

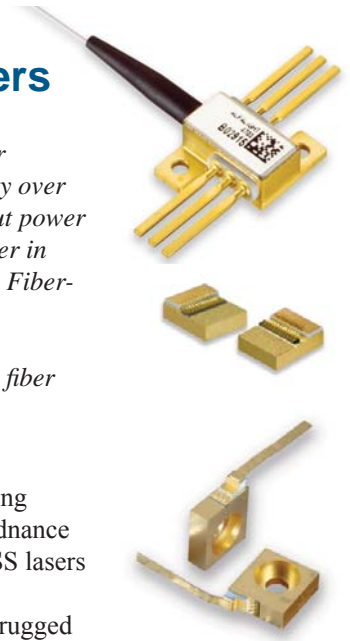


808 nm High-Efficiency Single Emitters

Alfalight's "generation B" 808 nm pump lasers offer over 55% power conversion, low threshold, high slope efficiency, and excellent stability over temperature. Chip-on-carrier packages offer 2.5 watts ex-facet output power on C- and Q-mounts. The fiber-coupled devices offer 2.0 watts ex-fiber in high-reliability packages with high-brightness 105 μm , 0.15NA fiber. Fiber-coupled packages have been qualified to GR-468.

The latest "generation C" laser offers 3.5 watts in a 105 μm , 0.15NA fiber with no compromise on long-term reliability.

- 55% PCE
- $I_{th} = 0.4 \text{ A}$
- $SE = 1.1 \text{ W/A}$
- Chip on carrier and fiber-coupled
- Custom wavelengths and powers available
- Microlaser pumping
- Laser-initiated ordnance
- End-pumped DPSS lasers
- High-reliability
- Environmentally-rugged



Device Characteristics*



6-pin Uncooled
XM6-808C-10-353

6-pin Uncooled
AM6-808B-10-203

Chip on Carriers
AMC-808B-02-253
AMQ-808B-02-253

Electro-Optical	Symbol	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Units
Center wavelength	λ_c		808 \pm 3		808 \pm 3			808 \pm 3			nm
Output power	P_o		3.5		2.0			2.5			W
Operating current	I_o		4.1		2.3	2.5		2.7	2.8		A
Forward voltage	V_f		1.7		1.7	1.8		1.7	1.8		V
Threshold current	I_{th}		0.7		0.43	0.50		0.39	0.50		A
Spectral width	$\Delta\lambda$		2.0		2.0	3.5		2.0	3.5		nm

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

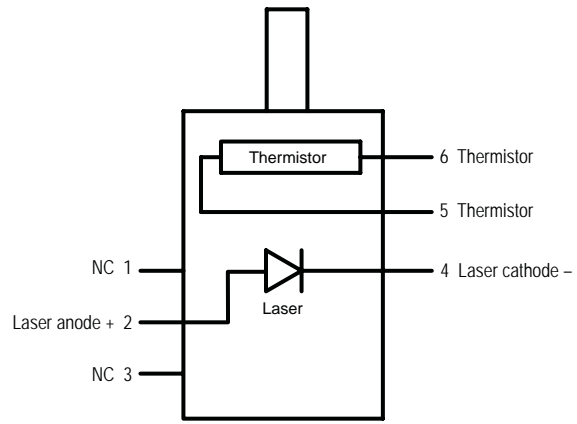
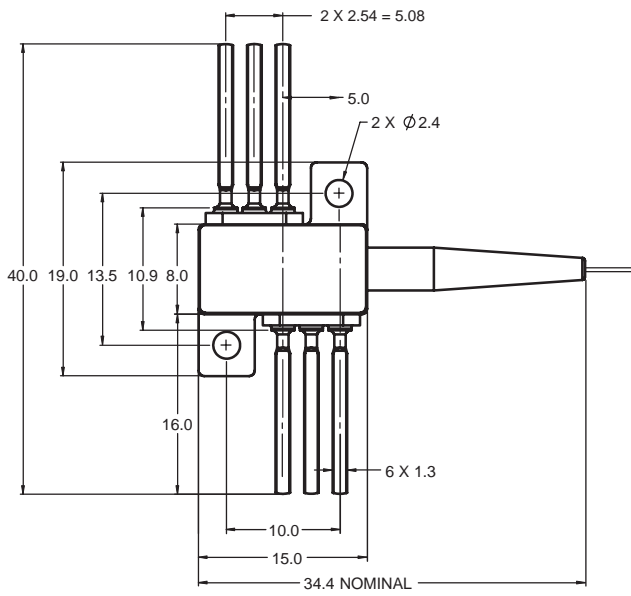
Mechanical

