

SFL1550P

### Description

The SFL1550P laser is a single-frequency laser source with spectral properties comparable to a DFB laser but with narrower linewidth and higher output power. Applying proprietary stabilization techniques, a single-frequency, external cavity semiconductor laser is provided in a compact, 14-pin butterfly package. The single-frequency laser contains an integrated thermoelectric cooler, thermistor, and optical isolator with a polarization-maintaining output fiber tail.

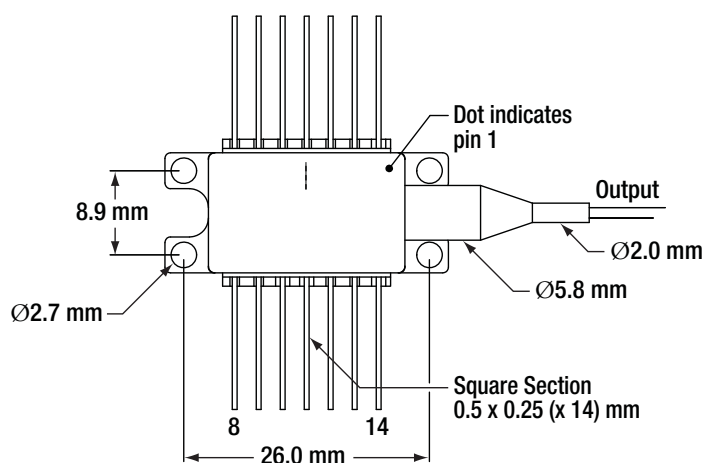
### Specifications

	SFL1550P			
	Symbol	Min	Typical	Max
Center Wavelength	$\lambda_c$	1549.5 nm	1550 nm	1550.5 nm
Operation Chip Temperature	$T_{CHIP}$	-	25 °C	-
Operation Case Temperature	$T_{CASE}$	10 °C	-	60 °C
Operating Current	$I_{OP}$	-	300 mA	-
Optical Power @ $I_{OP}$	$P_{OUT}$	25 mW	40 mW	-
Side Mode Suppression Ratio	SMSR	40 dB	45 dB	-
Linewidth (Lorentzian Line Shape)	$\Delta\nu$	-	50 kHz	100 kHz
Threshold Current	$I_{TH}$	-	50 mA	-
Slope Efficiency	$\Delta P/\Delta I$	-	0.2 mW/mA	-
Relative Intensity Noise	RIN	-	-150 dB/Hz	-
Forward Voltage @ $I_{OP}$	$V_F$	-	1.5 V	1.8 V
Single-Frequency Continuous Tuning Range (1 kHz rate)	$\Delta f$	-	3 GHz	-
TEC Operation @ $T_{CASE} = 25\text{ °C}$				
-TEC Current	$I_{TEC}$	-	0.3 A	-
-TEC Voltage	$V_{TEC}$	-	0.6 V	-
-Thermistor Resistance	$R_{TH}$	-	10 k $\Omega$	-

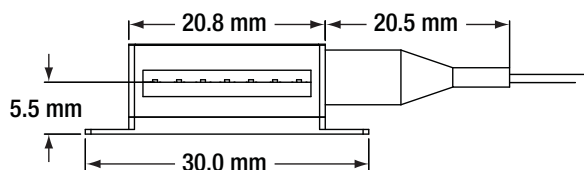


## Drawings

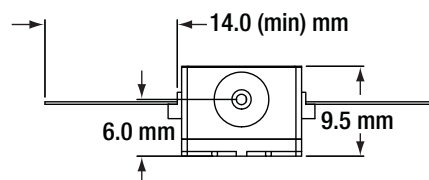
**Butterfly Top View**



Pin	Function	Pin	Function
1	TEC+	14	TEC-
2	Thermistor	13	Case
3	NC	12	NC
4	NC	11	Dev Cathode
5	Thermistor	10	Dev Anode
6	NC	9	NC
7	NC	8	NC



**Side View**



**Front View**