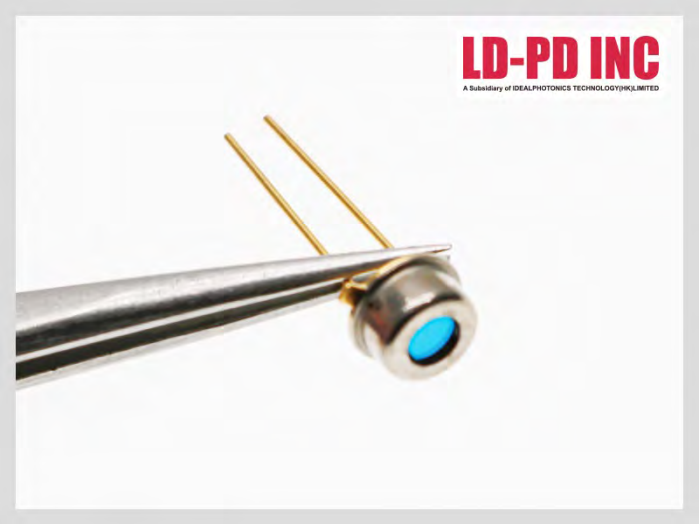
850nm SM VCSEL Laser diode Without TEC



Description:

The PL-VCSEL-0850-0-A82-TO46 850nm VCSEL is a vertical emitting MOVPE grown GaAsP/AlGaAs Single Mode diode laser. The chips are mounted in TO46 can. Wavelength tuning can be achieved via laser current. package with TEC and PD Built in (Optional). It is special designed for FTIR Application. Good Narrow linewidth and low cost made it a great low cost choice for FTIR Application.

Features:

- Gaussian-shaped beam profile
- Low beam divergence
- Low spectral width

Applications:

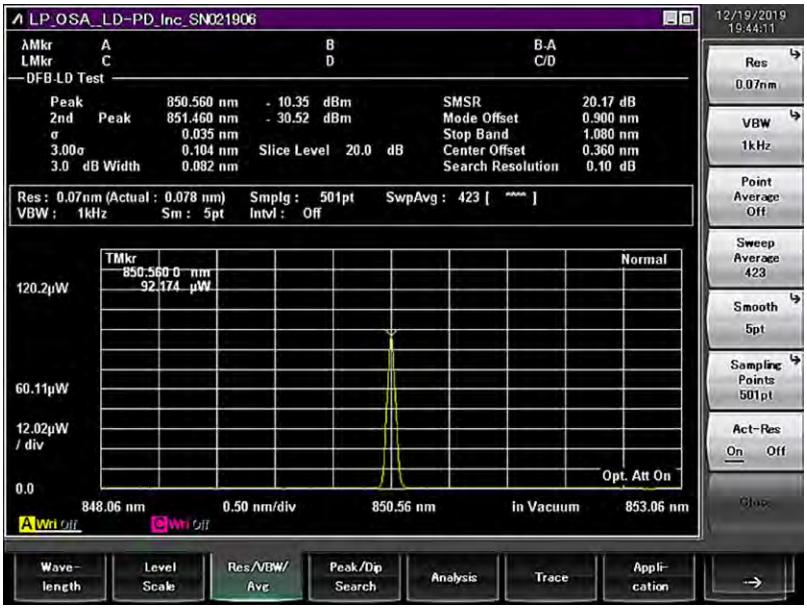
- Optical encoder for high-precision positioning
- FTIR

Laser Specifications:

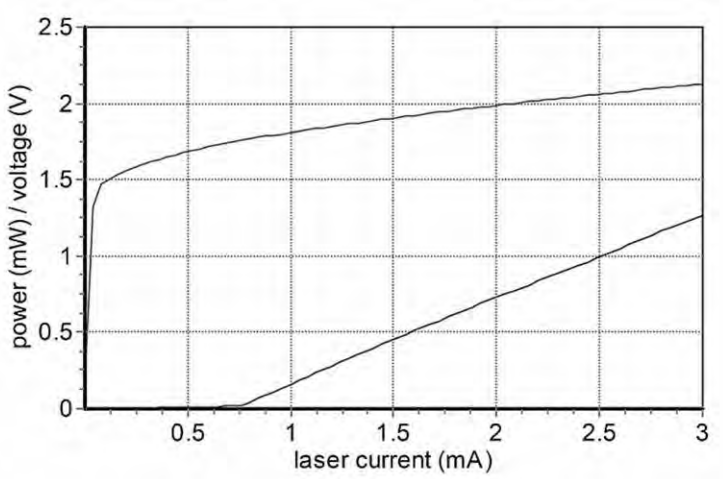
Condition:TOP = 20°C, IOP = 2.0 mA unless otherwise stated (TOP = chip backside temperature, controlled by the TEC)

Parameters	Symbol	Min	Typ	Max	Unit	Remark
Emission Wavelength	λR	850±10nm				
Threshold current	ITH		0.5		mA	
Output Power	Popt	1.0			mW	
Threshold Voltage	UTH		1.8		V	
Driving Current	IOP			2	mA	Popt = 0.3 mW
Laser voltage	UOP		2		V	Popt = 0.3 mW
Electro optic conversion rate	ηWP		12		%	Popt = 0.3 mW
Slope efficiency	ηS		0.3		W/A	
Differential series resistance	RS		250		Ω	Popt = 0.3 mW
3dB bandwidth	v3dB	0.10			GHz	Popt = 0.3 mW, Due to ESD protection diode
Relative intensity noise	RIN		-130	-120	dB/Hz	Popt = 0.3 mW @ 1 GHz
Wavelength tuning over current			0.6		nm/mA	
Wavelength tuning over temperature			0.06		nm/K	
Side mode supression		25			dB	I = 2 mA
Beam divergence	θ	10		25	°	Popt = 0.3 mW, full width 1/e2
Spectral Width			100		MHz	Popt = 0.3 mW

Spectrum:



L-I Curve(T@25°C):



Package Size and Pin definition:

