

LDI-1550-DFB-2.5G-20/80

1550 nm, DFB, 20 mW CW, 80 mW pulse, 2.5 Gbps

DESCRIPTION

The module is equipped with an SM fiber and operates both in CW giving optical power up to 20 mW and pulse mode giving optical power up to 80 mW. Small size and weight allow for installing it on a PCB without additional mounting.

Applications: optical fiber communication systems with data rate up to 2.5 Gbps.

ABSOLUTE MAXIMUM RATINGS

Parameter	Value	Unit
LD forward current, I_{fl}	150	mA
LD pulse forward current, I_{pfl}	500	mA
LD reverse voltage, V_{rl}	2	V
PD reverse voltage, V_{rd}	30	V
Operating temperature, T_c	-40 ÷ +80	°C
Storage temperature, T_{stg}	-40 ÷ +80	°C

ELECTRICAL-OPTICAL CHARACTERISTICS (SINGLE MODE, T = 25 °C)

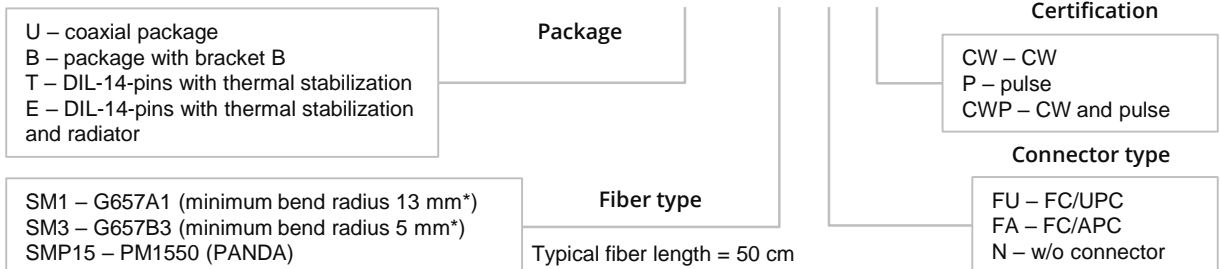
Parameter		Min	Typ	Max	Unit	Test conditions
Wavelength	λ	1547	1550	1553	nm	CW
Threshold current	I_{th}	3	6	10	mA	CW
Operating current	I_{op}		16	18	mA	CW, P = 1 mW
			50	60		CW, P = 10 mW
			95	110		CW, P = 20 mW
	I_p		450	500	mA	Pulse*, P = 80 mW
Spectral width	$\Delta\lambda$		0.09		nm	CW, -20 dB
Operating voltage	V_{op}		1.3	1.8	V	CW, P = 10 mW
Slope efficiency	S_e	0.18	0.22		mW/mA	CW, P = 10 mW
Resonance frequency	f_c		6		GHz	
Rise and fall times	t_r, t_f		0.08	0.12	ns	20% - 80%
Monitoring output current (PD)	I_m	0.2	0.5	3	mA	CW, $V_{rd} = 5$ V
Capacitance (PD)	C_t		10	20	pF	$V_{rd} = 5$ V, f = 1 MHz
Tracking error**	E_r		0.4	0.6	dB	CW, P = 5 mW, T = -30 ÷ +50 °C

* Pulse duration 10 μ s, duty cycle = 0.01.

**Tracking error $E_r = \max |10 \log(P/P_{25°C})|$, $I_m = \text{const}$

ORDERING INFORMATION

LDI-1550-DFB-2.5G-20/80 -X -2 -X -X -X



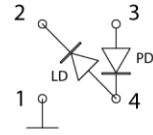
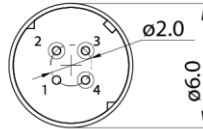
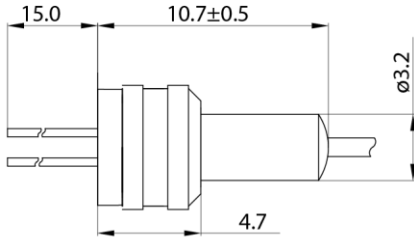
*Attenuation 0.1 dB/loop at 1550 nm

Our products are certified by Belarusian Chamber of Commerce. All the components used in production are ISO 9001:2008 certified and comply with RoHS directive. Characteristics, data, materials and structures specified in this datasheet are subject to change without notice.

