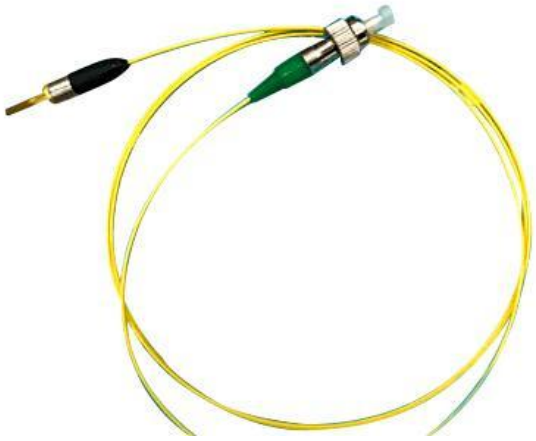
1310 nm single mode VCSEL (with TEC)



Product Description

The 1310nm Vertical Cavity Surface Emitting Laser (VCSEL) is packaged in a compact coaxial housing with a single mode fiber pigtail. The VCSEL-1310-SM is designed for fiber optic sensing, laser transmitters, and optical communication applications. It requires very low drive current and can be temperature stabilized with a built-in TEC.

Part Number

PL-VCSEL-1310-1-A81-CPSA

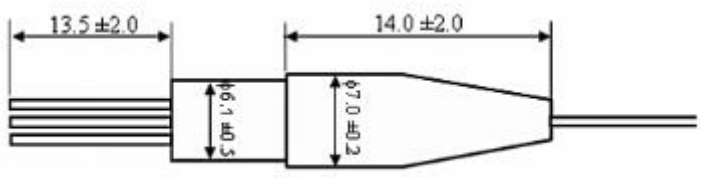
Product features

Low temperature dependence of electrical and optical properties、 Data rates from OC-3 to OC-48、 Low power consumption

Application area

Long-distance access network、 Local area network、 Gigabit Ethernet

Dimensional Drawing



Parameters

Photoelectric parameters:

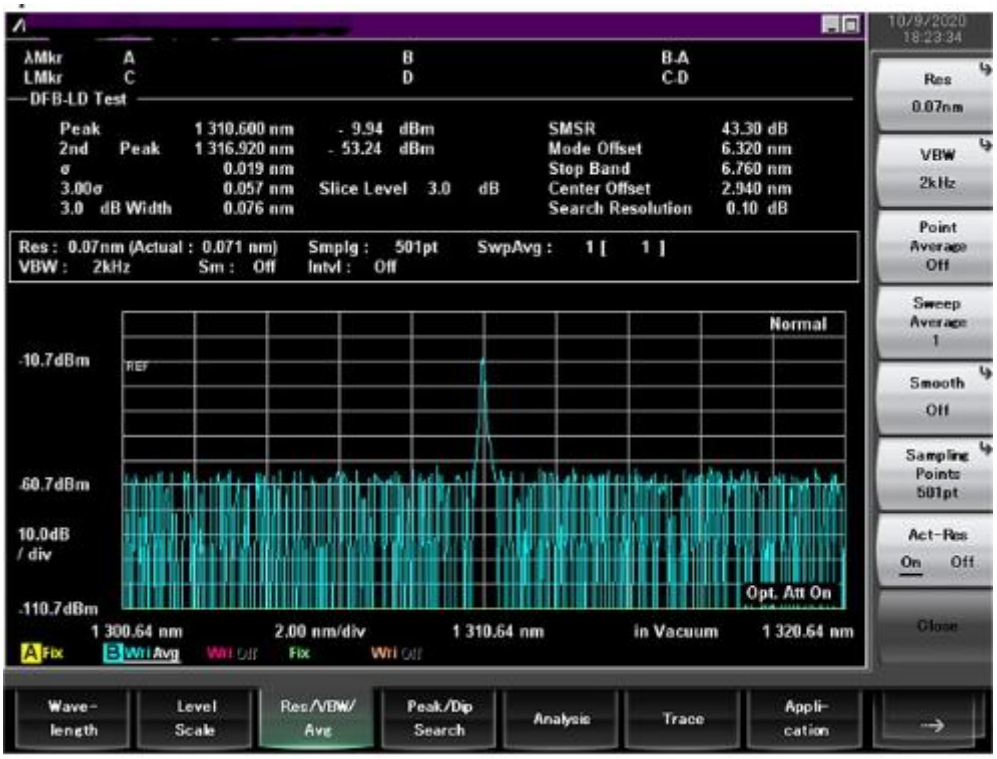
Wavelength	1310nm +/- 10nm
Wavelength tuning range	4 nm
Threshold current	2 mAtyp.
Linewidth	0.1 nm
Forward voltage	3V
Series resistance	100 Ω typ.
Output power	0.5 mW typ.
SMSR	35 dB typ.
Rise and fall time	100 pstyp.
Monitor current	0.1 mAtyp.
Modulation bandwidth	3 GHz typ

Absolute Maximum Parameters:

