

PUMP SOURCES FOR OPTICAL COMMUNICATIONS

SLI

BTF14-980P160

Specifications

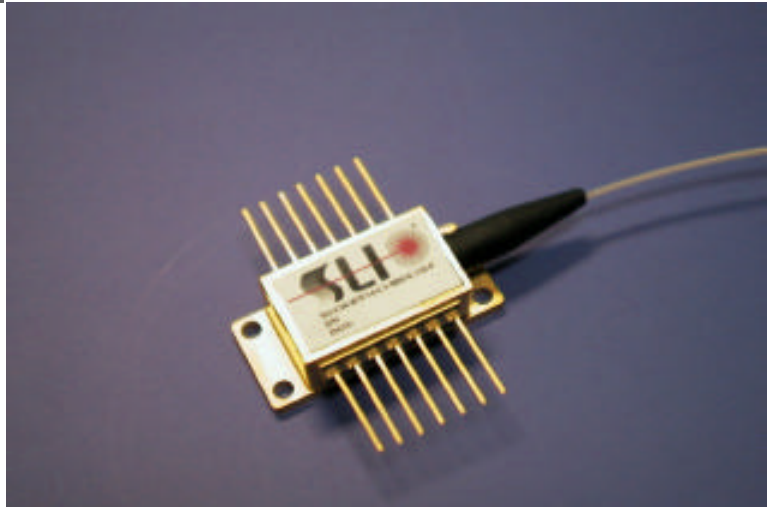
- Wavelength 980nm
- 160mW
- Optional Fiber Bragg grating stabilization available.
- Self contained thermistor and TEC
- Telcordia™ GR-468-CORE compliant

Functions

- DWDM EDFAs demanding high power with stabilized wavelength
- Metro area and high node count distribution and CATV trunks

Features

- Up to 200mW kink-free fiber output
- Industry-standard, fully floating pinout configuration
- Epoxy-free, fully hermetic, laser-welded package
- Corning Flexcore 1060 fiber pigtail standard (250 μ m diameter, 6 μ m core)



The SLI BTF14-980P160 laser diode pump module is ideally suited for pumping erbium-doped fiber amplifier systems (EDFAs), such as those used in metro area dense wavelength - division multiplexing (DWDM) products and cable TV networks. Operated in Continuous Wave mode, SLI BTF14-980P laser diode pump modules are available from 60mW to 200mW.

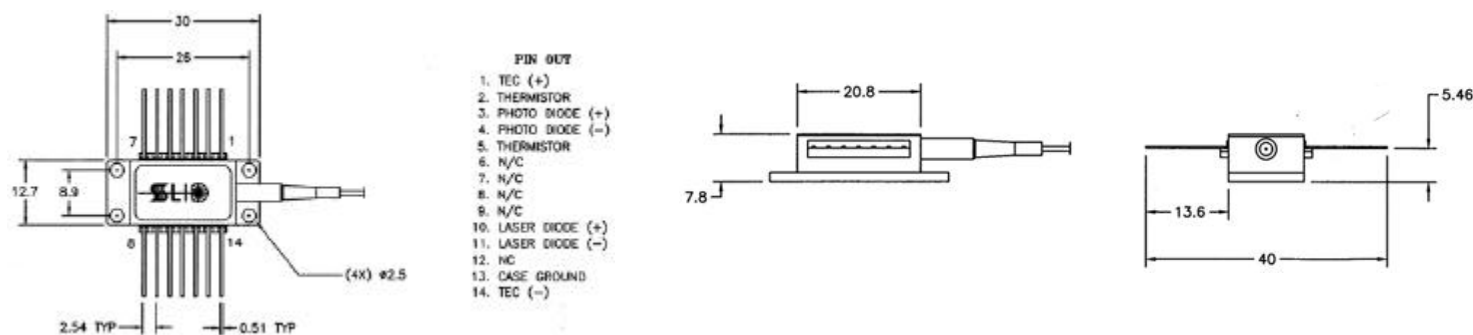
Designed and manufactured to meet rugged Bellcore GR-468 requirements, SLI BTF14-980P pump modules are available in 14 Pin Butterfly packages.

The SLI BTF14-980P uses fiber Bragg grating to stabilize the wavelength. The wavelength is "fixed" to provide a narrow band spectrum despite fluctuations in temperature. The grating also provides for an absence of noise with constant changes in drive current, feedback, and other hard to control environmental conditions.

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Package Drawings (all dimensions in mm)



Component	Min	Nom	Max	Unit
Laser Diode				
Peak Wavelength	975	980	985	nm
Power in Band	90%	99%	---	---
Power Stability	0.5%	1%	---	---
Forward Voltage	---	2.1	2.5	V
Threshold Current	---	30	45	mA
Operating Current	---	---	370	mA
Reverse Voltage	---	---	2.5	V
Monitor Photodiode				
Monitor Current	100	---	3000	μA
Monitor Dark Current	---	---	0.15	μA
Thermistor				
Resistance @ 25C	9	10	11	KΩ
Constant	3600	3900	4200	K
Thermoelectric Cooler				
Voltage	---	---	2.6	V
Current	---	---	1.5	A
Capacity	---	55	---	C
Package				
Storage Temperature	-40	25	85	C
Operation Temperature	-20	25	75	C
Fiber Pigtail				
Fiber Temperature	-40	---	85	C
Tensile Stress	---	---	5	N
Bend Radius	25	---	---	mm

The SLI BTF14-980P series uses a facet passivation process, which effectively protects the laser facets from catastrophic optical damage at high operating optical power densities. The lasers are 100% burned in at an industry-best 100°C to ensure reliable operation.

Handling Precautions

This laser must not be operated without proper termination of the output fiber, either by splicing into an EDFA system, or by otherwise assuring that radiation cannot be emitted into free space or reflected back to the laser (maximum permissible back radiation -28dB). Release of radiation into free space poses serious hazard of eye injury. Back reflection of optical power from a free fiber end may cause immediate and permanent damage to the laser or latent damage resulting in reduced service lifetime, and will void the product warranty.

This device is subject to damage by electrostatic discharge (ESD). It should be treated as an ESD Class 2 device during handling, assembly and testing. See JEDEC Publication Number 108-A for guidelines. Because of its small size, safety information is not printed on the actual laser module. This is, however, attached to the outside of the shipping carton.

Warranty

Unless otherwise noted, SLI warrants all standard pump laser products, when operated at or below noted optical power and within specified temperature and electrical limits, with no more than -28dB back reflection, against defects in material and workmanship for a period of 90 days from the date of shipment.

Laser Safety Information
Class IIb Laser Product

This laser diode module complies with 21 CFR 1040.10 and 1040.11. 6 μm single-mode fiber pigtail. Wavelength is 980nm. Maximum output power is 500mW.

Caution: Use of controls, adjustments and procedures other than those specified herein may result in hazardous laser radiation exposure.

DANGER

INVISIBLE LASER RADIATION
AVOID DIRECT EXPOSURE TO BEAM
Indium Gallium Arsenide Phosphide Laser
300mW maximum output @ 980nm
Class IIb Laser Product



Complies with 21 CFR 1040.10 & 1040.11