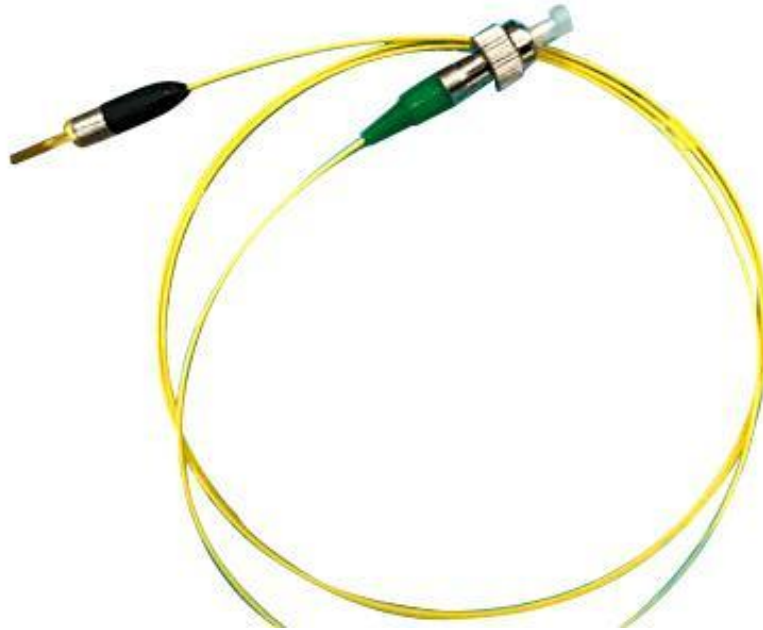


1310 nm single mode VCSEL (with TEC)



- **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.

● Product features

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

● Part Number

MP-VCS-1310-0.5-A81-SA-TEC

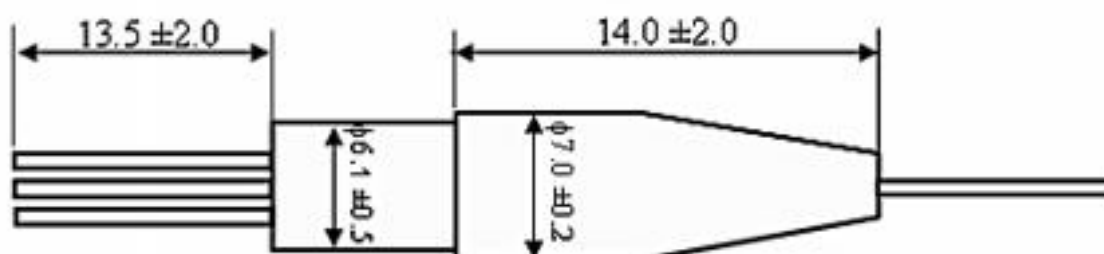
● Application area

Long-distance (>2 km) access network、 Metropolitan area network、 Gigabit Ethernet

● Core parameters

Wavelength	Wavelength Tuning Range	Linewidth
1310nm	4nm	0.1nm

● Dimension Drawing



● General Parameters

Photoelectric parameters:

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

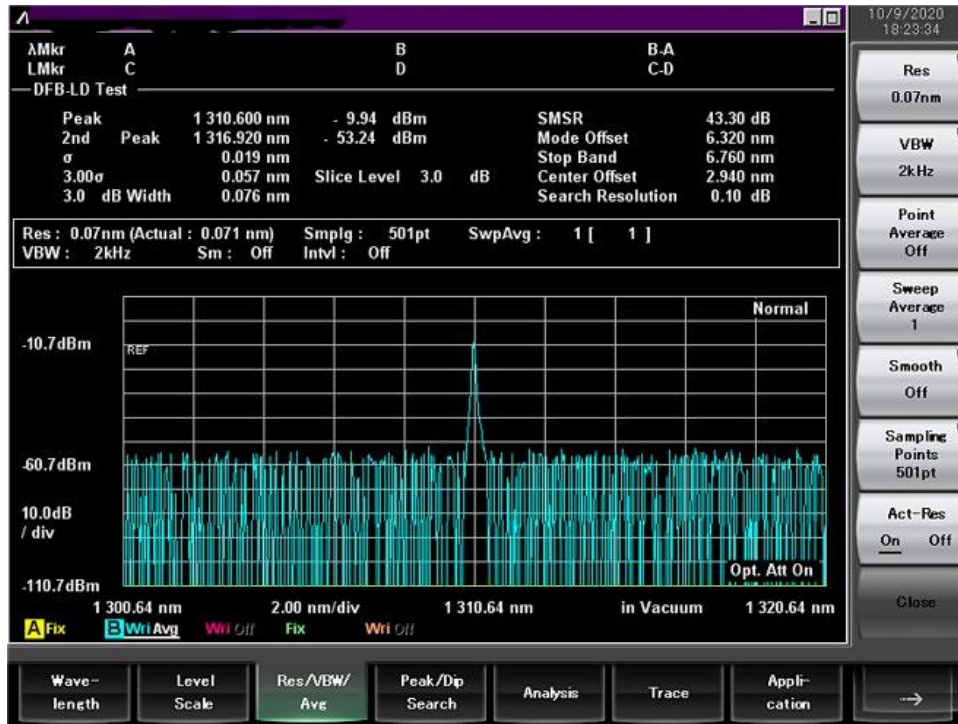
Absolute Maximum Parameters:

