SUPERLUM

High Power Semiconductor Optical Amplifier and Booster at 850 nm A850.25.40

Superlum's A850.25.40 semiconductor optical boosting amplifiers are multi-purpose devices which are good for various applications requiring amplification of small optical signals at 835-860 nm and boosting of their output to up to 40 mW.

A850.25.40 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
A850.25.40			
Forward current†, I_{typ}, mA	–	200	280
Center wavelength††, nm	835	845	860
Small signal fiber-to-fiber gain††, dB	18	23	–
Small signal gain bandwidth††, FWHM, nm	15	25	–
Saturated fiber to fiber gain at I_{typ}, dB	-	12	-
Gain ripple†††, dB	–	0.2	0.5
Maximum output power††††, mW	–	–	40
Slow / fast polarization ratio (PM modules) at P_{op}, dB	–	10	–

† - typical value to achieve 40 mW output at 845+/-5 nm with ~2 mW input
†† - at I_{typ}
††† - depends on gain, higher at higher gain
†††† - in any operating mode

Features

- Small signal fiber-to-fiber gain of 20 dB
- Small signal gain BW 25 nm
- Saturated fiber to fiber gain 12 dB
- Up to 40 mW output

Other Parameters

SLD forward voltage at P_{op}, V	–	–	2.6
PD monitor bias voltage, V	–	–	5.0
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 around 850 nm

The following marking should be used for ordering:

A840.25.40P– 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.