2004 nm DFB Laser

(P/N.: TDLAS-DFB-2004-YB14-PMF-01)

Features

- Multi-Quantum Well (MQW) Distributed Feedback (DFB) lasers with built in thermistor and TEC.
- 14-pin butterfly package with polarization maintaining (PM) fibre output and FC/APC connector.

Applications

- CO_2 TDLAS

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit	Condition
Operating Case Temperature	T_c	-20	65	°C	--
Storage Temperature	T_{stg}	-40	85	°C	--
Reverse Voltage	V_F	--	2.5	V	
Forward current	I_F		200	mA	
Thermoelectric cooler voltage	V_{TEC}		2	V	
Thermoelectric cooler current	I_{TEC}		2	A	

Opto-Electrical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit	Test Conditions
Optical Output Power	P_o	-	3	-	mW	CW, after fibre
Threshold Current	I_{TH}	-	30	40	mA	T=25 °C
Operating Voltage	V_{op}	-	-	2.1	V	CW, T=25 °C
Operating Current	I_{op}	-	100	-	mA	CW, T=25 °C
Center Wavelength	λc	1998	2004	2010	nm	CW, T=25 °C
Spectral linewidth	Δυ	-	-	2	MHz	CW, T=25 °C
Side-mode Suppression Ratio	SMSR	35	40	-	dB	I_{op}=100mA
Optical Isolation		30	-	-	dB	
Wavelength temp coefficient	ΔλΔ/T	-	0.1	-	nm/°C	
Wavelength current coefficient	ΔλΔ/I	-	0.007	-	nm/mA	
Monitor Dark Current	I_D	50	-	5000	uA	V_R=0.5 V
Thermistor Resistance	R_T	9.5	10.0	10.5	KΩ	T=25 °C
Thermistor B-Value		-	3950	-	K	T=25-85°C
Fibre		1m long PM, connector FC/APC				

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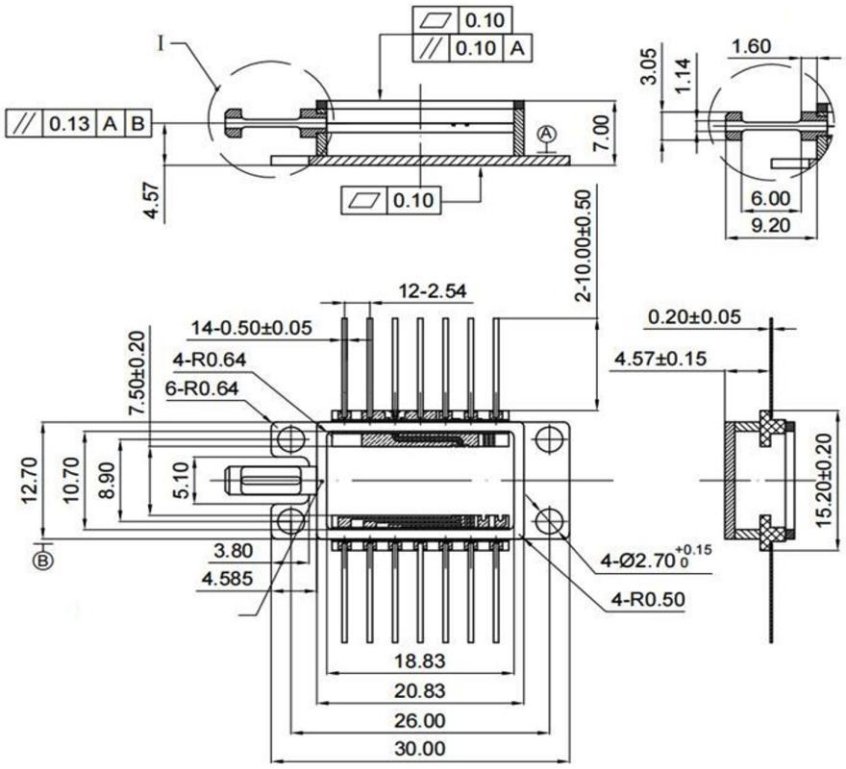
Dimensional outline (units = mm)



PIN No	Definition
1	Thermistor
2	Thermistor
3	LD（-）
4	MPD (+)
5	MPD (-)
6	TEC（+）
7	TEC（-）
8	Case
9	Case
10	N/C
11	LD（+）
12	LD（-）
13	LD（+）
14	N/C

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