

LDI-1625-DFB-1.25G-20/40

1625 nm, DFB, 20 mW CW, 40 mW pulse, 1.25 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 40 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 1.25 Gbps.

ABSOLUTE MAXIMUM RATINGS

Parameter	Value	Unit
LD forward current, I_{fl}	120	mA
LD pulse forward current, I_{pfl}	300	mA
LD reverse voltage, V_{rl}	2	V
PD reverse voltage, V_{rd}	30	V
Operating temperature, T_c	-30 ÷ +50	°C
Storage temperature, T_{stg}	-30 ÷ +60	°C

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

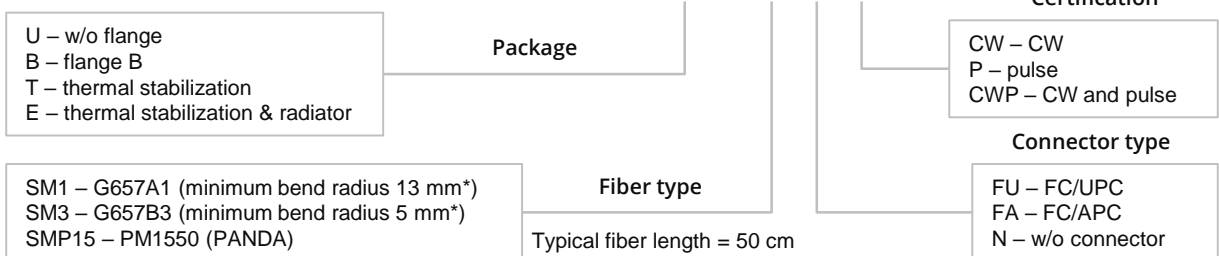
Parameter		Min	Typ	Max	Unit	Test conditions
Wavelength	λ	1615	1625	1635	nm	CW
Threshold current	I_{th}		12	18	mA	CW
Operating current	I_{op}		18	22	mA	CW, P = 1 mW
			55	70		CW, P = 10 mW
			110	120		CW, P = 20 mW
	I_p		200	250	mA	Pulse*, P = 40 mW
Spectral width	$\Delta\lambda$		0.1		nm	CW, - 20 dB
Operating voltage	V_{op}		1.6	1.8	V	CW, P = 20 mW
Slope efficiency	S_e	0.16	0.20		mW/mA	CW, P = 10 mW
Rise and fall times	t_r, t_f			0.2	ns	20% - 80% U, H, B package
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
Relaxation oscillation frequency	f_R		3.5		GHz	P = 3 mW

* 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-1625-DFB-1.25G-20/40 -X-1-X-X-X



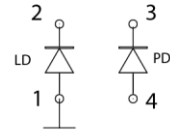
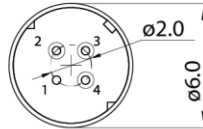
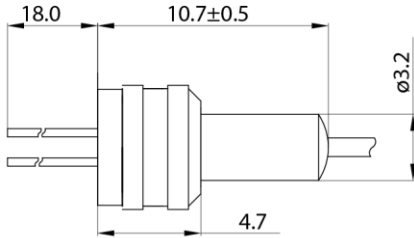
*Attenuation 0.1 dB/loop at 1550 nm

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 06.10.2017

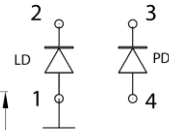
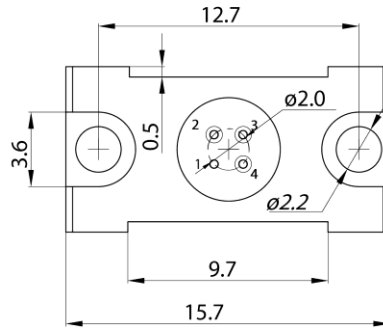
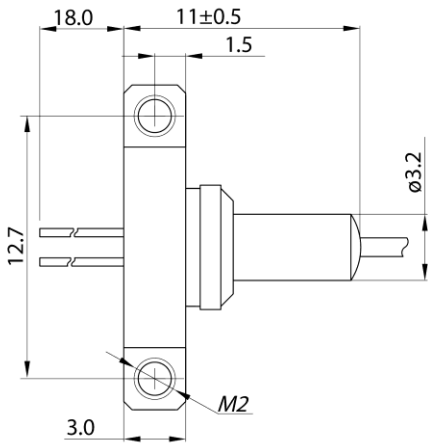
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U



