

## Fiber-Coupled SLD Benchtop Sources



S5FC Series SLD Source

### Features

- Superluminescent Diodes (SLDs) with Broadband Emissions Centered at 1310 or 1550 nm
- Single SLD Output Channel
- FC/APC Bulkhead Connector
- TEC Temperature Stabilized
- Low Noise Output
- USB 2.0 Interface
- SOA and BOA Compatible

The S5FC Series of Benchtop SLD Sources contain a broadband SLD pigtailed to a single mode fiber. The SLD is driven with a high-precision, low-noise constant current source, and the temperature of the SLD is independently controlled with an internal TEC element.

The front panel LCD display and controls allow the user to view and set the current and temperature parameters. While the SLD is enabled, the display will show the wavelength (not measured), operating power (calculated from the SLD monitoring diode), and the actual temperature of the SLD. The system's microcontroller actively regulates the drive current and temperature of the SLD as well as monitors the system for fault conditions.

The microcontroller has a USB interface that allows for remote adjustment of the output power and temperature of the SLD as well as the enabling of the SLD output.

An analog input is provided on the rear panel; it allows the user to modulate the output of the SLD using an external signal. To prevent damage, the microcontroller will disable the output if the analog input plus the internal setpoint exceeds the SLDs limits.

There is an interlock located on the rear panel that can be used to disable the SLD output when an unsafe condition exists. The interlock must be shorted in order for the SLD output to be enabled. The SLD output can be easily amplified thereby increasing the output power using a benchtop semiconductor optical amplifier (SOA), as shown in the picture below.

### Controller Characteristics

Setpoint Resolution	0.1 mA
Adjustment Range	-0 - Full Power
AC Input	100 - 240 VAC 50 - 60 Hz
Modulation Input	0 - 5 V Scaled to Current Limit
Modulation Bandwidth	250 kHz
Temperature Control	Integrated TEC
Temperature Stability	<0.01 °C
Temperature Adjustment Range	20 - 30 °C
Connector Type	FC/APC
Dimensions (L x W x H)	5.8" x 11.4" x 2.6" (146 mm x 290 mm x 66 mm)

ITEM#	S5FC1021S			S5FC1108S(P)			S5FC1018S			S5FC1005S(P)		
Optical Characteristics	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max
Wavelength (nm)	-	1310	-	1290	1310	1330	1530	1550	1570	1530	1550	1570
Output Power (mW)	10	12.5	-	22	30	-	2.0	2.5	-	2.0	22	-
Optical Bandwidth (nm)	80	85	-	40	45	-	85	95	-	45	50	-
RMS Gain Ripple (dB)	-	0.1	0.35	-	0.1	0.35	-	-	0.25	-	0.2	0.35

ITEM#	SLD1021SXL			SLD1018SXL(PXL)			SLD1005SXL(PXL)					
Optical Characteristics	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max
Wavelength (nm)	1290	-	1330	1290	-	1330	-	-	-	1535	1550	1565
Output Power (mW)	13	-	-	30	-	-	-	-	-	22	-	-
Optical Bandwidth (nm)	80	85	-	40	45	-	-	-	-	55	-	-
RMS Gain Ripple (dB)	-	0.1	0.35	-	0.1	0.35	-	-	-	-	0.2	0.35

ITEM#	\$	£	€	RMB	DESCRIPTION*
S5FC1021S	\$ 2,566.00	£ 1,779.00	€ 2,278.00	¥ 21,668.00	SM Benchtop SLD Source, 1550 nm, 22 mW
S5FC1021SXL	\$ 4,184.00	£ 2,886.96	€ 3,723.76	¥ 39,999.00	SM Benchtop SLD Source, 1310 nm, 30 mW
S5FC1018S	\$ 2,954.00	£ 2,048.00	€ 2,622.50	¥ 24,944.00	SM Benchtop SLD Source, 1310 nm, 30 mW
S5FC1018SXL	\$ 4,676.00	£ 3,226.44	€ 4,161.64	¥ 44,703.00	SM Benchtop SLD Source, 1310 nm, 30 mW
S5FC1108S	\$ 2,384.00	£ 1,652.50	€ 2,116.50	¥ 20,131.00	SM Benchtop SLD Source, 1550 nm, 2.5 mW
S5FC1005S	\$ 2,566.00	£ 1,652.50	€ 2,116.50	¥ 20,131.00	SM Benchtop SLD Source, 1550 nm, 20 mW
S5FC1005SXL	\$ 3,908.00	£ 1,652.50	€ 3,478.12	¥ 20,131.00	SM Benchtop SLD Source, 1550 nm, 20 mW

\*Typical values, see the specifications table for more information.

ITEM#	\$	£	€	RMB	DESCRIPTION*
S5FC1018P	\$ 2,566.00	£ 1,779.00	€ 2,278.00	¥ 21,668.00	PM Fiber coupled SLD source 1310 nm 22 mW
S5FC1018PXL	\$ 4,184.00	£ 2,048.00	€ 2,622.50	¥ 24,944.00	PM Fiber coupled SLD source 1310 nm 30 mW
S5FC1005P	\$ 2,954.00	£ 2,048.00	€ 2,622.50	¥ 24,944.00	PM Fiber coupled SLD source 1550 nm 20 mW
S5FC1005PXL	\$ 4,676.00	£ 2,696.52	€ 3,478.12	¥ 24,944.00	PM Fiber coupled SLD source 1550 nm 22 mW

\*Typical values, see the specifications table for more information.