

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# **FINISAR**

#### **Key Features**

- Works with any existing booster amplifier
- ► Class 1M\* laser safety classification
- Detects fiber link disruptions up to a few tens of kilometersfrom 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

# **UltraSpan**°

## UltraSpan<sup>™</sup> Power Booster

#### Overview

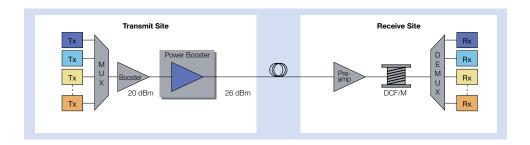
Finisar's UltraSpan<sup>®</sup> Power Booster is a unique high output power EDFA designed to boost the launch power into the transmission fiber up to 26 dBm. This high output power is critical in applications requiring an improved optical signal to noise ratio (OSNR), such as long repeaterless links, 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.





## UltraSpan™ Power Booster

### **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<br>Output Power                        |                | 13    | dBm  | Optional                             |
| Gain Transient Suppression,<br>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 (-4 interface connecto | 18 V DC) or 2 standar<br>rs (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 protect                      | tion for eye safety                        | Optional   |   |
| Front Panel Optical Adaptors         |   | Add (optional), out<br>high power) – outpu | Can be customized according to customer requirements     |   |
| Cooling Fans                         | 4                                       |  |  | Redundant hot-swappable fans  |
| Alarm LEDs                           | Output power, eye                       | safety, input loss, ha                     | Four three color LEDs<br>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                              | _                                       | 48 VDC<br>110 VAC<br>220 VAC               | А  |   |

<sup>\*</sup> 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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