GAIN MODULES

Ultra-compact erbium fibre amplifier modules

Embedded erbium-doped gain modules with separately specified booster and preamplifier performance.

Applications to discuss: Optical instrument integration; Optical sensor amplification.

Selection points
70 x 45 x 12 mm package / 19 dBm standard; 15 dBm gain-flat limits / Booster and preamplifier configurations

Configuration options

Configuration	Optical wavelength range	Output power	Noise figure
Standard booster	1525 to 1590 nm	≤19 dBm	≤5.5 dB
Standard preamplifier	1525 to 1590 nm	≤19 dBm	≤3.7 dB
Gain-flat booster	1525 to 1575 nm	≤15 dBm	≤5.5 dB
Gain-flat preamplifier	1525 to 1575 nm	≤15 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	Standard booster, Standard preamplifier: Typ. 34 nm; Gain-flat booster, Gain-flat preamplifier: ≤34 nm
Small-signal gain	Standard preamplifier: >38 dB
Control modes	ACC, APC, AGC
Dimensions, length x width x height	70 mm x 45 mm x 12 mm
Per-channel gain at -25 dBm input	Gain-flat preamplifier: >35 dB
Gain flatness	Gain-flat booster, Gain-flat preamplifier: <1.5 dB

Integration and delivery

Item	Configuration detail
Integration	Embedded electronics; PM or non-PM optical options
Electrical and optical interfaces	RS232 or RS485 and connectors depend on the selected module; confirm pinout and optical delivery

Conditions and configuration notes

• The selected operating band is narrower than the overall family wavelength coverage; the bandwidth entry describes the individual configuration.

• ACC: automatic current control; APC: automatic power control; AGC: automatic gain control.