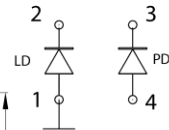
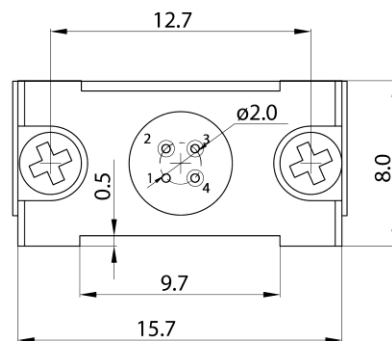
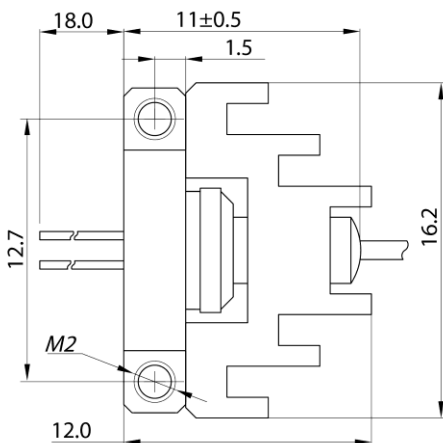
- 1. Case, LD Anode
- 2. LD Cathode
- 3. PD Cathode
- 4. PD Anode

B



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

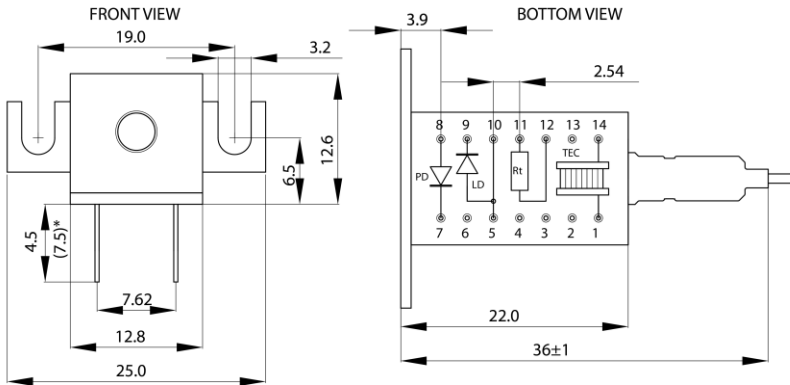
BR



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

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T



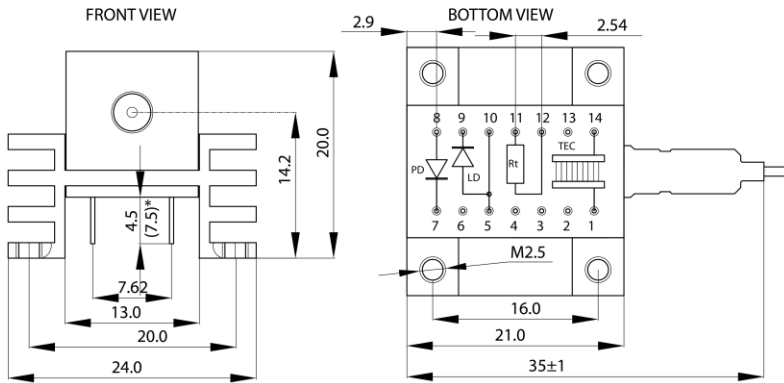
PIN CONNECTION

- 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

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

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

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

*Possible pins length 4.5 mm or 7.5 mm.

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