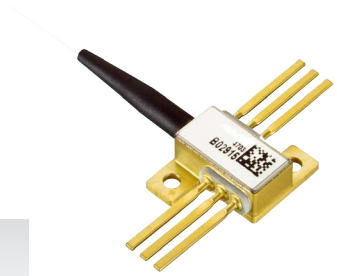
COMPOUND PHOTONICS

808 nm High-Efficiency Single Emitters

Compound Photonics' "Generation C" 808 nm pump lasers offer over 55% power conversion, low threshold, high slope efficiency, and excellent stability over temperature. The fiber-coupled devices offer 3.5 watts ex-fiber in high-reliability packages with high-brightness 105 µm, 0.15 or 0.22 NA fiber. Fiber-coupled packages are fully qualified to GR-468.



Key Characteristics

- 55% power conversion efficiency
- Low threshold current and high slope efficiency
- Up to 3.5 watts output power
- Proven lifetime and fully environmentally qualified

Applications

- Microlaser pumping
- Laser-initiated ordnance
- End-pumped DPSS lasers

Device Parameters*

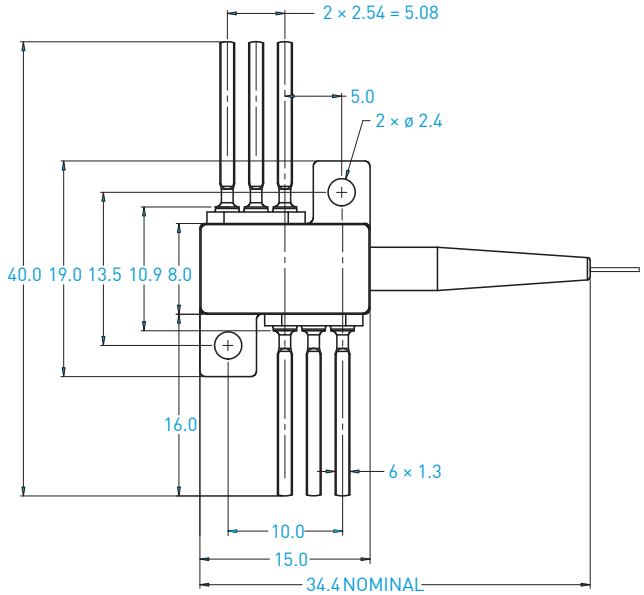
Electro-Optical	Symbol	XM6-808C-10-353 XM6-808C-20-353 Min	Typ	Max	Units
Center wavelength	λ_c		808 ± 3		nm
Output power	P_o		3.5		W
Operating current	I_o		4.1		A
Forward voltage	V_f		1.7	1.8	V
Threshold current	I_{th}		0.7		A
Spectral width, FWHM	Δλ		2.0		nm
Thermal					
Thermistor value at 25°C	R_{th}	9.5	10	10.5	kΩ
Thermistor constant, 0 - 50°C	β		3892		K
Spectral shift with submout temperature			0.35		nm/°C
Mechanical					
Case operating temperature		0		50	°C
Case storage temperature		–40		85	°C
Fiber core diameter			105		µm
Fiber numerical aperture	NA		0.15 or 0.22		
Fiber length			1.5		m
Fiber pull strength			1.0		kg-f

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

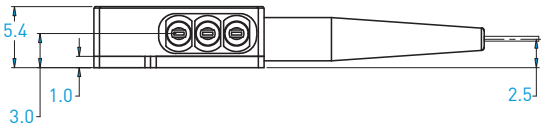
Absolute Maximum Ratings*	Min	Max	Units
Soldering temperature **		260	°C
Soldering duration**		10	s
Mounting torque		24	in-oz
Long term fiber bend radius	25		mm
LD reverse current		10	mA
LD current transient max		t = 100 ns 1000 mA	
LD ESD damage C=100 pF, R=1.5 kW		HBM > 1000 V	
MPD ESD damage C=100 pF, R=1.5 kW		HBM 500 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.

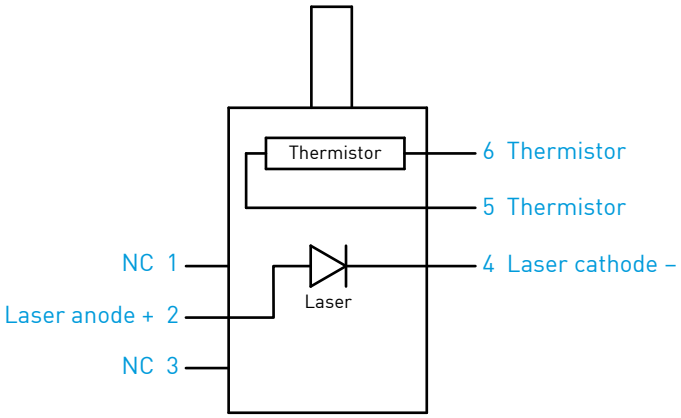
Package Dimensions



All units in mm



Package Pinout



For more information, ordering, and support.
www.compoundphotonics.com

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