

# TRR-1F42-753

## 1.25Gbps LC Connectorized InGaAs PIN plus AGC Pre-amplifier

### FEATURES:

- Pre-aligned LC-type receptacle for optical fiber communication.
- Design for Small Form Factor transceivers.
- Suitable for long wavelength 1.25Gbps application.
- Single power supply +3.3V.



### ELECTRO-OPTICAL CHARACTERISTICS: (Typical values are at +3.3V@ 25°C)

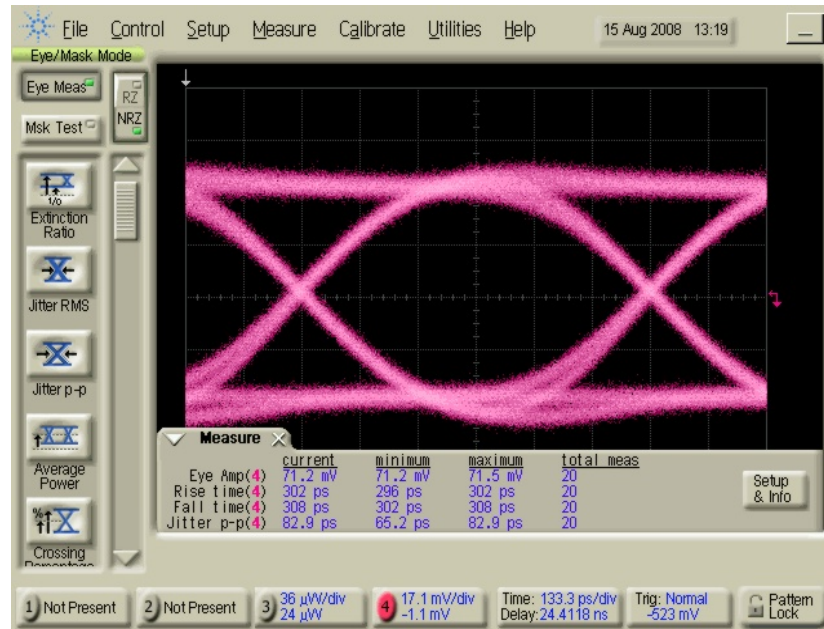
| PARAMETERS                    | SYMBOL           | MIN  | TYP | MAX  | UNIT  | TEST CONDITIONS                                     |
|-------------------------------|------------------|------|-----|------|-------|---|
| Power Supply                  | V <sub>CC</sub>  | 3.0  | 3.3 | 3.6  | V     |   |
| Supply Current                | I <sub>CC</sub>  |      | 28  | 35   | mA    | no loads  |
| Differential Responsivity     | R <sub>d</sub>   | 12   | 18  | 28   | mV/μW | R <sub>load</sub> = 100ohm,<br>P = -24dBm, λ=1310nm |
| Single Ended Responsivity     | R <sub>s</sub>   | 6    | 9   | 14   | mV/μW | R <sub>load</sub> = 50ohm,<br>P = -24dBm, λ=1310nm  |
| Small-Signal Bandwidth        | BW               | 730  |     |      | MHz   |   |
| Low-Frequency Cut off         | LF               |      |     | 115  | kHz   |   |
| Rise / Fall Time(20 % ~ 80 %) | tr/tf            |      |     | 400  | ps    | P = -24dBm, λ=1310nm                                |
| Saturation Power              | P <sub>Sat</sub> | 0    |     |      | dBm   |   |
| Single Ended Output Impedance | R <sub>O</sub>   |      | 50  |      | ohm   |   |
| Wavelength                    | λ                | 1260 |     | 1620 | nm    |   |
| Sensitivity                   |                  |      |     | -27  | dBm   | λ=1310nm, @1244.16Mbps,<br>PRBS7,ER=10dB,BER=1E-12  |

### ABSOLUTE MAXIMUM RATINGS:

| PARAMETERS              | MIN | MAX | UNIT | TEST CONDITIONS |
|-------------------------|-----|-----|------|-----------------|
| Storage Temperature     | -40 | 100 | °C   |                 |
| Operating Temperature   | -40 | 85  | °C   |                 |
| Lead Solder Temperature |     | 260 | °C   | 10 seconds      |

**Eye Diagram :**

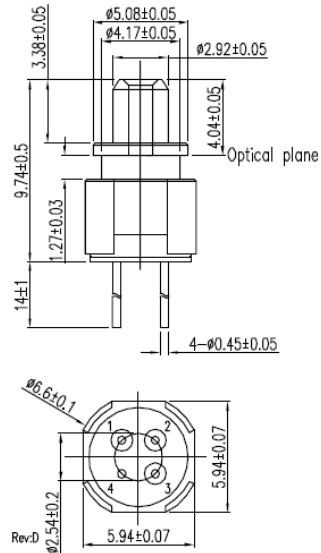
$R_{load} = 50\Omega$ ,  $P = -24\text{dBm}@1244.16\text{Mbps}$ , 1310nm, PRBS 7.



$t_r=302\text{ps}$ ,  $t_f=308\text{ps}$ , Jitter p-p=82.9ps

**OUTLINE DIMENSIONS:**

• Unit: mm



**Pinout: C-4**

1. Dout
2. Vcc
3. Dout
4. Gnd