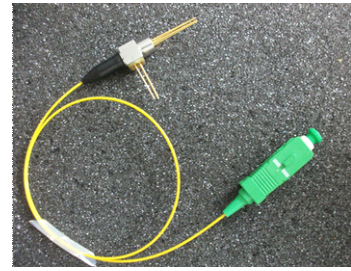


## T1610DFB/R1310nm Analog Pigtail BOSA (Built-in Isolator)

### FB-Z36G3ANx-00

**Features:**

With 1610nm DFB transmit suitable for Burst-Mode transmission  
1310nm analog PIN Photodiode  
For full-duplex communication over a single fiber.  
Built-in optical isolator  
Operate temperature from -40°C to +85°C  
SC&FC&LC pigtail connector



**Specification:**

**Absolute Maximum Ratings**

| Parameter                  | Symbol    | Condition | Min | Max | Unit |
|----------------------------|-----------|-----------|-----|-----|------|
| Operating Case Temperature | $T_c$     | --        | -40 | 85  | °C   |
| Storage Temperature        | $T_{stg}$ | --        | -40 | 85  | °C   |
| Lead solder Temperature    | --        | --        |     | 260 | °C   |
| Lead Soldering Time        | --        | --        |     | 10  | s    |

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

**1610nm DFB Laser Transmitter**

| Parameter                          | Symbol                   | Min  | Typ  | Max  | Unit    | Test Conditions                  |
|------------------------------------|--------------------------|------|------|------|---------|----------------------------------|
| Optical Output Power               | $P_o$                    | 2.0  | --   | 4.0  | mW      | CW, $I_{op}=30mA$                |
| Threshold Current                  | $I_{th}$                 | --   | 10   | 15   | mA      | $T=25\text{ }^\circ\text{C}$     |
| Forward Voltage                    | $V_F$                    | --   | 1.1  | 1.6  | V       |                                  |
| Operating Current                  | $I_{op}$                 | --   | 30   | 40   | mA      | CW, $T=25\text{ }^\circ\text{C}$ |
| Center Wavelength                  | $\lambda_c$              | 1590 | 1610 | 1630 | nm      | CW, $T=25\text{ }^\circ\text{C}$ |
| Spectral Width (-20 dB)            | $\Delta\lambda$          | --   | 0.1  | 1.0  | nm      |                                  |
| Wavelength temperature coefficient | $\Delta\lambda/\Delta T$ |      | 0.08 | 0.12 | nm/°C   |                                  |
| Side-Mode Suppression Ratio        | SMSR                     | 35   | 40   |      | dB      | $I_{op}=30mA$                    |
| Isolator                           |                          | 35   |      |      | dB      |                                  |
| Relaxation Oscillation Frequency   | $f_R$                    | --   | 4.5  | --   | GHZ     | $I_{op}=30mA$                    |
| Rise/Fall Times                    | $t_R, t_F$               | --   | --   | 0.1  | ns      | 20% to 80%                       |
| Monitor Current                    | $I_{mon}$                | 100  | --   | 1000 | $\mu A$ | $V_R=5\text{ V}$ ,               |
| Monitor Dark Current               | $I_D$                    | --   | --   | 200  | nA      | $V_R=5\text{ V}$                 |

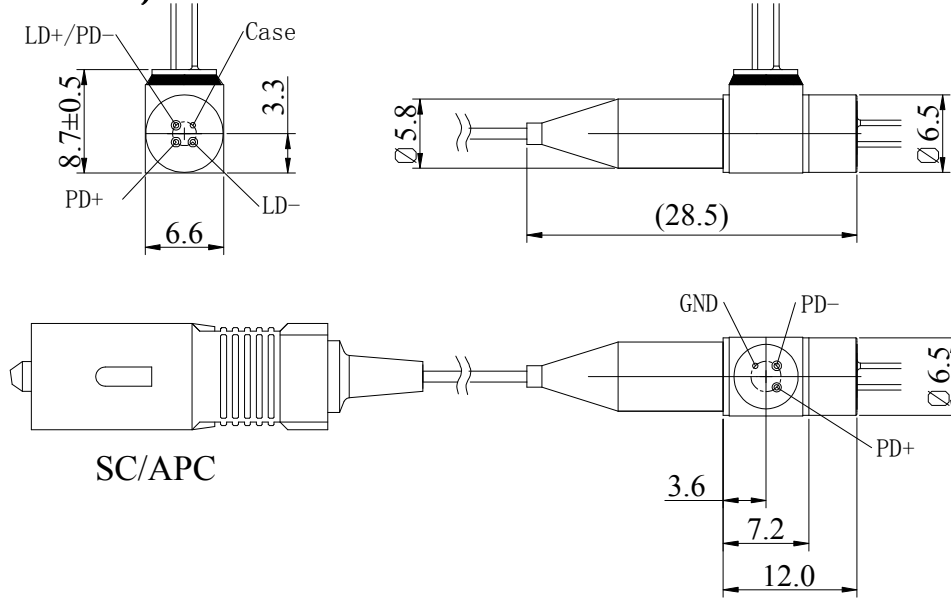
**1310nm analog PIN Receiver**

| Parameter               | Symbol    | Min  | Typ  | Max  | Unit | Test Conditions          |
|-------------------------|-----------|------|------|------|------|--------------------------|
| Wavelength              | $\lambda$ | 1250 | 1310 | 1390 | nm   |                          |
| Dark Current            | $I_d$     | 0.2  | --   | 0.6  | nA   | $E_e=0, V_r=5V$          |
| Responsivity            | RE        | 0.85 | --   | --   | A/W  | $V_r=5V, \lambda=1310nm$ |
| Capacitance             | C         | --   | 0.45 | 0.7  | PF   | $f=1MHz, V_r=5V, E_e=0$  |
| -3dBm Bandwidth         | BW        | 2.5  | --   | --   | GHZ  | $RL=50\ \Omega, V_r=5V$  |
| Saturated Optical Power | $P_s$     | +3   | --   | --   | dBm  | $V_r=0V$                 |

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|                                        |      |    |    |     |     |                                                                   |
|----------------------------------------|------|----|----|-----|-----|-------------------------------------------------------------------|
| Optical Return Loss                    | ORL  | 30 | -- | --  | dB  |                                                                   |
| 2 <sup>nd</sup> Order Inter-Modulation | IMD2 | -- | -- | -70 | dBc | f1=400MHZ, P1=-3dBm<br>f2=450.25MHZ, P2=-3dBm<br>RL=50 Ω , Vr=12V |

**Dimensions And Package Outline**  
**(SC/APC Pigtail Connector)**



**Order information**

FB - Z 3 6 G 3 A N x - 0 0

- Optical Connector: 1--SC/PC Pigtail  
2-- SC/APC Pigtail  
3--FC/PC Pigtail  
4--FC/APC Pigtail  
7--LC/PC Pigtail  
8--LC/APC Pigtail