SUPERLUM

High Power Semiconductor Optical Amplifier and Booster at 780 nm A785.15.50

Superlum's A785.15.50 semiconductor optical boosting amplifiers are multi-purpose devices which are good for various applications requiring amplification of small optical signals at 780-790 nm and boosting of their output to up to 50 mW.

A785.15.50 boosters are butterfly packaged with internal TEC and thermistor for temperature stabilization of SOA chips. PM fibers are used as a standard, SM fibers may be used upon request.

Specifications (Nominal Stabilization Temperature +25 °C)

Parameter	MIN	TYP	MAX
A785.15.50			
Forward current†, I_{typ}, mA	–	200	280
Center wavelength††, nm	780	785	790
Small signal fiber-to-fiber gain††, dB	18	23	–
Small signal gain bandwidth††, FWHM, nm	12	15	–
Saturated fiber to fiber gain at I_{typ}, dB	–	14	–
Saturated gain bandwidth, nm	–	10	–
Gain ripple†††, dB	–	0.2	0.5
Maximum output power†††, mW	–	–	50
Slow/fast polarization gain ratio, dB	–	10	–

† - typical value to achieve 50 mW output at 785+/-5 nm with ~2 mW input
†† - at I_{typ}
††† - in any operating mode



Features

- Small signal fiber-to-fiber gain of 20 dB
- Small signal gain BW 15 nm
- Saturated fiber to fiber gain 14 dB
- Up to 50 mW output

Other Parameters

SLD forward voltage at P_{op}, V	–	–	2.6
Operating temperature at P_{op}, °C	-20	–	+65
Storage temperature at P_{op}, °C	-40	–	+85
Cooler current, A	–	–	2.5
Cooler current, V	–	–	3.2
Thermistor BETA, K	–	3892	–
Thermistor Resistance at 25 °C, kΩ	–	10	–

Applications

- Active media for tunable lasers
- Active media for swept sources
- Power boosting at 780-790 nm

The following marking should be used for ordering:

A785.15.50P– as rated above, PMF pigtail, FC/APC

SMF pigtailed SOAs are available upon request. Modules will be shipped FC/APC finished if not specified otherwise in the PO.

Superlum offers customization of its products to fit the requirements of every customer. Please get in touch with us for more details before ordering if you need customer-specific SOA parameters.