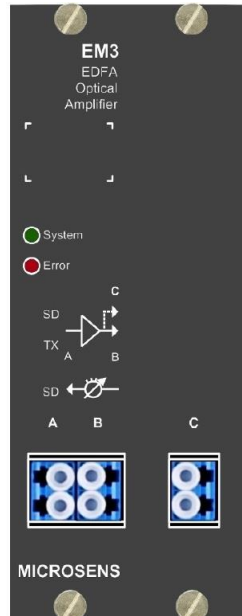


Datasheet

MSP 1000

Amplifier module EDFA

 Made
 in
 Germany



General Information

The optical amplifier module EDFA (Erbium Doped Fiber Amplifier) of the MICROSENS MSP1000 platform is used to amplify the signal level of an entire data stream within a DWDM infrastructure in order to increase the performance and as a result the signal range.

Regardless of the data rates, this amplifier is looped between the DWDM filter and the line fiber to amplify the total signal over a defined wavelength range. Depending on the requirements, the amplification can take place at the beginning (booster) or at the end (pre-amp) of the line and can be adjusted accordingly.

The integrated Gain Flattening Filter (GFF) ensures a consistent amplification over the defined wavelength range and thus allows a high number of channels to be actively used and amplified or the use of several amplifier stages for very long connections.

Precise level meters allow the measurement of unamplified, amplified as well as return channels, adjustable thresholds allow the permanent monitoring of the entire line during operation. In addition, external measuring devices can be connected via the integrated monitor port.

The MSP1000-EDFA module is operated exclusively within the 4U chassis and occupies two slots when installed.

The monitoring of the EDFA parameters is provided by the MICROSENS NMP software.

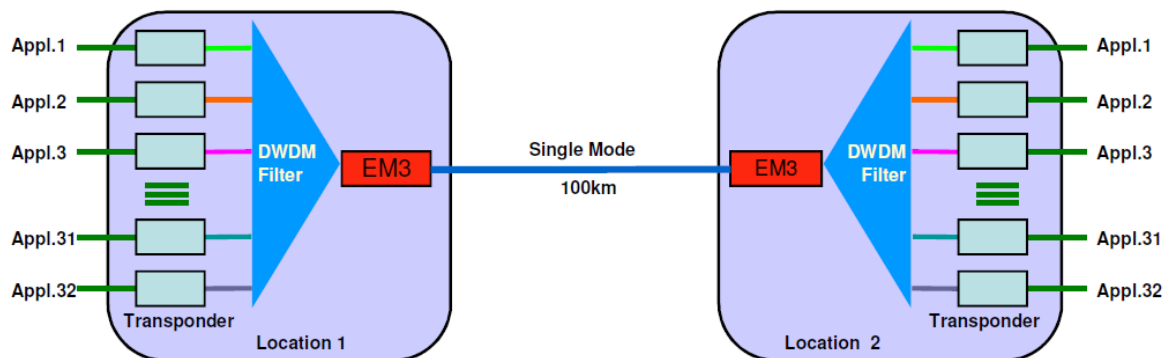
Technical Details

Type	Optical Amplifier module EDFA MSP1000
Typ. Application	<ul style="list-style-type: none">- Long and very long distances- Extensive rings- DWDM with high number of channels to compensate filter losses- Cascaded amplifier stages
Optical interfaces	Transfer range 1529nm - 1565nm (DWDM C-Band)
Operating modes	<p>Booster (line driver): is used at the beginning of the fiber</p> <p>Pre-Amp: (preamplifier): is used at the end of the fiber (in data direction)</p>
Data Rates	Independent
Data security	Soft reset or software download does not cause data interruption. It is not possible to intercept the data via the management system
Dimensions	Space requirement 2 Slots in MSP1000-Chassis (only 4U)
Test functions	<ul style="list-style-type: none">- Optical level before and after amplifier- Optical level of the return channel- Lamp test-
Operating temp.	0..+40 °C
Storage temp.	-40..+85 °C
Humidity	5% up to 80 % non-condensing

Optical parameters

Pre-Amp / Booster Mode		Noise Figure	
Input level (Operation) permitted	Min: -30 dBm Max: +5 dBm	with Gain: 30 dB	5,5 dB max.
Input level (Damaged)	Max: +15 dBm	with Gain: 27 dB	5,6 dB max.
Input level (Monitoring only)	Min: -38 dBm Max: -30 dBm	with Gain: 24 dB	5,7 dB max.
Output level	Min: -8 dBm Max: +20 dBm	with Gain: 21 dB	6,5 dB max.
Monitor Output	0,7% - 1,55% Of the output level	with Gain: 18 dB	8,0 dB max.
Amplification	15 - 30 dB	with Gain: 15 dB	10,7 dB max.
Gain Flatness: 1 dB			

Example of application



Order Information*

Description	Art.-No.
MSP1000 optical amplifier module EDFA Booster/Pre-Amp for C-Band with integrated GFF, Monitorport integrated, 3x LC/PC duplex, occupies 2 Slots	MS425643M-V2

Accessoires MSP1000 (Selection)

Description	Art.-No.
MSP1000 Enterprise 4U Chassis	
MSP1000 Enterprise 4HE Chassis AC 19" 2 Slots for 2x 230 VAC-Power supply prep., 11 Modulslots, incl. Backplane, incl. 3-fold Fan Module	MS425500M
MSP1000 Enterprise 4U Chassis DC 19" 2 Slots for 2x 48 VDC-power supply prep., 11 Modulslots, incl. Backplane, incl. 3-fold Fan Module	MS425501M
MSP1000 Enterprise 4U Chassis AC/DC 19" 2 Slots for 48 VDC and 230 VAC-Power Supply prep., 11 Modulslots, incl. Backplane, incl. 3-fold Fan Module	MS425502M
MSP1000 Power Supply	
MSP1000 Enterprise AC Power supply Module Input: 90..264 VAC, 50..60 Hz, max. 250 W	MS425510
MSP1000 Enterprise DC Power supply Module Input: 36..75 VDC, max. 250 W	MS425511

* For more information on the MSP1000 portfolio, please refer to our document [„Technical description MICROSENS MSP1000 Optical Platform.pdf“](#).

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