LΛMBDλAMP™

Universal Optical Amplifier

The deployment of the Lambdaamp-20 optical amplifiers enables DWDM transmissions over long distances. The LA-20 is designed for use as a booster and as a line amplifier.

When used as a booster (boosting the power of the laser) it will be installed at the front end of the fibre to inject an amplified signal into the fibre. Likewise it can be used as a line amplifier or intermediate amplifier to compensate signal loss sustained in long-haul optical transmissions and is placed every 60 km to 120 km. Equally effective as a preamplifier, the LA-20 can also be installed at the far end of the fibre and amplify a weak signal at the receive end to get a usable signal level the receivers are able to detect.

The Lambdaamp-20 is a broadband EDFA amplifier (Erbium Doped Fibre Amplifier) and can be used for the simultaneous, protocol transparent amplification of up to 80 DWDM wavelengths over a single optical fibre. It is a matter of course that this amplifier can be configured and monitored locally via SNMP or CLI (Telnet) or WEB. Featuring a dedicated transceiver port, it allows for an in-band control of the LA-20 over the fibre (OSC – Optical Service Channel).

Added to the Automatic Power Control Mode (APC), an optional Automatic Gain Control (AGC) can be set to keep the amplifier output signal at a constant level even if the incoming signal strength is strongly varying.
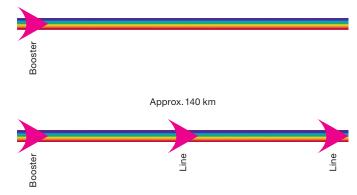
Technical Data

- Operation wavelength range: 1529 nm min. / 1562 nm max.
- Input Power: +0 dBm max. / –29 dBm min.
- Maximum output power: +20 dBm
- Adjustable output power range:
  - -10 dBm to +20 dBm (APC)
  - +3 dB to +30 dB (AGC)
- Gain flatness: single channel <5 dB; 2 dB typical
- Noise figure: 5 dB typical, 6 dB max.
- Polarization dependent gain: 0.5 dB
- Polarization mode dispersion: 0.5 ps
- Input / output isolation: 30 dB min.
- Input pump leakage: –35 dBm max.
- Output pump leakage: –35 dBm max.
- Return loss: 40 dB min.
- LAN Interface: 2 x RJ45, 1 x SFP (OSC)
- Communication interface: RS232
- Network Management: CLI, WEB, SNMP
- Power supply: 100 to 230 VAC / –36 to –72 VDC
- Power consumption: 30 Watt max.
- Operation temperature: 0 to 50 °C
- Dimension (W x D x H): 1U, 19″ (483 mm x 375 mm x 44 mm)
- Weight: 3.80 kg
- Standards
  - CE certified

Features

- Broadband amplification
- Low noise level
- Monitoring via CLI, Telnet, WEB, SNMP
- Simple deployment
- Compact design
- 3 years warranty
- –48 V DC or 230 V AC, redundant, mixed possible
- Utilisation as a booster and line amplifier
- In-band management

Approx. 140 km

Booster

Approx. 140 km

Booster   Line   Line

DELTANET