

## 1310nm 155Mbps 4pin ROSA

### DI6S-9055-6N Series

**TYPE NAME: DI6S-9055-6N**

#### Product Description:

The LuxNet DI6S-9055-6N ROSA (Receiver Optical Sub-Assembly) is designed for a high-speed, high-performance data communication and telecommunication applications. This device integrates our high-speed 1310 nm PIN detector with a STM1/OC3 trans-impedance amplifier (TIA) and capacitors with a TO-46 header with cap window and optical port. The product is designed for OC-3 long distance optical communication systems. The LC or SC type optical port has a fiber connector that transmits light through an receptacle into the PIN detector with high coupling efficiency.

#### Product Specifications:

Absolute Maximum Ratings (T = 25°C):

| Parameter                 | Symbol           | Unit | Min. | Max. | Note            |
|---------------------------|------------------|------|------|------|-----------------|
| Operating Temperature     | T <sub>op</sub>  | °C   | -40  | 85   |                 |
| Storage Temperature       | T <sub>stg</sub> | °C   | -40  | 100  |                 |
| Solder Reflow Temperature | T <sub>stg</sub> | °C   |      | 260  | 10 seconds max. |
| Power Supply Voltage      | V <sub>p</sub>   | V    |      | 4.5  |                 |
| Optical Power             | P <sub>in</sub>  | dBm  |      | 5    |                 |

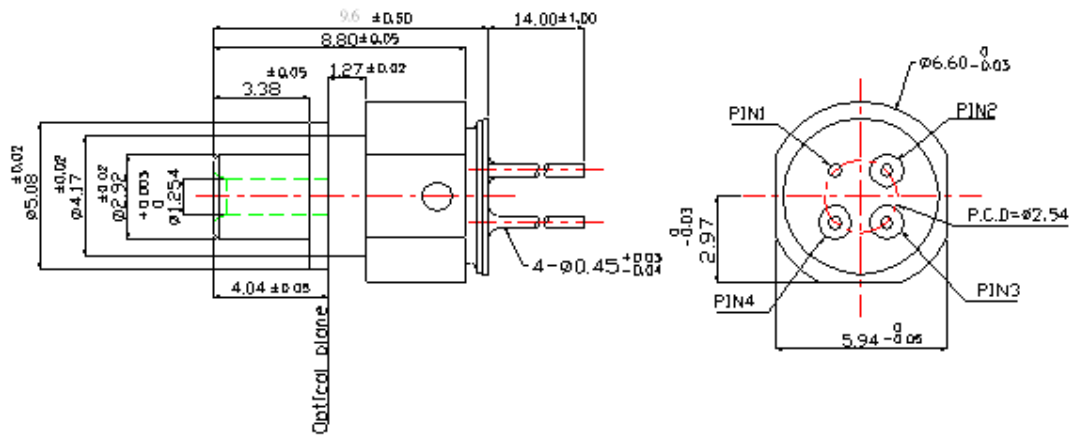
Electro-Optical Characteristics (T = 25°C, unless noted otherwise):

| Parameter                     | Symbol                         | Unit  | Min. | Typ.    | Max.    | Test Condition  |
|-------------------------------|--------------------------------|-------|------|---------|---------|---|
| Supply Voltage                | V <sub>cc</sub>                | Volts | 3.0  | 3.3     | 3.6     |   |
| Supply Current                | I <sub>cc</sub>                | mA    | 12   | 22      | 32      | P <sub>m</sub> = 0 μW, R <sub>L</sub> = 50Ω                               |
| Output Voltage (differential) | V <sub>out</sub>               | mV    |      |         | 800     | P <sub>m</sub> = 10 μW, R <sub>L</sub> = 50Ω                              |
| Responsivity                  | R                              | KV/W  |      | 33.1    |         | λ=1310nm<br>P <sub>m</sub> =1.5 μW, AC<br>Coupled to R <sub>L</sub> = 50Ω |
| Upper -3dB Bandwidth          | BW                             | MHz   | 110  | 140     |         | R <sub>L</sub> = 50Ω  |
| Sensitivity                   | S                              | dBm   |      | -38     | -37     | λ=1310nm<br>2 <sup>23</sup> - 1 PRBS, BER= 10 <sup>-10</sup>              |
| Peak Wavelength               | λ <sub>p</sub>                 | nm    | 1100 | 1310    | 1650    |   |
| Rise/Fall Time                | τ <sub>r</sub> /τ <sub>f</sub> | ns    |      | 1.6/1.6 | 2.0/2.0 | V <sub>cc</sub> =3.3V; (20%-80%)  |

\* Specifications are subject to change without notice.  
\* Screening per customer-specified reject limits is available.

## DI6S-9055-6N (LC-ROSA)

**Dimensions:** (mm)  
All dimensions are nominal



### PINOUT

| DI6S-9055-6N |                            |
|--------------|----------------------------|
| Number       | Function                   |
| 1            | Gnd                        |
| 2            | Vcc                        |
| 3            | Inverted Output ( D* )     |
| 4            | Non-Inverted Output ( D+ ) |

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\* Screening per customer-specified reject limits is available.