

LDI-850-FP-20/70

850 nm, FP, 20 mW CW, 70 mW pulse

DESCRIPTION

The module is equipped with an MM or SM fiber. It operates both in CW giving optical power up to 20 mW and pulse mode giving optical power up to 70 mW. Small size and weight allow for installing it on a PCB without additional mounting.

Applications: the module with the fiber SM1, SM3, MM5 or MM6 is suitable for reflectometry; the module with the fiber SM05 or SMP05 (PANDA) is suitable for biomedical systems as a Gaussian light source.

ABSOLUTE MAXIMUM RATINGS

Parameter	Value	Unit
LD forward current, I_{fl}	60	mA
LD pulse forward current, I_{pfl}	170	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}	-40 ÷ +80	°C

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

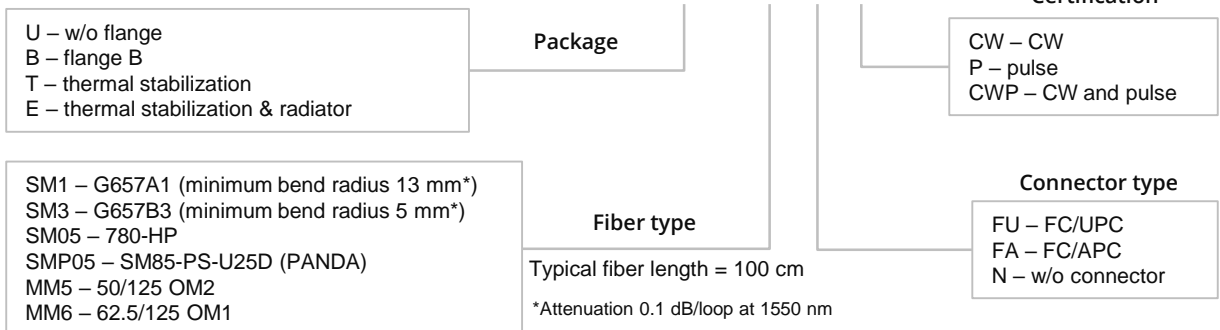
Parameter	Min	Typ	Max	Unit	Test conditions	
Wavelength	λ	845	855	865	nm	CW
Threshold current	I_{th}		10	15	mA	CW
Operating current	I_{op}		13	18	mA	CW, P = 2 mW
			27	37		CW, P = 10 mW
			45	58		CW, P = 20 mW
	I_p		140	160	mA	Pulse*, P = 70 mW
Spectral width	$\Delta\lambda$		1	2	nm	CW, -3 dB
Operating voltage	V_{op}		1.9	2.5	V	CW, P = 20 mW
Slope efficiency	S_e	0.4	0.54		mW/mA	CW, P = 20 mW
Monitoring output current (PD)	I_m	0.2	0.8	1.6	mA	CW, P = 20 mW, $V_{rd} = 5$ V
Tracking error**	E_r		0.4	0.6	dB	CW, P = 5 mW, T = -20 ÷ +50 °C

* Pulse duration 1 μ s, duty cycle = 0.01.

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

ORDERING INFORMATION

LDI-850-FP-20/70-X-3-X-X-X

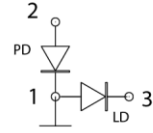
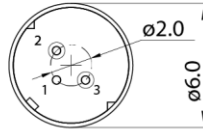
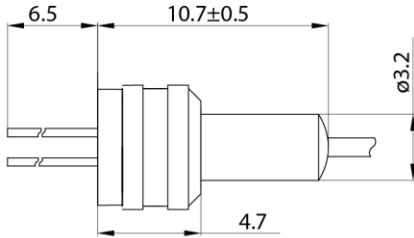


Our products are certified by Belarusian Chamber of Commerce. All the components used in production are ISO 9001:2008 certified and comply with RoHS directive. Characteristics, data, materials and structures specified in this datasheet are subject to change without notice.

This document was updated on 31.08.2017

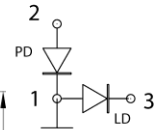
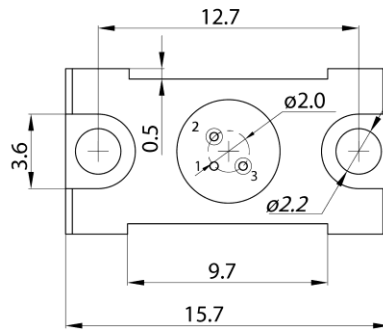
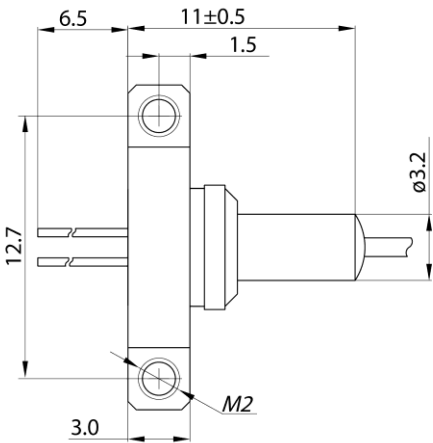
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U



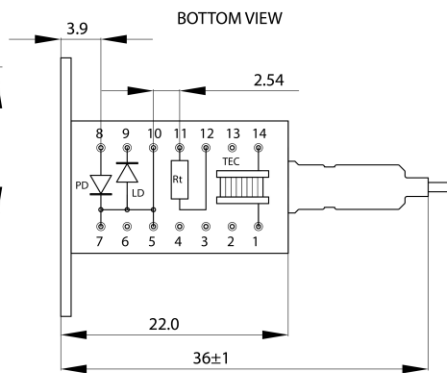
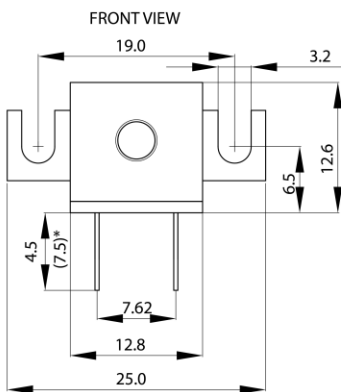
- 1. Case, LD Anode, PD Cathode
- 2. PD Anode
- 3. LD Cathode

B



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

T



PIN CONNECTION

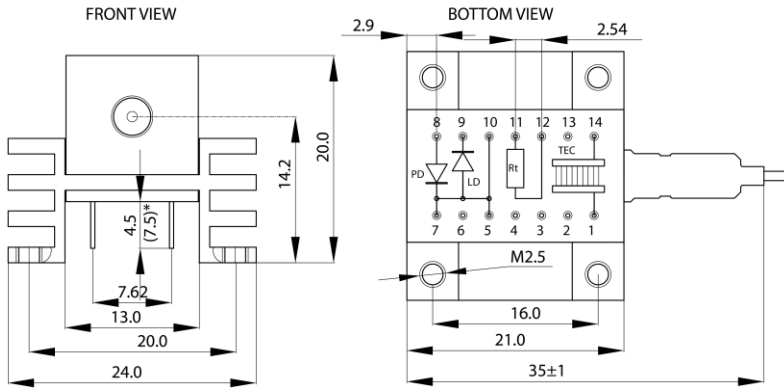
- 1. Cooler Anode
- 2.-
- 3.-
- 4.-
- 5. LD Anode
- 6.-
- 7. PD Cathode
- 8. PD Anode
- 9. LD Cathode
- 10. LD Anode
- 11. Thermistor
- 12. Thermistor
- 13.-
- 14. Cooler Cathode

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

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

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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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