Parameters	Unit	Min.	Typ.	Max.
Storage temperature	°C	-40	25	125
Chip temperature	°C	+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*	°C	100	130	260
Power consumption	mw	-	-	5

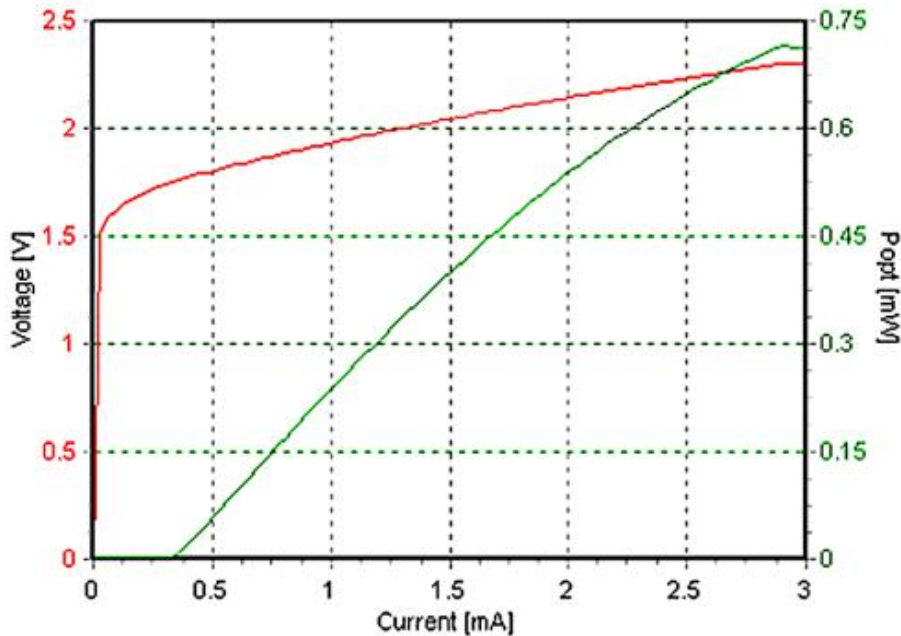
(*TEC temperature must be below 150°C)



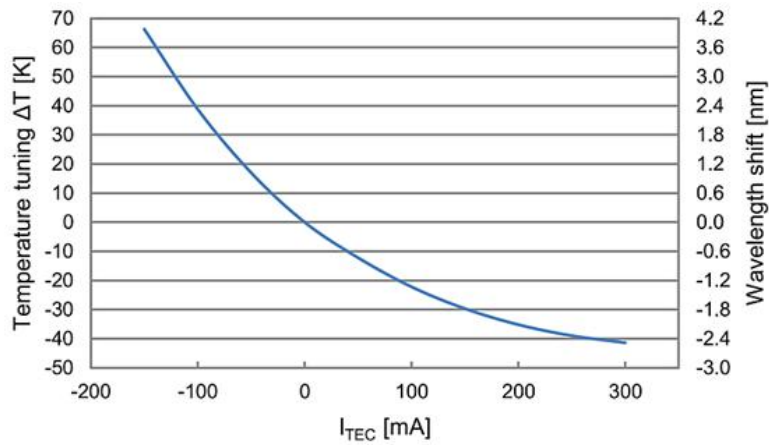
Spectrum:



L-I Curve(T@25°C):

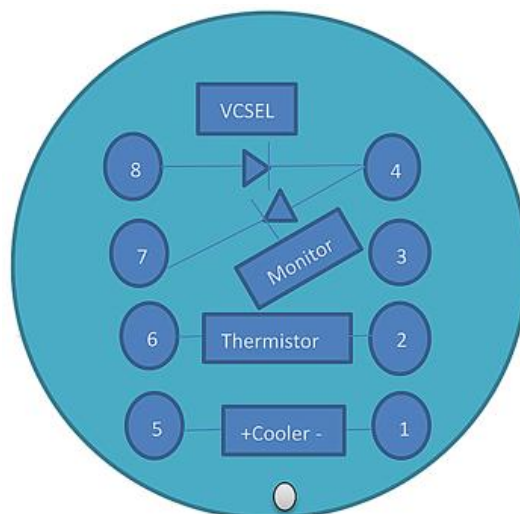


Temperature/wavelength tuning curve @TEC current:



* 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	VCSEL Anode (+)



Order Info:

MP-VCS-W□□□□-☆-A8▽-XXXX

□□□□: Wavelength

0760:760nm

0795:794.7nm

1310: 1310nm

☆ : TEC

0: Without TEC

1: With TEC

▽: Wavelength Tolerance

1: ± 10 nm

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