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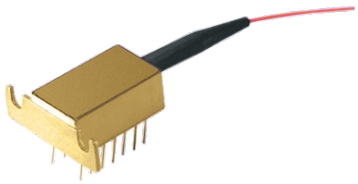
BLD-1170-14DL



Single frequency FBG-stabilized laser diode module designed for optical measurement and communication. The laser is packaged in 14pinDIL package with monitor photodiode and thermo-electric cooler (TEC). Module is pigtailed with 0.5-0.9 m of single mode or polarization maintaining (optional) fiber and connectorized by FC/APC connector.

Optical and electrical characteristics:

Parameter	Symbol	Test condition	Min.	Typ.	Max.	Unit
Optical Power	P_f	CW	5	10		mW
Pulsed Optical Power	P_{fp}	Pulse, τ=10μs, D=1%		15		mW
Treshold Current	I_{th}		30	40	60	мА
Forward Current	I_f	P_f		80	120	mA
Pulsed Forward Current	I_{fp}	P_{fp}, τ=10μs, D=1%		150		mA
Forward Voltage	V_f	P_f			2.5	V
Center Wavelength	λ_c	P_f	1169	1170	1171	nm
Spectral Width	$\Delta\lambda_c$	P_f			1	MHz
Side Mode Suppression Ratio		SMSR	30			dB
Single-Frequency Continuous Tuning Range	Δf		1			GHz
Current Tuning	Δλ/ΔI			0.001		nm/mA
Temperature Tuning	Δλ/ΔT			0.08		nm/°C
Monitor Current	I_m	P_f	20		500	μA
PD Dark Current	I_d	V_{rd}=5V			0.1	μA
TEC Current	I_t	I_t			1.4	A
TEC Voltage	V_t	TC=70°C			2.7	V
Thermal Resistance	R_0	T=25°C, B=3900±100K	9.5	10	10.5	kΩ
Extinction Ratio (PM fiber)	X_p	P_f	20			dB

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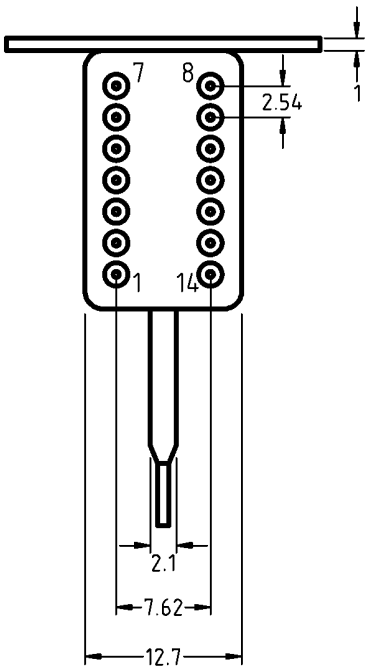
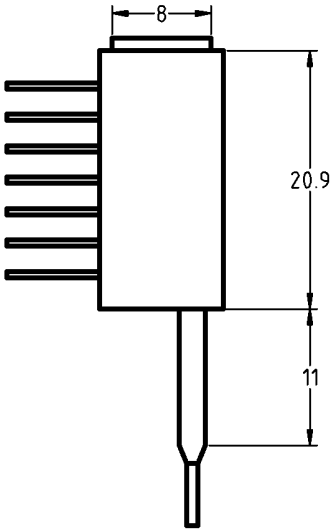
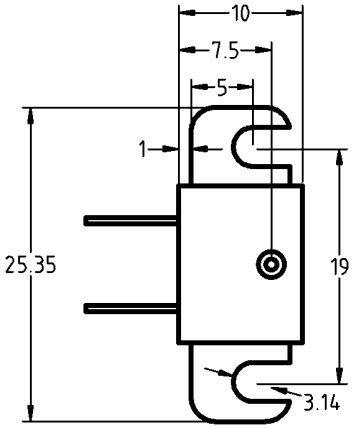
Absolute maximum ratings:

Parameter	Symbol	Rating	Unit
Forward Current	I_f	150	mA
Reverse Voltage	V_r	1.8	V
PD Reverse Voltage	V_{rd}	7	V
Minimum Operation Case Temperature	T_{ol}	-40	°C
Maximum Operation Case Temperature	T_{oh}	70	°C
Minimum Storage Temperature	T_{sl}	-40	°C
Maximum Storage Temperature	T_{sh}	70	°C
TEC Current	I_t	1.5	A

Packaging:

14pinDIL:			
№	Parameter	№	Parameter
1	Cooler anode +	8	PD anode -
2	NC	9	LD cathode -
3	NC	10	NC
4	NC	11	Thermistor
5	LD anode +	12	Thermistor
6	NC	13	NC
7	PD cathode +	14	Cooler cathode -

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