This document was updated on 25.10.2017

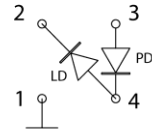
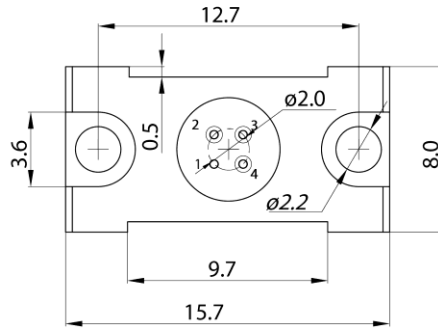
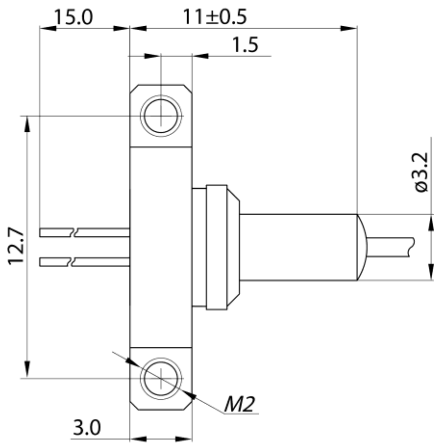
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U



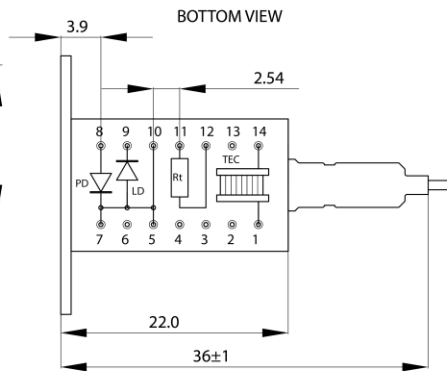
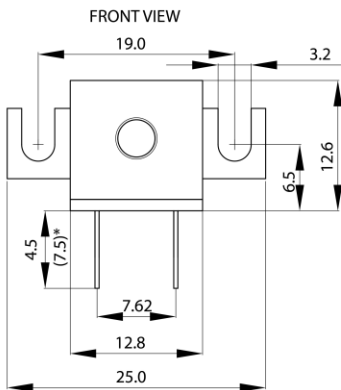
- 1. Case
- 2. LD Cathode
- 3. PD Anode
- 4. LD Anode, PD Cathode

B



- 1. Case
- 2. LD Cathode
- 3. PD Anode
- 4. LD Anode, PD Cathode

T



PIN CONNECTION

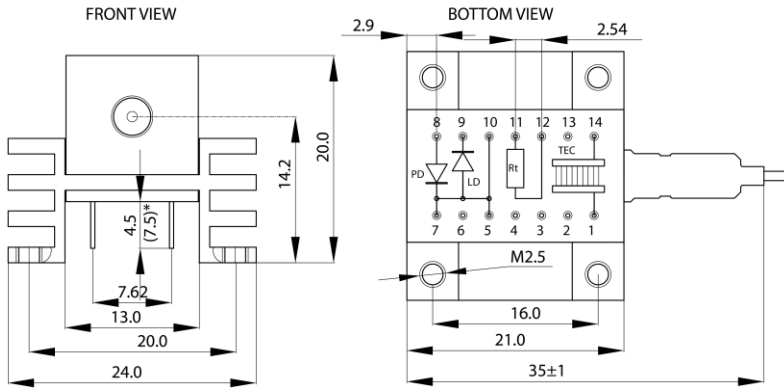
- 1. Cooler Anode
- 2. -
- 3. -
- 4. -
- 5. LD Anode
- 6. -
- 7. PD Cathode
- 8. PD Anode
- 9. LD Cathode
- 10. LD Anode
- 11. Thermistor
- 12. Thermistor
- 13. -
- 14. Cooler Cathode

Cooler: I<600mA, U<3.6V, Q<1.1W

Rt=10000*EXP(3450*(1/T(K)-1/298))

LDI-1550-DFB-2.5G-20/80

E



PIN CONNECTION

- 1.Cooler Anode
- 2.-
- 3.-
- 4.-
- 5.LD Anode
- 6.-
- 7.PD Cathode
- 8.PD Anode
- 9.LD Cathode
- 10.LD Anode
- 11.Thermistor
- 12.Thermistor
- 13.-
- 14.Cooler Cathode

Cooler: I<600mA, U<3.6V, Q<1.1W

$R_t = 10000 \cdot \text{EXP}(3450 \cdot (1/T(K) - 1/298))$

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