

PEARL™ HIGH-BRIGHTNESS SERIES



The Pearl™ high-brightness series offers up to 40 Watts from a 200 micron fiber and has been optimized for fiber laser pumping and direct diode materials processing.

The Pearl™ product family offers unparalleled reliability and efficiency by coupling nLIGHT's high-brightness nXLT™ single emitters with a proprietary optical design for efficient fiber coupling.

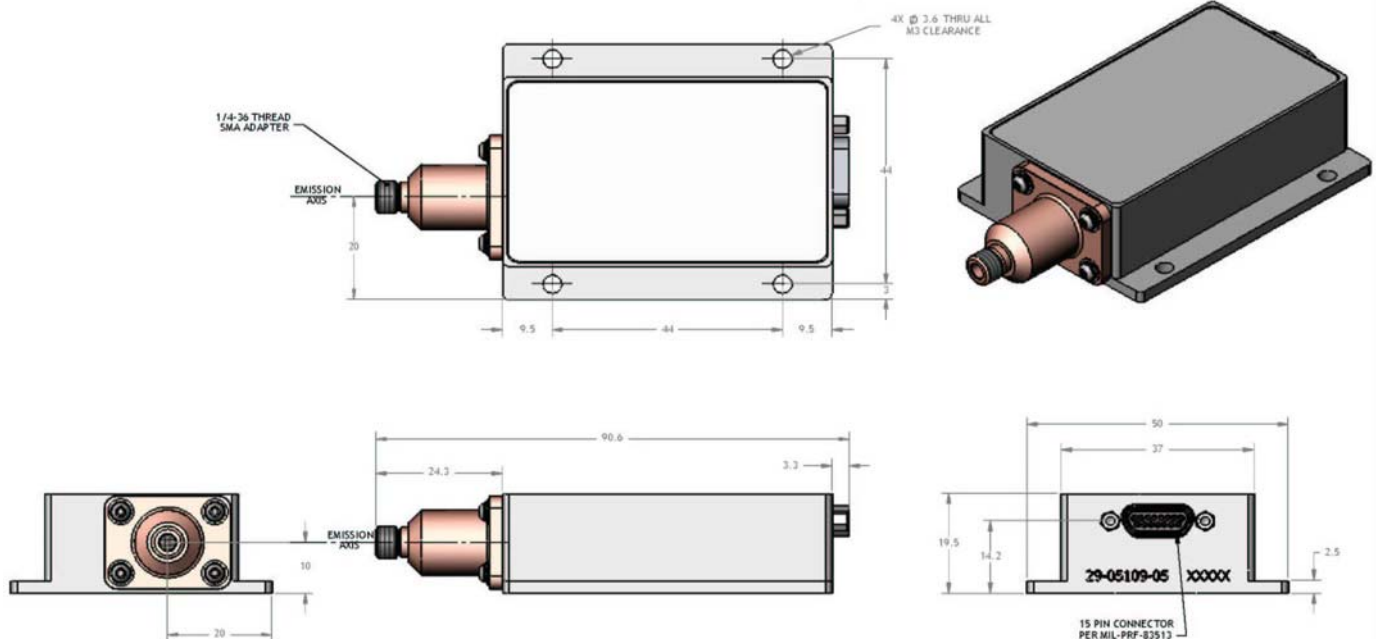
Applications

- Fiber laser pumping
- Dental
- Materials processing
- Surgical

Features

- Single emitter diodes with nXLT™ diode protection
- High-brightness 200µm fiber
- >50% wall-plug efficiency
- nDure™ fiber
- Plug and play

Package dimensions



Typical device specification

		P2-050-0915-5	P2-050-0980-3
Optical			
Center wavelength	nm	915	980
Center wavelength tolerance	nm	± 5	± 3
CW output power	W	50	50
Fiber core diameter	µm	200	200
Beam divergence	NA ¹	< 0.2	< 0.2
Spectral width (FWHM)	nm	< 5	< 3.5
Slope efficiency	W / A	10.7	10.7
Electrical			
Power conversion efficiency	%	54	54
Threshold current	A	0.5	0.5
Operating current	A	5.3	5.3
Operating voltage	V	17.5	17.5
Series resistance	Ω	0.4	0.4
Mechanical			
Storage temperature range ²	°C	-30 to +60	-30 to +60
Mass (+/- 5%)	gr	100	100
Thermal			
Thermal resistance ³	°C / W	0.4	0.2
Operating temperature	°C	+15 to +35	+15 to +35
Wavelength temperature coefficient ⁴	nm / °C	0.28	0.28

¹ Numerical aperture (NA) is the sine of the half-angle encircling 90% of the optical energy from the fiber.

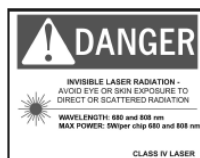
² A non-condensing environment is required for storage and operation.

³ Thermal resistance is the diode junction temperature shift per incremental Watt of heat load.

⁴ The wavelength temperature coefficient is the wavelength shift per °C change at the diode junction.

CFR Regulation

These components do not comply with the federal regulation (Title 21 CFR, Chapter 1, Subchapter J) as administered by the Center for Device and radiological Health. Purchaser acknowledges that their products must comply with these regulations before they can be sold to an end-user.



Notice

nLIGHT continually improves its products to provide our customers with outstanding quality and reliability. nLIGHT may make changes to specifications and product descriptions at any time, without notice. In addition, nLIGHT offers a limited warranty to ensure customer satisfaction. For complete details, please contact your nLIGHT sales representative.