

PRODUCT BRIEF

KEY FEATURES

- ▶ Works with any existing booster amplifier
- ▶ Class 1M* laser safety classification
- ▶ Detects fiber link disruptions up to a few tens of kilometers from the unit, and open connectors
- ▶ Optional high power connector cover switch safety mechanism
- ▶ Optional amplification of the optical supervisory channel (OSC), e.g. 1510 nm
- ▶ Gain flattening of less than 1 dB
- ▶ Optional pre-tilt for SRS compensation
- ▶ State-of-the-art transient suppression
- ▶ 1RU network-ready rack-mountable unit
- ▶ Supports SNMP v2/v3 communication protocol
- ▶ Replaceable power supply unit with dual redundant power supply feeds

APPLICATIONS

- ▶ Long repeaterless links (e.g. island hopping, desert ranges and oil rigs)
- ▶ Low latency links (avoid FEC and fewer O-E-O conversion)
- ▶ Storage area networks (SANs), remote locations, disaster recovery
- ▶ Security-sensitive applications
- ▶ Traversing challenging spans within multi-spans links
- ▶ Improving OSNR in long-haul and ultra-long haul links
- ▶ 40 Gb/s and 100 Gb/s transmission and/or increasing channel count to 80+ WDM channels

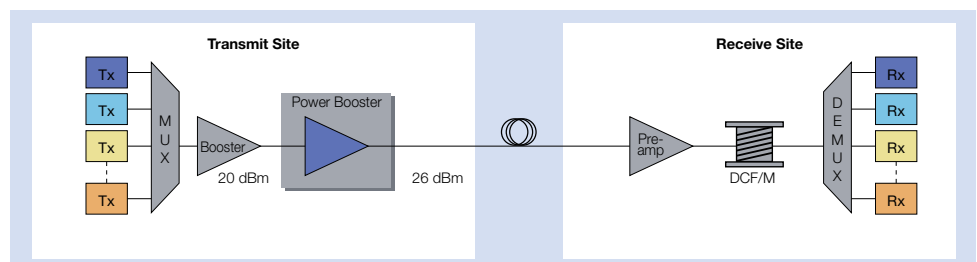
OVERVIEW

Finisar's UltraSpan™ Power Booster is a unique high output power EDFA designed to boost the launch power into the transmission fiber up to 26 dBm. This high output power is critical in applications requiring an improved optical signal to noise ratio (OSNR), such as long repeaterless links, long span masking in multi-span links, and high capacity systems. The product is packaged in a 1RU rack-mountable network-ready unit, including built-in GUI and SNMP communications, and can thus be operated as a fully independent network element.

The Power Booster is designed to be deployed in conjunction with existing booster amplifiers. Thus, it provides relatively low gain and high output power as required for boosting the output of existing booster amplifiers from 17-20 dBm to the range of 23-26 dBm. As the product is fully compatible with existing booster amplifiers, it can easily and rapidly be integrated into any existing design to allow the system to support OSNR critical applications requiring high launch power.

Using patented automatic power reduction mechanisms, the Power Booster is classified as a Class 1M* laser product, even though it typically provides output power above 21 dBm. The amplifier contains three parallel fully independent eye safety mechanisms that shut down the amplifier in case of a fiber link disruption, including open connectors (PC or APC) or broken fiber, even at a distance of a few tens of kilometers from the unit.

The Power Booster can optionally be provided in a high gain configuration to replace existing booster amplifiers, as well as a module for integration on a line card.



KEY OPTICAL SPECIFICATIONS

Parameter	Specifications			Remarks
	Min.	Max.	Unit	
Wavelength Range	1528	1567	nm	
Gain	6	20	dB	Factory set
Gain Accuracy	-0.25	+0.25	dB	Gain is calculated as (Pout-ASE)/pin
Composite Output Power		26	dBm	Assuming no pre-tilt
Composite Input Power	-10	20	dBm	
Gain Flatness (peak-to-peak)		1	dB	
Noise Figure (max gain, min input power)		8	dB	
Supervisory Channel Band-pass (add/drop filters)	1500	1520	nm	Optional
Supervisory Channel Extension Output Power		13	dBm	Optional
Gain Transient Suppression, Overshoot/Undershoot (15 dB add/drop)	-1	+1	dB	
Gain Transient Suppression Time		400	μsec	
PDG		0.3	dB	
PMD		0.3	psec	
Laser Safety	Class 1M*			CDRH 1040.10, IEC 60825-1

MECHANICAL, ENVIRONMENTAL, ELECTRONIC SPECIFICATIONS

Parameter	Specifications			Remarks
	Min.	Max.	Unit	
Dimensions (WxHxD)	442x44x240		mm	
Front Panel Power Connectors	2 x 3-Pin D Type (-48 V DC) or 2 standard appliance interface connectors (110/220 VAC)			Replaceable power supply unit
Front Panel Communication Connectors	RJ45, 9-Pin D Type	15-Pin D Type	2 x 9-Pin D Type	Ethernet, RS232, SNMP ver 2 and 3, or web server, maintenance, high speed control
High E2000 Cover Switch	Mechanical protection for eye safety			Optional
Front Panel Optical Adaptors	LC-UPC (input, OSC Add (optional), output tap, input tap, OCM feed) E2000 (high power) – output			Can be customized according to customer requirements
Cooling Fans	4			Redundant hot-swappable fans
Alarm LEDs	Output power, eye safety, input loss, hardware failure			Four three color LEDs LED operation can be customized
Operating Environment Temperature	-5	+55	°C	
Storage Temperature	-40	+85	°C	
Humidity	5	90	%	
Standards	ETSI, NEBS Level 3			
Supply Voltage	-36 to -76 DC or 65-240 AC		V	
Power Dissipation	<50		W	For 26 dBm output power
Current	1 A @ 48 VDC 0.5 A @ 110 VAC 0.25 A @ 220 VAC		A	

* Class 1M products are not hazardous under normal circumstances, but may pose an eye hazard when the laser output is viewed with certain optical instruments (for example eye loupes, magnifiers and microscopes) within a distance of 100 mm

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