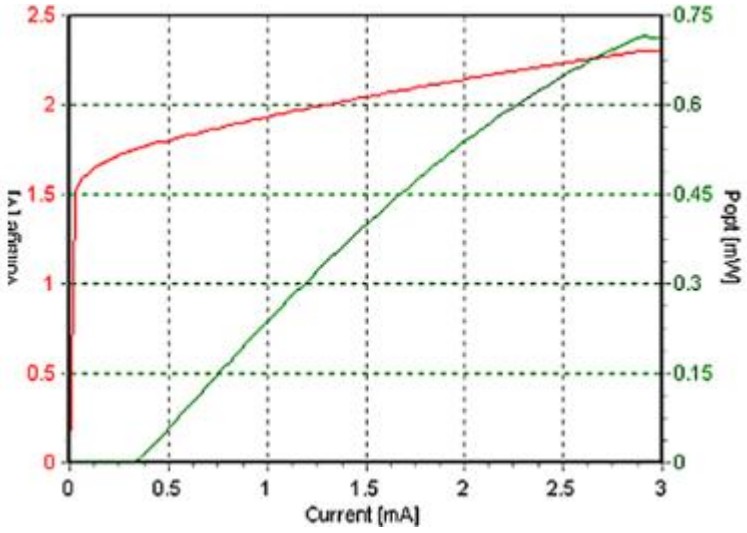
Parameters	Unit	Min.	Typ.	Max.
Storage temperature	℃	-40	25	125
Chip temperature	℃	+10	25	40
Operating current	mA	0	3.0	5.0
Forward voltage	V	0.8	3.0	4.8
TEC current	mA	-150	-	+300
Soldering temperature*	℃	100	130	260
Power consumption	mw	-	-	5

(*TEC temperature must be below 150°C)

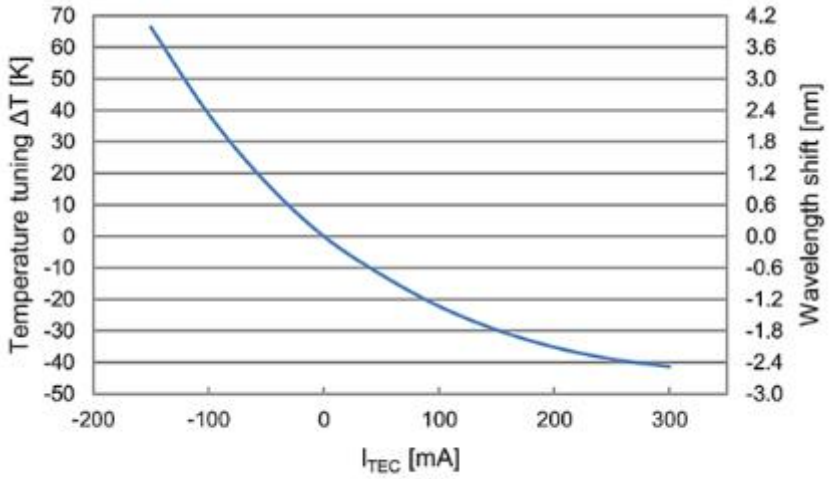
Spectrum:



L-I Curve(T@25°C):

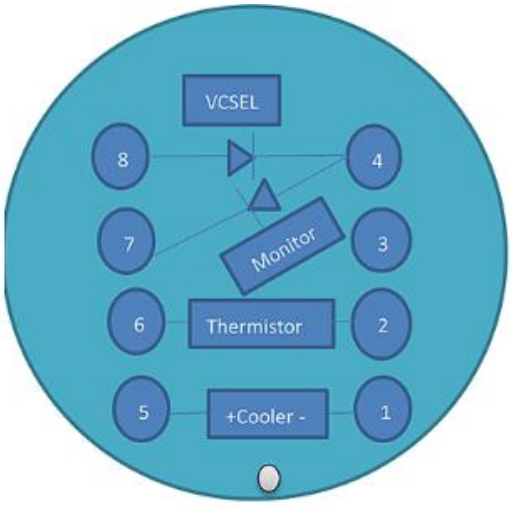


Temperature/wavelength tuning curve via TEC current:



* TEC performance is dependent on heat load, ambient temperature and heatsink properties

Pin definition:



1	Thermoelectric Cooler (-)	5	Thermoelectric Cooler (+)
2	Thermistor	6	Thermistor
3	N/C	7	PD Monitor Cathode (+)
4	VCSEL Cathode (–)/PD Monitor Anode (-)	8	VCSELAnode (+)

Order Info:

PL-VCSEL-W□□□□-☆-A8▽-XXXX

□□□□：Wavelength

0760:760nm
0795:794.7nm
*****

1310：1310nm

☆ ：TEC

0：Without TEC

1：With TEC

▽：Wavelength Tolerance

1：±10nm

XXXX: Package
CPSA=Coaxial Package with SM1310+ FC/APC
CPSP=Coaxial Package with SM1310+ FC/PC
CPPP=Coaxial Package with PM Fiber+FC/PC
CPPA=Coaxial Package with PM Fiber+FC/APC