1651 nm DFB Laser

(P/N.: TDLAS-DFB-1651-TO6-2-01)

Features

- Multi-Quantum Well (MQW) Distributed Feedback (DFB) lasers with built in thermistor and TEC.
- Small form factor 8-pin package and low power consumption TEC.
- Laser gain chip qualified as per Telcordia ITU.T GR-468.

Applications

- Low power consumption TDLAS

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit	Condition
Operating Case Temperature	T_c	-5	75	°C	--
Storage Temperature	T_{stg}	-40	85	°C	--
Reverse Voltage	V_R	--	2	V	
Forward current	I_F		100	mA	
Thermoelectric cooler voltage	V_{TEC}		1.2	V	
Thermoelectric cooler current	I_{TEC}		0.7	A	
Lead solder Temperature	--		260	°C	--
Lead Soldering Time	--		10	s	--

Opto-Electrical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit	Test Conditions
Optical Output Power	P_o	5	8	-	mW	CW, T=25°C, I_F = 40mA
Threshold Current	I_{th}	3	-	15	mA	CW, T=25°C
Forward Voltage	V_F	-	1.5	2.0	V	T=25°C, I_F = 30mA
Center Wavelength	λ_c	1650	1651	1652	nm	CW, T=25 °C
Side-mode Suppression Ratio	SMSR	35	40	-	dB	I_F=30mA
Monitor Dark Current	I_D	-	-	100	nA	V_R=5 V
Monitor Photodiode Current	I_{PD}	40	-	1000	μA	
Thermistor Resistance	R_{TRM}	9.5	10.0	10.5	KΩ	T=25 °C
Thermistor B-Value	B	3800	3950	4000	K	T=25 °C
TEC Power	P_{TEC}	-	-	0.7	W	T=25 °C
TEC Capacity	ΔT_{TEC}	-	-	70	°C	T=25 °C

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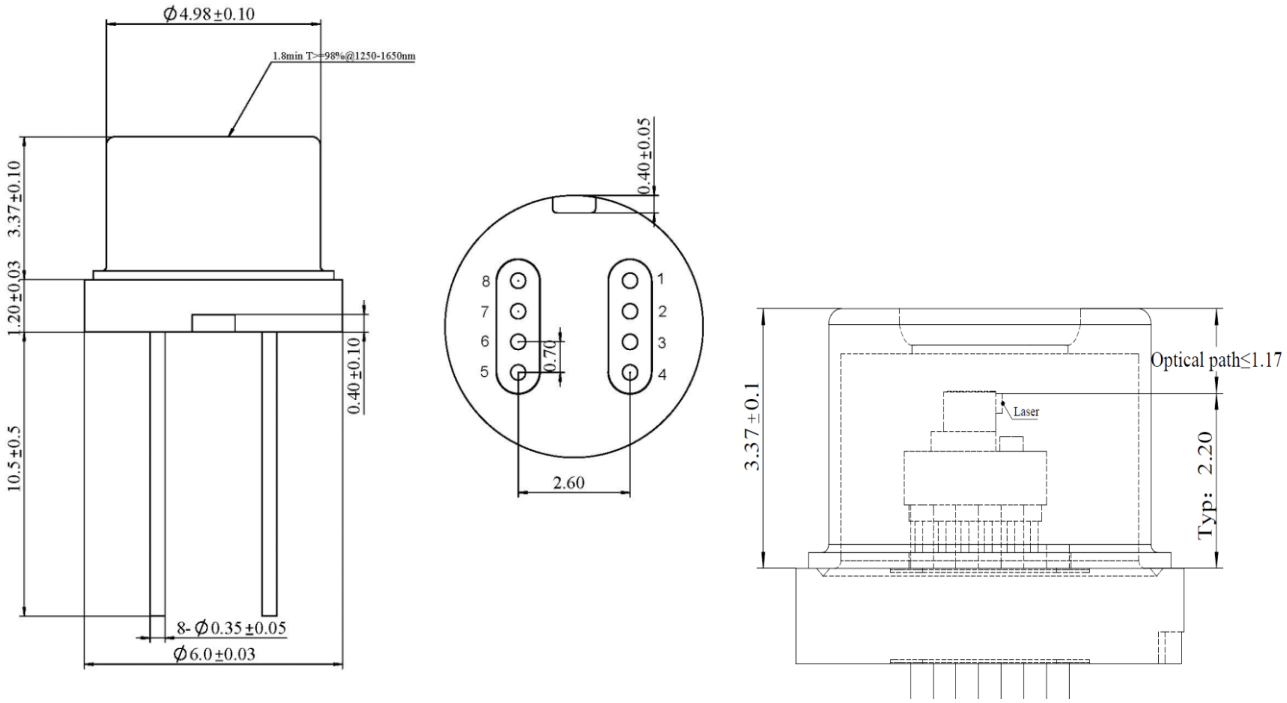
Dimensional outline (units = mm)



Pin	Description	Pin	Description
1	TEC +	5	LD -
2	Thermistor	6	LD +
3	Photodiode -	7	Thermistor
4	Photodiode +	8	TEC -

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