TEST INSTRUMENTS

Laboratory C-band and L-band optical amplifiers

Rack laboratory amplifiers with single-channel and gain-flattened booster or preamplifier options.

Applications to discuss: Optical component testing; Optical test benches.

Selection points
1524-1625 nm family coverage / 29 dBm or 27 dBm output limits / AC-powered laboratory rack format

Configuration options

Configuration	Optical wavelength range	Output power	Noise figure
Single-channel booster	1524 to 1625 nm	≤29 dBm	≥4.5 dB
Single-channel preamplifier	1524 to 1625 nm	≤29 dBm	≥3.5 dB
Gain-flat booster	1524 to 1625 nm	≤27 dBm	≥4.5 dB
Gain-flat preamplifier	1524 to 1625 nm	≤27 dBm	≥4.2 dB

Each row is a separate configuration. Limits from different rows must not be combined.

Technical details

Parameter	Specification or condition
Operating bandwidth	Single-channel booster, Single-channel preamplifier: Typ. 34 nm; Gain-flat booster, Gain-flat preamplifier: ≤47 nm
Small-signal gain	Single-channel booster: -; Single-channel preamplifier: ≤52 dB
Control modes	Single-channel booster, Single-channel preamplifier: ACC, APC, AGC; Gain-flat booster, Gain-flat preamplifier: ACC, APC, AGC with flat gain
Per-channel gain at -25 dBm input	Gain-flat preamplifier: ≤50 dB
Gain flatness	Gain-flat booster, Gain-flat preamplifier: <1.5 dB

Integration and delivery

Item	Configuration detail
Format	1U, AC-powered test instrument
Controls	RS232 graphical interface; optional Ethernet; key switch and remote interlock
Optical options	PM or non-PM, variable gain and mid-stage access require configuration review

Conditions and configuration notes

- The noise-figure inequalities are printed as lower bounds (≥), not guaranteed maxima. Their intended direction requires confirmation.
- The headline small-signal gain differs from the detailed table; the detailed table entries are retained pending confirmation.
- ACC: automatic current control; APC: automatic power control; AGC: automatic gain control.