

BLUE SKY RESEARCH

Optical Network Components

PROGRAMMABLE LASER™ PRL1550 Series

Blue Sky Research Programmable ITU Lasers are versatile, high-performance tunable laser sources for the optical network. They offer a new level of capability today in an architecture providing a direct path to future network requirements. The devices' high performance results from their new, proprietary EOEC design—an Electro-Optical tuning element in a compact External-Cavity structure. The electro-optical tuning system, which uses neither thermal nor moving mechanical elements to operate, provides fast, wide-range tuning. Blue Sky's Programmable Lasers generate output power up to 10 and 20 mW in its simpler, more economical design. Fine-tuning capability allows channel spacing as narrow as 50 GHz, and a 25 GHz design is in development. The Programmable Laser, including tuning element, gain chip and wavelength locker, is contained in a compact butterfly package. The product is also available with complete digital interface driver controls in a single module. The Programmable Laser complies with Telcordia standards of reliability.

Blue Sky Research Programmable Lasers are offered in a family of price-performance models, each optimized for specific applications. Choices include different channel spacings, power levels, and tuning speeds.



Available as a complete laser package with control electronics (A), or as a laser with tuning element and locker in a butterfly package (B)

VERSATILE TUNABLE ITU LASER IN A COMPACT DESIGN

- **Reliable Electro-Optical Tuning (No Moving Parts)**
- **High Output Power**
- **Wide Tuning Range**
- **Telcordia Qualified**
- **Highly Stable**
- **Superb Price/Performance**

APPLICATIONS

- **Long Haul and Metropolitan DWDM Systems**
- **Replacement for Fixed Laser Sources**
- **Spare Source for Long Haul DWDM Systems**
- **Dynamic Provisioning and Wavelength Routing**
- **Optical Add/Drop Multiplexing**

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RESEARCH**

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Programmable Laser

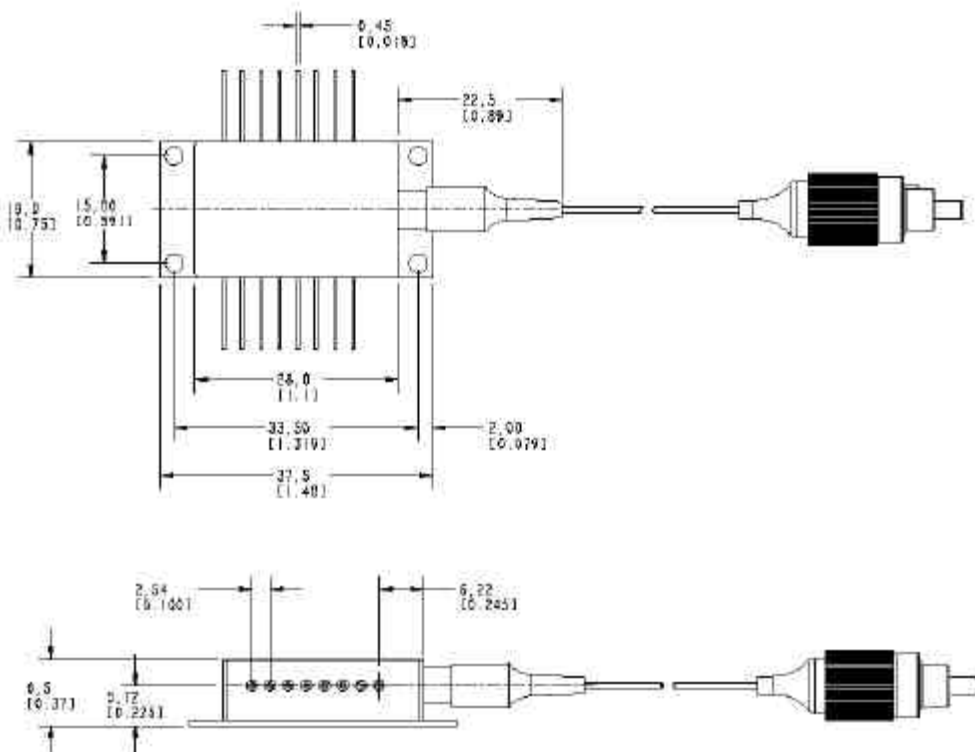
PRL1550 Series, C-band

PRELIMINARY SPECIFICATIONS (SUBJECT TO CHANGE WITHOUT NOTICE)

Parameter	PRL1550-01	PRL1550-02
Tuning range	20nm, ½ C-Band	40nm, C- or L-Band
Output power	5 mW	5 mW
	10 mW	10 mW
	20 mW	20 mW
Tuning speed	100 msec	100 msec
	< 1 msec	
SMSR	35dB min	35dB min
Frequency Accuracy	± 5 GHz for 100 GHz spacing	± 2.5 GHz for 50 GHz spacing
		± 5 GHz for 100 GHz spacing
Linewidth (@FWHM)	500 KHz typ	500 KHz typ
Power Variance vs λ	< 0.5 dB	< 0.5 dB
Channel Spacing	100 GHz	50 GHz
		100 GHz
		200 GHz
RIN (100 KHz – 2.9 GHz)	-140 dB/Hz	-140 dB/Hz
Power Consumption	TBD	TBD
Blackout @ λ Switch	Yes	Yes
Reliability Qualification	Telcordia (GR-468)	Telcordia (GR-468)
Storage Case Temperature (T _{stg})	-40°C - 85°C	-40°C - 85°C
Operating Case Temperature (T _{case})	0°C - 70°C	0°C - 70°C

Dimensions:

Butterfly Package (mm)



Programmable Laser PRL1550 Series, C-band

Dimensions:

Complete Package (mm)
(butterfly & control electronics)

