



No. 6, Hejiang Road, Jhongli City,  
Taoyuan County, TAIWAN  
Tel: +886-3-452-5188  
Fax: +886-3-462-9588  
www.luxnetcorp.com.tw

## 1310/1550nm 155Mbps 5pin LC-ROSA

### DI6F-908x-3x Series

**TYPE NAME: DI6F-9080-3F**

#### **Product Description:**

The LuxNet DI6F-908x-3x 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, cap window, and optical port. The product is designed for OC-3 long distance optical communication systems. The LC type optical port has a fiber connector that transmits light through an LC 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>s</sub>	°C		260	10 seconds max.
Power Supply Voltage	V <sub>p</sub>	V	-0.5	6.0	
Optical Power	P <sub>in</sub>	dBm		5	

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

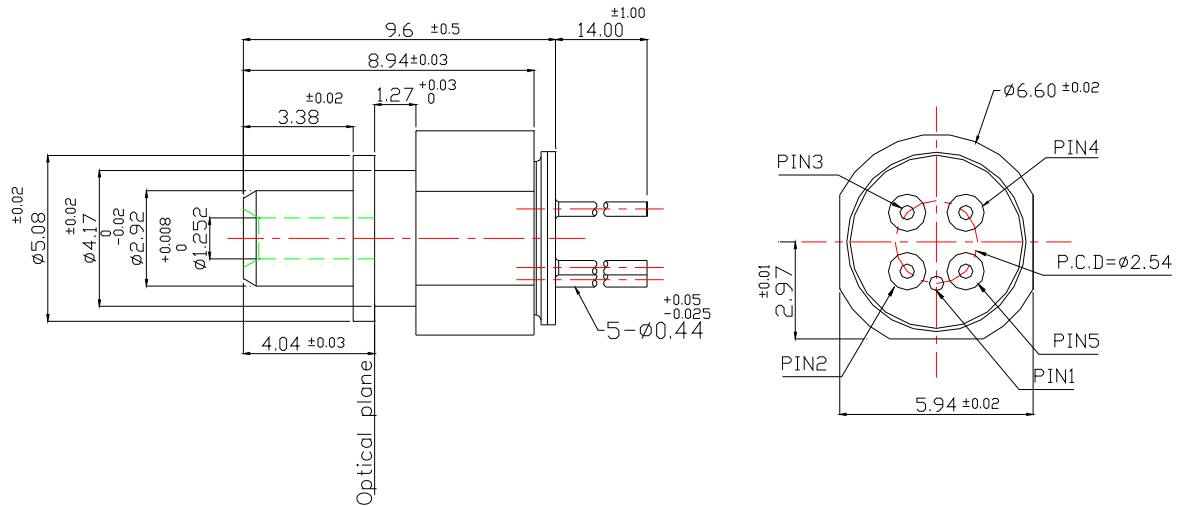
Parameter	Symbol	Unit	Min.	Typ.	Max.	Test Condition
Supply Voltage	V <sub>cc</sub>	V	2.97	3.3	5.5	
Supply Current	I <sub>cc</sub>	mA	22	28	36	V <sub>cc</sub> =3.3V
Output Voltage (differential)	V <sub>out</sub>	V			1.5	R <sub>L</sub> = 100Ω
Responsivity	R	KV/W		29		λ=1310nm P = 7.5 μW, AC Coupled to R <sub>L</sub> = 50Ω
Sensitivity	S	dBm			-36	λ=1310 nm 2 <sup>23</sup> - 1 PRBS, BER= 10 <sup>-10</sup> ER= 9~10dB
High Frequency Bandwidth (-3dB)	BW	MHz		165		R <sub>L</sub> = 50Ω
Lower Frequency Bandwidth	BW	kHz			25	R <sub>L</sub> = 50Ω
Wavelength	λ <sub>p</sub>	nm	1100	1310	1650	
Rise/Fall Time	τ <sub>r</sub> /τ <sub>f</sub>	ns		2.0/2.0		10%-90%
Dark Current	I <sub>d</sub>	nA			20	V <sub>i</sub> =3.3V
Overload	Pload	dBm	0			2 <sup>23</sup> - 1 PRBS, BER= 10 <sup>-10</sup> ER= 9~10dB

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

Version 1.1

## DI6F-9080-3F (LC-ROSA)

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



### PINOUT

DI6F-9080-3F	
Number	Function
1	Gnd
2	Non-Inverted Output ( D+ )
3	Vcc
4	Power monitor(Vpd)
5	Inverted Output ( D* )

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