

17 dBm Controlled EDFA for Metro and Long Haul Applications

OA 3500 Amplifier Series



Key Features



- Variable gain, 5 to 23 dB
- Fast transient suppression
- Variable optical attenuator (VOA)
- Constant gain, power, and current modes
- Alarms
- Platform flexibility

Applications

- C band
- Dense wavelength division multiplexing (DWDM) networks
- Metro, long haul, or ultra long haul networks
- Pre-amplifier, inline, or booster amplification

JDSU's Agile Optical Amplifiers respond dynamically to accommodate changes in number of wavelengths or signal powers using advanced transient suppression techniques. As a result, they preserve gain, flatness and output power over a wide range of input conditions to meet the needs of reconfigurable optical networks.

The JDSU OA 3500 Series is a controlled optical amplifier that features variable gain and transient suppression. The maximum optical output of 17 dBm and variable gain range of 5 to 23 dB make the module suitable for pre-amplifier, inline, and booster applications.

The transient suppression feature of the module minimizes transmission penalties as channels are added and dropped in the network, or as input power varies. The control interface is a Transistor-Transistor Logic (TTL) level RS232 driven by a 5 V power supply.

JDSU has extensive experience with the development of fully functioning erbium doped fiber amplifiers (EDFAs), and can design standard, high-performance optical amplifier products that meet your technical performance, cost target, and time-to-market requirements.

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Specifications**Parameter** **OAC-17F3500Cx**

| | |
|--|----------------------|
| Signal wavelength | 1530 to 1563 nm |
| Total input signal power (full channel load) | -28 to 12 dBm |
| Total output signal power | 17 dBm |
| Signal gain (design point) | 5 to 23 dB |
| Flatness | 1.0 dB |
| Noise figure | 6.0 dB |
| Gain transient suppression time | See table below |
| Gain transient overshoot/undershoot | See table below |
| Power supply requirements | 5 V |
| Dimensions (W x H x D) | 130 x 212 x 14.75 mm |
| Operating temperature | -5 to 70 °C |



Gain Transient

| Transient Event | Maximum Excursion (Overshoot/Undershoot) | Settling Time (Typical) | Settling Time (Maximum) |
|------------------------|---|--------------------------------|--------------------------------|
| 3 dB add/drop | 0.8 dB | 150 | 300 |
| 9 dB add/drop | 1.5 dB | 200 | 400 |
| 15 dB add/drop | 2.0 dB | 300 | 500 |

Ordering Information

For more information on this or other products and their availability, please contact your local JDSU account manager or JDSU directly at 1-800-498-JDSU (5378) in North America and +800-5378-JDSU worldwide or via e-mail at customer.service@jdsu.com.

Sample: OAC-17F3500CA

| OAC-  | F 03500C  | | | | | | | | | | | | | | | | | | | | | |
|---|---|------------------------|----|--------|---|------|---------------|---|-----------|---|------|-----------------------------|---|--------|---|--------|---|--------|---|------------------|---|----|
| <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Code</th> <th style="text-align: left;">Power Out¹</th> </tr> </thead> <tbody> <tr> <td>17</td> <td>17 dBm</td> </tr> </tbody> </table> | Code | Power Out ¹ | 17 | 17 dBm | <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Code</th> <th style="text-align: left;">Gain Flatness</th> </tr> </thead> <tbody> <tr> <td>F</td> <td>Flattened</td> </tr> </tbody> </table> | Code | Gain Flatness | F | Flattened | <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Code</th> <th style="text-align: left;">Connector Type²</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>FC/APC</td> </tr> <tr> <td>5</td> <td>SC/APC</td> </tr> <tr> <td>9</td> <td>FC/UPC</td> </tr> <tr> <td>A</td> <td>SC/UPC (default)</td> </tr> <tr> <td>C</td> <td>MU</td> </tr> </tbody> </table> | Code | Connector Type ² | 3 | FC/APC | 5 | SC/APC | 9 | FC/UPC | A | SC/UPC (default) | C | MU |
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1. Other output power options available upon request.
2. More connector options available upon request.

User Safety

The invisible laser light emitted from this module is harmful to the human eye. Proper laser safety eyewear must be worn during operation.

ESD Protection

The laser diodes and photodiodes contained in this module are very reliable under normal operating conditions. However, they are easily destroyed by inadvertent electrostatic discharge (ESD). Take extreme precaution to prevent ESD. Use wrist straps, grounded work surfaces, and antistatic techniques when operating this module. When not in use, the fiber amplifier must be kept in a static-free environment with the shorting plug covering the connector.

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