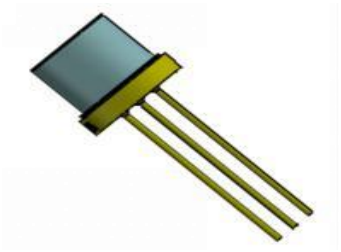
1653.7nm DFB TO-CAN datasheet

P/N：WD12-270-C



Description

The laser diode module is a cost effective, highly coherent laser source. The Discrete Mode laser diode chip is packaged in an industry standard.

Features

Narrow Linewidth < 2MHz

Excellent wavelength control and stability

Mode-Hop free tuning

Excellant reliability

Customer specific wavelengths available

Applications

Tunable diode laser absorption spectroscopy

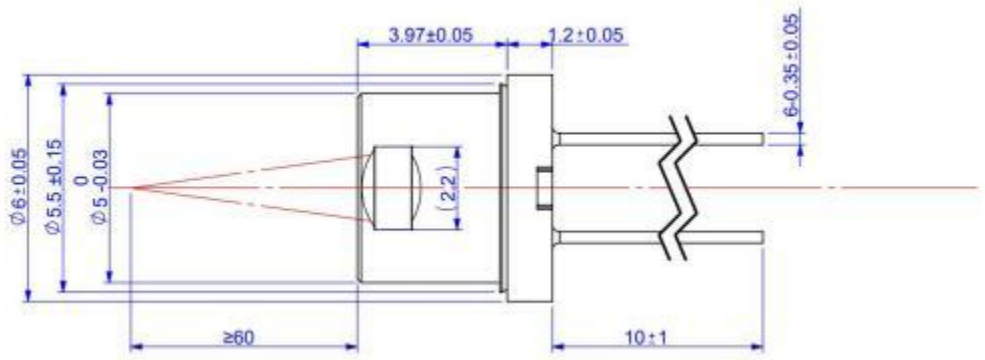
CH_4 Monitoring

Electrical/Optical Characteristics (T_{sub} = 25°C, CW bias unless stated otherwise)

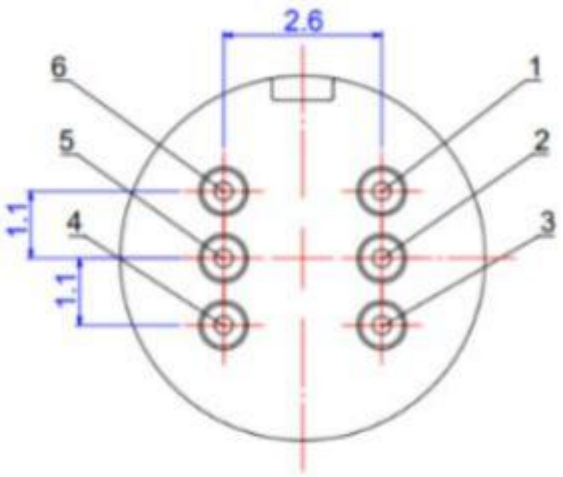
Parameter	Symbol	Value			Units	Note
		Min	Typ.	Max		
Differential efficiency	η	0.1	0.23	--	mW/mA	T=25℃
Threshold Current (BOL)	I_{TH}	--	13	18	mA	
Laser Forward Voltage	V_F	--	1.2	2	V	
Operating Current	Iop	--	60	80	mA	
Output Power	P_{OP}	6.5	--	--	mW	IOP=60mA，T=30℃
Side-mode Suppression Ratio	SMSR	38	42	--	dB	CW, Iop=60mA，T=30℃
Central Wavelength	λc	1652.7	1653.7	1654.7	nm	T=30℃
Operating Temperature	Tc	25	35	50	℃	Iop=60mA、λc=1653.7nm
Spectral Width(-20 dB)	Δλ	--	0.12	1	nm	
Wavelength tuning coefficient	Δλ/ΔT		0.1	0.12	nm/℃	
Relaxation Oscillation Frequency	f_R	3		10	GHz	
Thermistor resistance	R_{th}	9.5	10	10.5	kΩ	T=25 ℃
B constant of Rth	B	3800	3930	4000	K	

Thermistor current		10		200	uA	T =25 ℃
TEC Current	I			0.5	A	Qc =0,DT=DTmax,Th =50 ℃
TEC Voltage	V			1.94	V	Qc =0,I=Imax,Th =50 ℃
TEC Power	Qc			0.52	W	I =Imax,DT=0,Th =50 ℃
TEC Capacity	DT			76	℃	Qc =0, I=Imax,Th =50 ℃

Mechanical Dimension



Pin Description



Pin	Standard
1	TEC (-)
2	THERMISTOR (+)
3	LD Anode
4	LD Cathode
5	THERMISTOR (-)
6	TEC (+)

Environment Specification

Item	Unit	Min	Typ	Max
Operation Temperature	℃	-10		70
Storage Temperature	℃	-40		70