Case operating temperature		-40		70	-40		70	0		50	°C
Case storage temperature		-40		80	-40		80	0		85	°C
Fiber core diameter/BAL stripe			105			105			100		μm
Fiber NA/Divergence	NA		0.15			0.15			$8^\circ \times 34^\circ$		
Fiber length			1.5			1.5					m

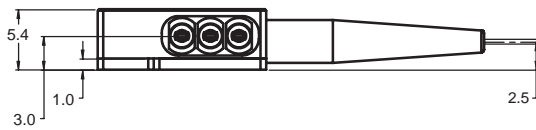
*All conditions are at 25°C submount temperature and output power unless otherwise noted.

Specifications for XM6-808C-10-353 are preliminary. Nominal values are subject to change.

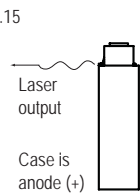
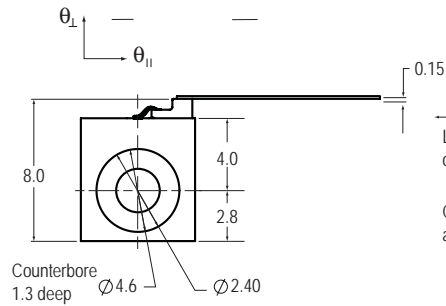
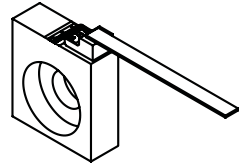
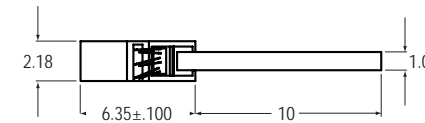
6-pin Package Dimensions and Pinout



All units in mm

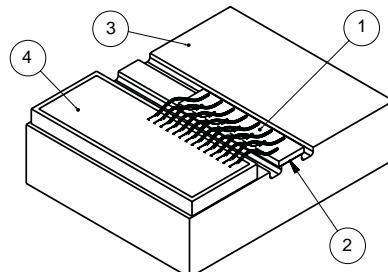
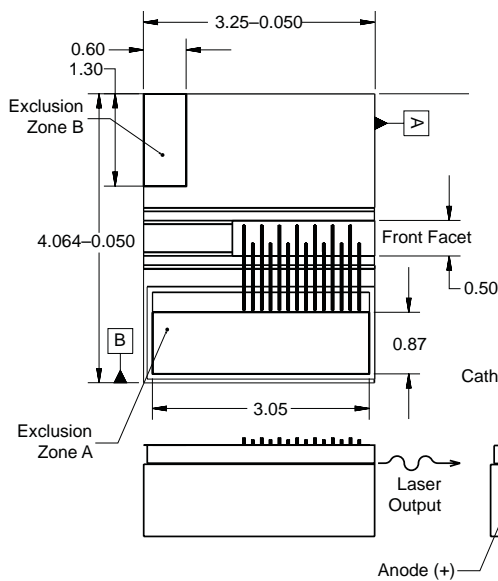


C-mount Package Dimensions

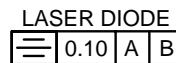
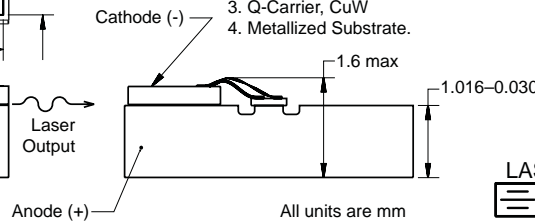


All units in mm

Q-mount Package Dimensions



1. Laser Diode
2. Solder AuSn
3. Q-Carrier, CuW
4. Metallized Substrate.



All units are mm

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