

APDI-55-3G-K

Avalanche photodiode module, 800-1650 nm, 3 GHz

DESCRIPTION

This detector module works in the spectral range 800 - 1650 nm at frequencies up to 3 GHz. It is equipped with an MM or SM fiber. Small size and weight allow for installing it on a PCB without additional mounting.

APDI-55-3G-K-RM is the module with optical matching (space between a fiber and APD is filled with an index-matched medium).

APDI-55-3G-K-R50 provides low back reflection (<-50 dB).

Applications: reflectometry and analogue optical equipment.

ABSOLUTE MAXIMUM RATINGS

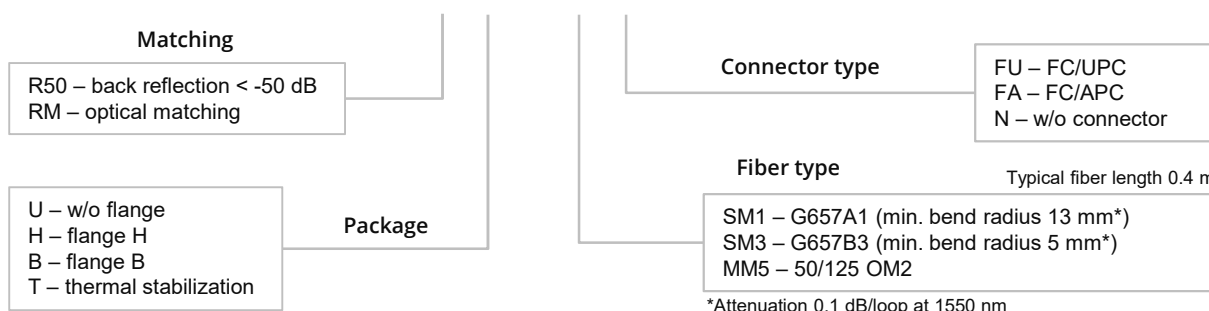
Parameter	Value	Unit
Forward current, I_f	10	mA
Reverse current, I_r	2	mA
Operating temperature, T_c	-40 ÷ +80	°C
Storage temperature, T_{stg}	-40 ÷ +85	°C

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

Parameter	Min	Typ	Max	Unit	Test conditions	
Responsivity	APDI-55-3G-K-R50	0.80	0.92	A/W	$\lambda = 1310 \text{ nm}, M = 1, P = 1 \mu\text{W}$	
	APDI-55-3G-K-RM	0.85	0.97			
Multiplication coefficient	M	40	80		$\lambda = 1310 \text{ nm}, V_R = V(I_D = 20 \text{ nA})$	
Breakdown voltage	V_{BR}	45	55	V		
Breakdown voltage temperature coefficient $\Delta V_{BR}/\Delta T$	δ	0.08	0.10	0.12	V/°C	T = 25 °C
Dark current	I_d	5	30	nA	$V_R = 0.9 V_{BR}$	
Total capacitance	C_t	0.68	0.8	pF	f = 1 MHz	
Chip capacitance	C_{chip}	0.38	0.5	pF	f = 1 MHz	
Bandwidth	BW	3		GHz	M = 10	

ORDERING INFORMATION

APDI-55-3G-K-X-X-7-X-X

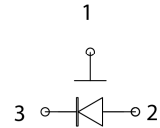
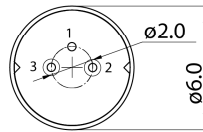
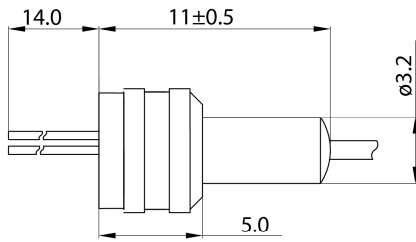


Our products are certified by Belarusian Chamber of Commerce. All the components used in production are ISO 9001:2008 certified and comply with RoHS directive. Characteristics, data, materials and structures specified in this datasheet are subject to change without notice.

This document was updated on 06.02.2017

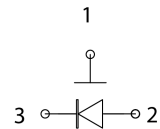
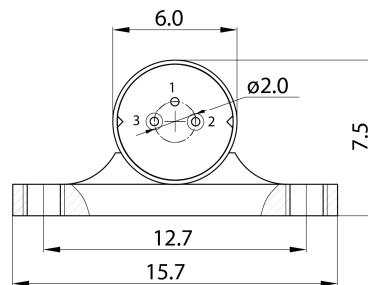
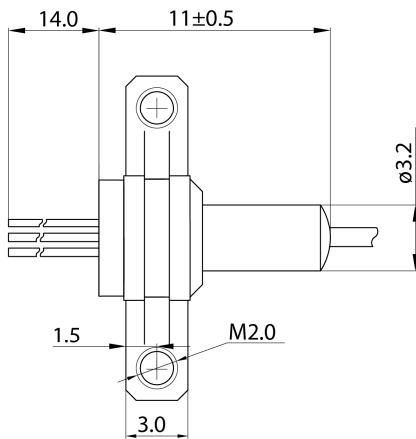
APDI-55-3G-K

U



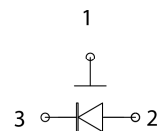
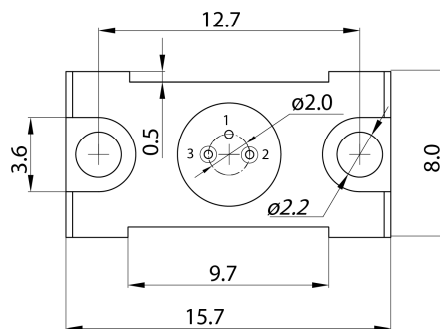
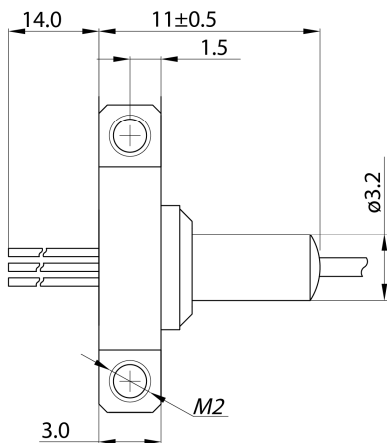
- 1. Case
- 2. PD Anode
- 3. PD Cathode

H



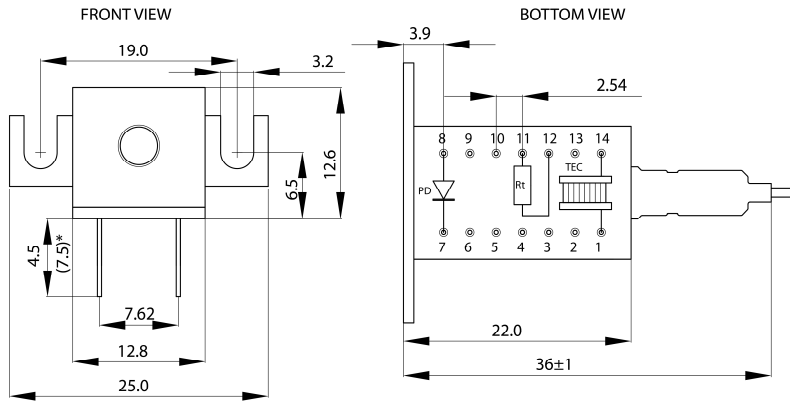
- 1. Case
- 2. PD Anode
- 3. PD Cathode

B



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

APDI-55-3G-K



PIN CONNECTION

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

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

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

*Possible pins length 4.5 mm or 7.5 mm.

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