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## 155 Mbps 1310 nm 5pin Low Optical Return Loss LC-ROSA

### DI6B-9080-4x Series

#### TYPE NAME: DI6B-9080-4AG

#### Product Description:

The LuxNet DI6B-9080-4x 5-pin low optical return loss LC-ROSA (Receiver Optical Sub-Assembly) is designed for high-speed, high-performance data communication and telecommunication applications. This ROSA provides special digital diagnostic capability for transceivers with a wide dynamic range of input optical power. This device integrates our high-speed 1310 nm PIN detector with an STM1/OC3 transimpedance amplifier (TIA) and capacitors into a TO-46 5-pin header with cap window and LC port. The product is designed for OC-3/STM-1 long-haul inter-office optical communication systems, where low optical return loss is required. The LC-type optical port with fiber stub transmits light into the PIN detector with high coupling efficiency and low return loss.

#### 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	5.0	
Supply Current @3.3V @5.0V	I <sub>cc</sub>	mA	14 15	23 24	36 32	P <sub>in</sub> = 0 μW, R <sub>L</sub> = 50Ω
Output Voltage (differential)	V <sub>out</sub>	mV			1200	P <sub>in</sub> = 10 μW, R <sub>L</sub> = 50Ω
Responsivity	R	KV/W		153		λ=1310nm P <sub>in</sub> = 1.5 μW, AC Coupled to R <sub>L</sub> = 50Ω
Sensitivity	S	dBm		-38	-35.5	λ=1310nm, 2 <sup>23</sup> - 1 PRBS, BER= 10 <sup>-10</sup>
Upper -3dB Bandwidth	BW	MHz	93	110		R <sub>L</sub> = 50Ω
Peak Wavelength	λ <sub>p</sub>	nm	1100	1310	1650	
Rise/Fall Time	τ <sub>r</sub> /τ <sub>f</sub>	ns	--	--	2.6/2.6	(20%-80%)
Dark Current	I <sub>d</sub>	nA			10	V <sub>r</sub> =-3.3V
Optical Return Loss	ORL	dB	-27	-40		

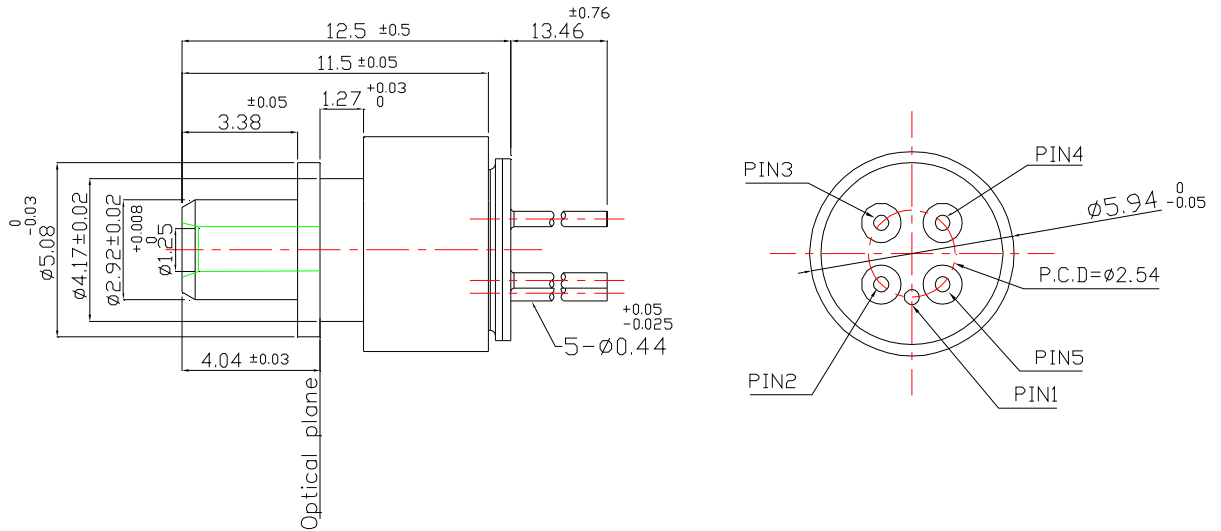
\* Specifications are subject to change without notice.

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

Version 1.1

## DI6B-9080-x (LC-ROSA)

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



### PINOUT

DI6B-9080-4AG	
Number	Function
1	GND
2	Non-inverted Output ( D )
3	Vcc
4	Power Monitor(Vpd)
5	Inverted Output ( D*)

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