

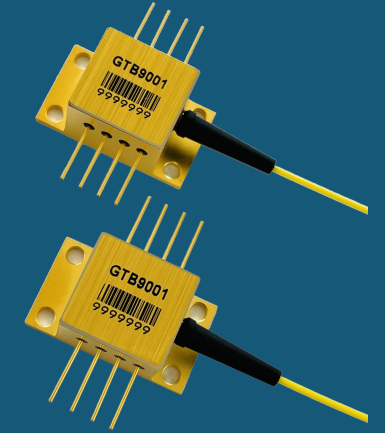
## APD Butterfly Receiver ( 8 pins )

### Features

- Long Wavelength Operation
- Industry-standard, 8 Pin Butterfly Package
- Low Dark Current, Built -in TEC, Thermistor
- Excellent Reliability
- RoHs Compliant

### Application

- Optical Sensor System
- Optical Communications System
- Test equipment



Description: The product integrates a high linearity InGaAs APD with TEC and thermistor ,low dark current ,high linearity , High responsivity. M > 60

### Absolute Maximum Ratings (Tc=25°C .unless otherwise specified)

Parameter	Symbol	Min.	Max.	Unit	Test Condition
Storage Temperature	Tstg	-40	+85	°C	-
Operating Temperature	Tc	-40	+85	°C	-



Reverse Voltage	V <sub>r</sub>	--	V <sub>br</sub>	V	-
Thermoelectric Cooler Voltage	V <sub>TEC</sub>	--	2.6	V	-
Thermoelectric Cooler Current	I <sub>TEC</sub>	--	1.5	A	-
Soldering Temperature / Time			260 / 10	°C	-

## Specifications ( electrical & optical characteristics )

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Wavelength Range	$\lambda$	1000	-	1650	nm	-
Temperature Coefficient of Reverse Breakdown Voltage	$\delta$		0.2		% / °C	*1
Voltage	V <sub>BR</sub>	50	-	100	V	I <sub>D</sub> =10 $\mu$ A
Dark Current	I <sub>d</sub>	-	0.3	1	nA	V <sub>R</sub> =V <sub>BR</sub> -1V
Responsivity	R	0.80 @ 1310nm			A / W	M=1
		0.95 @ 1550nm				
		0.80 @ 1650nm				

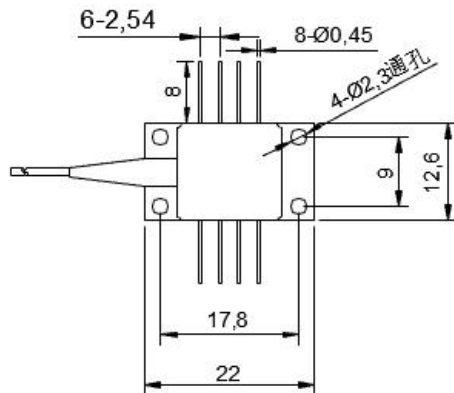
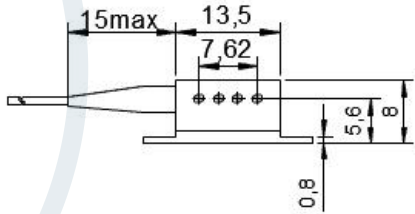


Multiplication Factor	M	40	60		M	$\lambda = 1310\text{nm}$ , $I_{po} = 1.0 \mu\text{A}$ , $V_r = V$ (@ $I_d = 1 \mu\text{A}$ )
Excess Noise Factor	X		0.7			$\lambda = 1310\text{nm}, 1550\text{nm}$ , $I_{po} = 1.0 \mu\text{A}$ , $M=10, f=35\text{MHz}, B=1\text{MHz}$
	F		5			
Capacitance	Ct	-	0.35	-	pF	$f = 1 \text{ MHz}$ , $V_R = V_{BR} - 1V$
Multiplied Dark Current	$I_{dm}$		1	5	nA	$M=2$ to 10
Cut-off Frequency	Fc	2.5	-	-	GHz	$M=10$
Optical Return Loss	ORL	30	-	-	dB	SMF

\*1

$$\delta = \frac{V_{BR}(25^\circ\text{C} + \Delta T^\circ\text{C}) - V_{BR}(25^\circ\text{C})}{\Delta T^\circ\text{C} \cdot V_{BR}(25^\circ\text{C})}$$

## Dimensions(mm)



## Pin Assignment

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

## Order Information

GTB9001



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