



# FRF-25P-3L8-701

25Gbps LC Connectorized InGaAs PIN plus Pre-amplifier with FPC

## FEATURES:

- LC-type optical sub-module with flexible circuit attached.
- Photocurrent monitoring available.
- Single power supply +3.3V.



## ELECTRO-OPTICAL CHARACTERISTICS: ( $T_A = 25^\circ\text{C}$ )

| PARAMETERS                    |                 | SYMBOL    | MIN  | TYP  | MAX   | UNIT              | TEST CONDITIONS                                                                 |
|-------------------------------|-----------------|-----------|------|------|-------|-------------------|---------------------------------------------------------------------------------|
| Power Supply                  |                 | $V_{CC}$  | 3    | 3.3  | 3.5   | V                 |                                                                                 |
| Supply Current                |                 | $I_{CC}$  |      | 29   |       | mA                | No loads                                                                        |
| Differential Responsivity     |                 | $R_d$     |      | 0.9  |       | mV/ $\mu\text{W}$ | $R_{load} = 100\text{ohm}$ ,<br>$P = -10\text{dBm}$ , $\lambda = 1310\text{nm}$ |
| TIA RSSI                      | Slope           |           |      | 0.25 |       | mA/mA             | TIA RSSI                                                                        |
|                               | Offset          |           |      | 10   |       | nA                |                                                                                 |
|                               | Linearity Limit |           |      |      | 2     | mA                |                                                                                 |
| Small-Signal Bandwidth        |                 | BW        |      | 17   |       | GHz               | In TIA linear gain region                                                       |
| Low-Frequency Cut off         |                 | LF        |      | 100  |       | kHz               |                                                                                 |
| Saturation Power              |                 | $P_{Sat}$ | 2    |      |       | dBm               | $\lambda = 1310\text{nm}$ , @25.78125Gbps                                       |
| Single Ended Output Impedance |                 | $R_O$     |      | 50   |       | ohm               |                                                                                 |
| Wavelength                    |                 | $\lambda$ | 1260 |      | 1360  | nm                |                                                                                 |
| Optical Return Loss           |                 | ORL       | 27   |      |       | dB                | $\lambda = 1310\text{nm}$                                                       |
| Sensitivity                   |                 |           |      |      | -14.0 | dBm               | $\lambda = 1310\text{nm}$ , @25.78125Gbps<br>PRBS31, ER=4.3dB, BER=5E-5         |

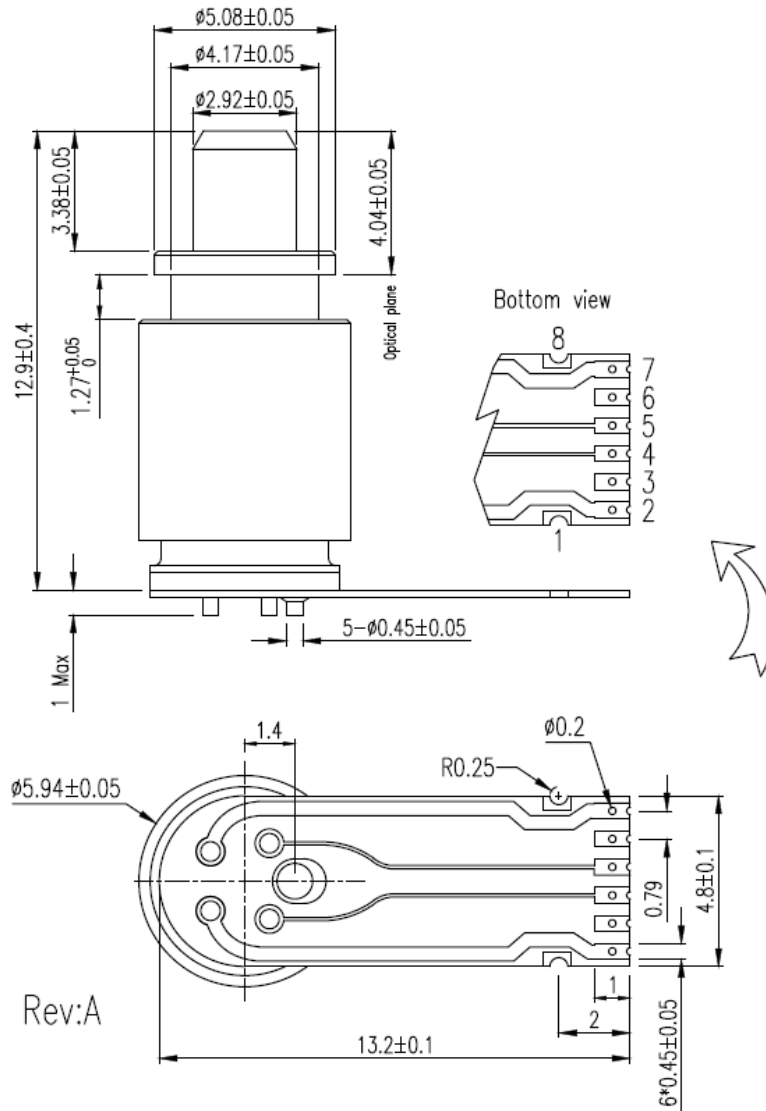
## ABSOLUTE MAXIMUM RATINGS:

| PARAMETERS              | MIN | MAX | UNIT             | TEST CONDITIONS |
|-------------------------|-----|-----|------------------|-----------------|
| Storage Temperature     | -40 | 100 | $^\circ\text{C}$ |                 |
| Operating Temperature   | -40 | 85  | $^\circ\text{C}$ |                 |
| Lead Solder Temperature |     | 260 | $^\circ\text{C}$ | 10 seconds      |
| Flex Attach Temperature |     | 370 | $^\circ\text{C}$ | 10 seconds      |



**OUTLINE DIMENSIONS:**

• Unit: mm

**Pinout:**

| Pin no. | TRF-1H57-701 |
|---------|--------------|
|         | Function     |
| 1       | Gnd          |
| 2       | Vcc          |
| 3       | Gnd          |
| 4       | Dout(+)      |
| 5       | Dout(-)      |
| 6       | Gnd          |
| 7       | Isource      |
| 8       | Gnd          |