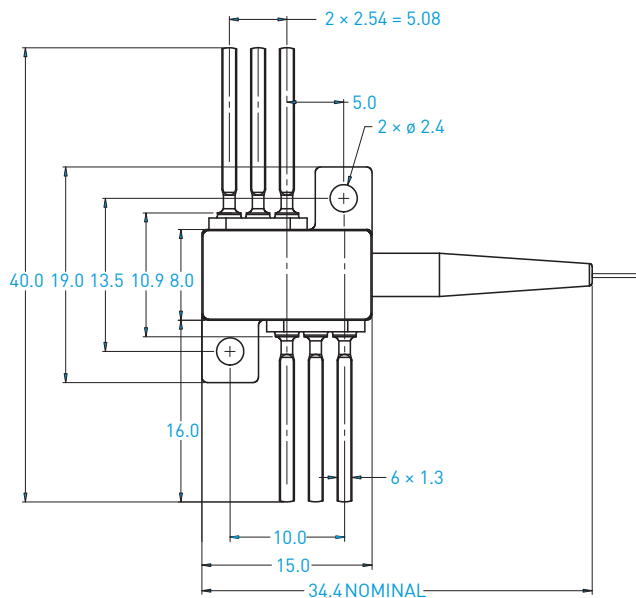
*All conditions at 25°C case temperature and nominal output power unless otherwise noted.

Absolute Maximum Ratings*	Min	Max	Units
Soldering temperature **		260	°C
Soldering duration**		10	s
Mounting torque		24	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		t = 100 ns 1000 mA	
LD ESD damage C=100 pF, R=1.5 kW		HBM > 1000 V	
Thermistor voltage		5	V
Thermistor current		2	mA

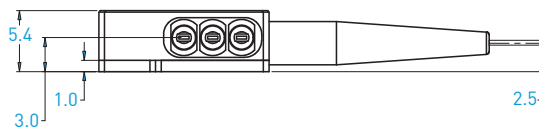
*These are safe short-term exposure limits, non-operating. Prolonged exposure to conditions at the absolute maximum ratings will have a deleterious effect on reliability and could shorten diode lifetime.

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

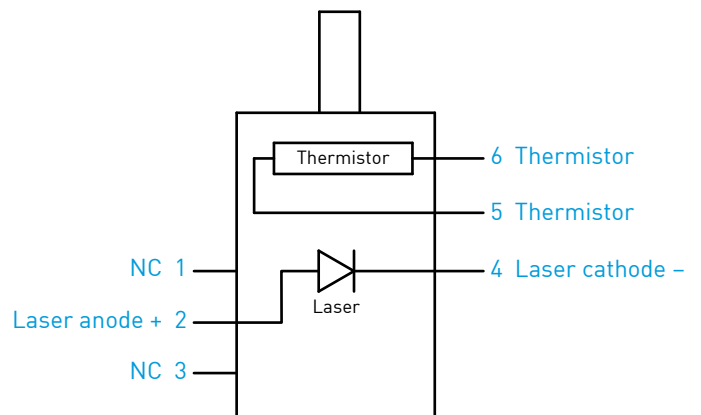
Package Dimensions



All units in mm



Package Pinout



For more information, ordering, and support.

www.compoundphotonics.com