

Butterfly APD Receiver

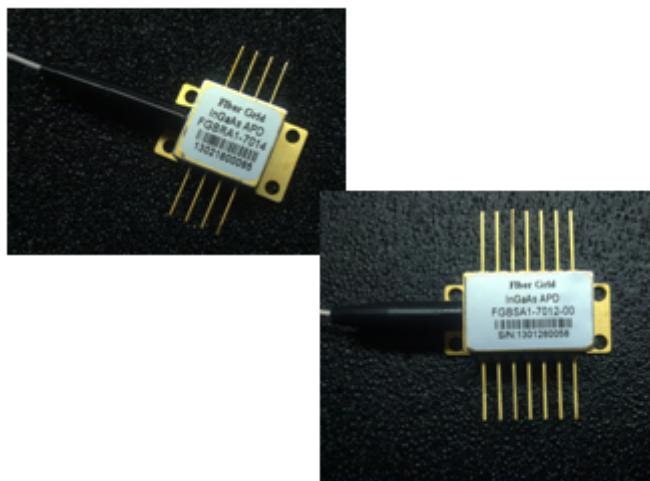
FGBxA1-701x-00

Description

The product integrates a high linearity InGaAs APD with TEC and thermistor, Low dark current, High linearity, High responsivity

Features:

- Long wavelength operation
- Package: 8pin & 14pin butterfly package
- Built-in thermistor, and TEC
- Low dark current
- Excellent reliability compliance to GR-468-CORE
- Compliance to RoHS standard



Applications

- Optical fiber sensor system
- Optical fiber communications system

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit	Condition
Operating Case Temperature	T_c	-40	85	°C	--
Storage Temperature	T_{stg}	-40	85	°C	--
Reverse Voltage	V_r	--	V_{br}	V	
Thermoelectric cooler voltage	V_{TEC}		2.6	V	
Thermoelectric cooler current	I_{TEC}		1.5	A	
Lead solder Temperature	--		260	°C	--
Lead Soldering Time	--		10	s	--

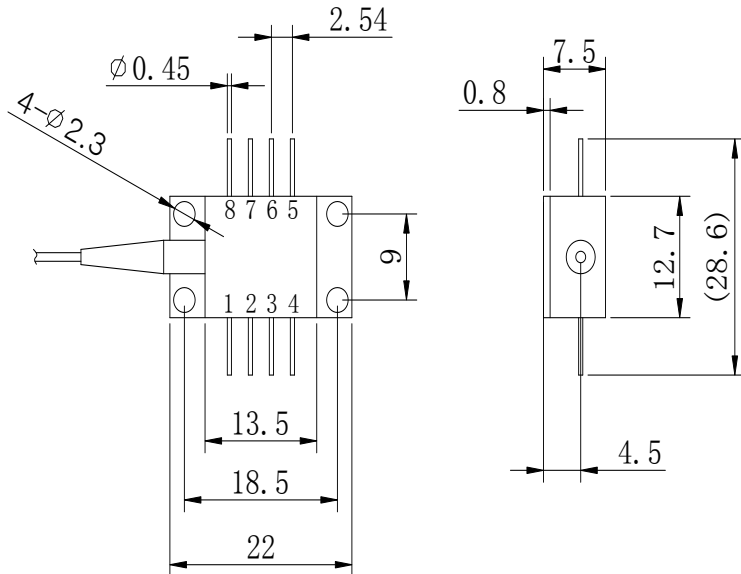
Optical/Electrical Characteristics (T=25°C, unless otherwise stated)

Parameter	Symbol	Min	Typ	Max	Unit	Test Conditions
Optical Wavelength	λ	1100	-	1650	nm	
Breakdown Voltage	V_{br}	35	42	55	V	$I_d=10\mu A, T_c=25^\circ C$
Dark Current	I_d	-	10	50	nA	$T_c=25^\circ C, V_r=0.9V_{br}$
Responsivity	R_e	4.0	5.5		A/W	$\lambda = 1310nm,$ $V_r=0.9V_{br}, 25^\circ C$
TEC Current	I_{tec}	-	-	1500	mA	$T_c=25^\circ C, V_r=0.9V_{br}$
Cutoff frequency	f_c	2.0	3.0	-	GHz	$T_c=25^\circ C, V_r=0.9V_{br}$
Capacitance	C		0.38	0.5	pF	$f = 1MHz, V_r = 0.9 V_{br}$
Thermistor Resistance	R_T	9.9	10	10.1	k Ω	@25°C
Thermistor B-Value		-	3970	-	K	25°C/85°C

Dimensions and Pin Description

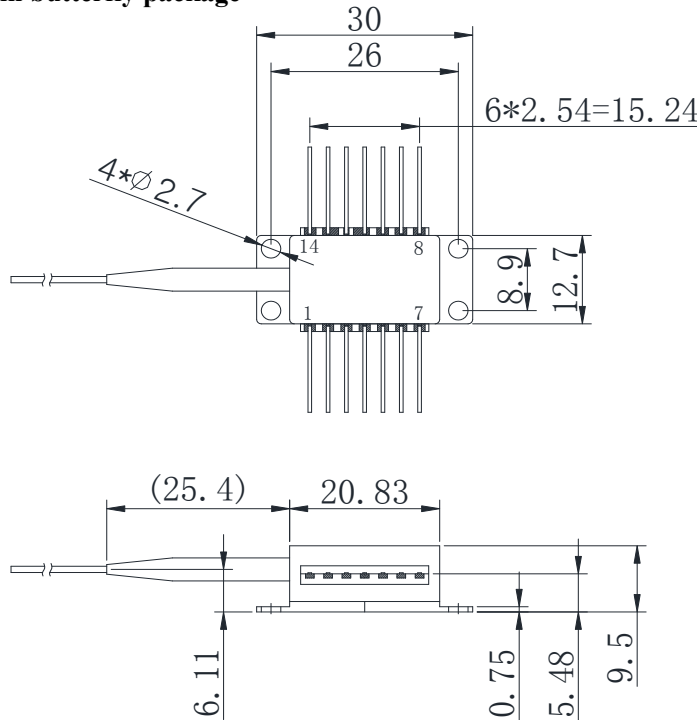
Dimensions are in millimeters. All dimensions are ± 0.1 mm unless otherwise specified.

8pin butterfly package



Pin	Description
1	TE Cooler (+)
2	Thermistor
3	Thermistor
4	APD Cathode
5	APD Anode
6	NC
7	NC
8	TE Cooler (-)

14pin butterfly package



Pin	Description
1	Thermistor
2	Thermistor
3	APD(P)
4	NC
5	NC
6	TEC(+)
7	TEC(-)
8	NC
9	Ground
10	Ground
11	Ground
12	APD(N)
13	Ground
14	NC

Order information

F G B_x A 1 - 701_x - 0 0

Optical Connector: 1--SC/PC SM Pigtail, 2-- SC/APC SM Pigtail
 3--FC/PC SM Pigtail, 4--FC/APC SM Pigtail

Package: R--8pin butterfly package
 S--14pin butterfly package