



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

## 622Mbps 1310/1550 nm 5-Pin Low Optical Return Loss LC-ROSA

### DI7F-9060-4x Series

**TYPE NAME: DI7F-9060-4A**

#### Product Description:

The LuxNet DI7F-9060-4x 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 STM4/OC12 trans-impedance amplifier (TIA) and capacitors into a TO-46 5-pin header with cap window and LC port. The product is designed for OC-12/STM-4 Intra-office and short-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	-0.5	6.5	
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	23	28	35	P <sub>in</sub> = 0 μW, R <sub>L</sub> = 50Ω, V <sub>cc</sub> = 3.3V
Output Voltage (differential)	V <sub>out</sub>	mV		210	270	P <sub>in</sub> = 32 μW, R <sub>L</sub> = 50Ω
Responsivity	R	KV/W		42.8		λ = 1310nm P <sub>in</sub> = 1.5 μW, AC Coupled to R <sub>L</sub> = 50Ω
Upper -3dB Bandwidth	BW	MHz	347	459	532	R <sub>L</sub> = 50Ω
Sensitivity	S	dBm		-32.5	-31	λ = 1310nm 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>	ps		550/550		V <sub>cc</sub> = 3.3V (20%-80%)
Dark Current	I <sub>d</sub>	nA			10	V <sub>r</sub> = -3.3V
Saturation Power	P <sub>sat</sub>	dBm			-1	
Optical Return Loss	ORL	dB	-27	-40		
Overload		dBm	-3			λ = 1310nm, 2 <sup>23</sup> - 1 PRBS, BER = 10 <sup>-10</sup>

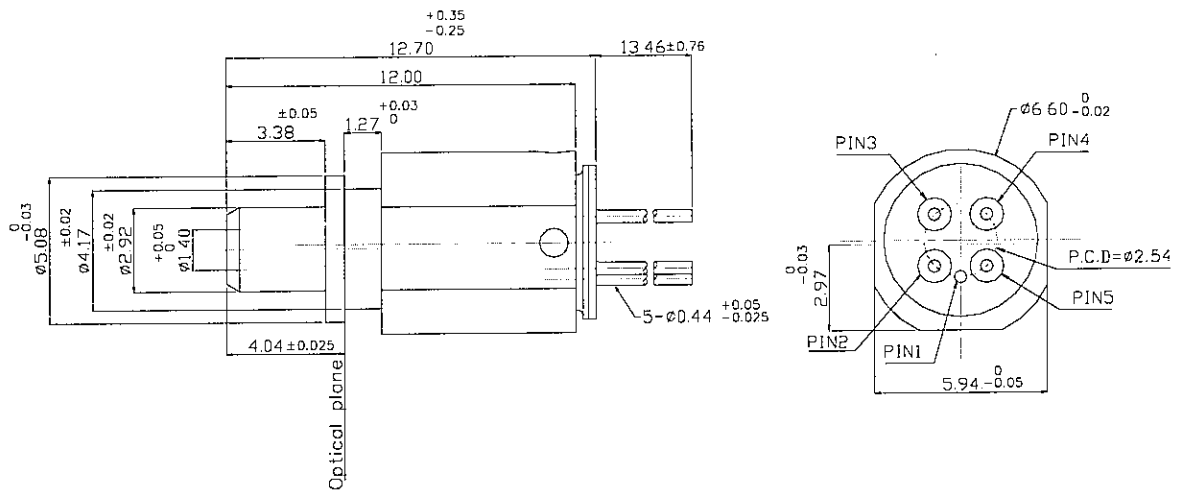
\* Specifications are subject to change without notice.

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

Version 1.1

## DI7F-9060-4A (LC-ROSA)

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



### PINOUT

DI7F-9060-4A	
Pin Number	Function
1	Gnd
2	Non-Inverted Output (D)
3	Vcc
4	PD Monitor(Vpd)
5	Inverted Output(D*)

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