

1310/1550nm 2.5Gbps 5-Pin Low Optical Return Loss LC-ROSA

DI2E-9050-4x series

TYPE NAME: DI2E-9050-4D

Product Description:

The LuxNet DI2E-9050-4x 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 1310/1550 nm PIN detector with an STM16/OC48 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-48/STM-16 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 _{op}	°C	-40	85	
Storage Temperature	T _{stg}	°C	-40	100	
Solder Reflow Temperature	T _{stg}	°C		260	10 seconds max.
Power Supply Voltage	V _p	V	-0.5	6	
Optical Power	P _{in}	dBm		5	

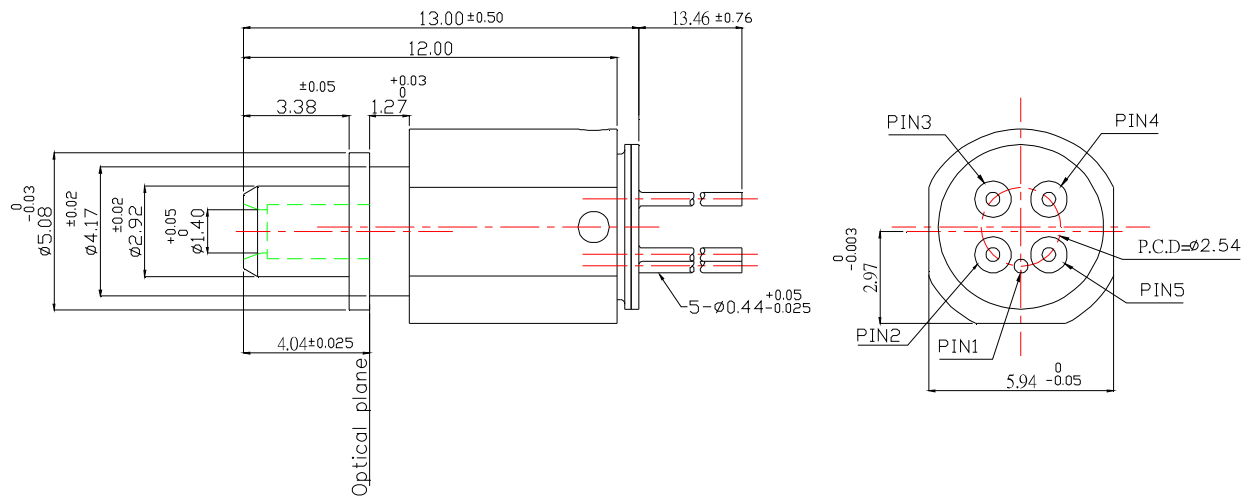
Electro-Optical Characteristics (T = 25°C, unless noted otherwise):

Parameter	Symbol	Unit	Min.	Typ.	Max.	Test Condition
Supply Voltage	V	V	3.0	3.3	3.6	
Supply Current	I _{cc}	mA		44	59	P _{in} = 0 μW, R _L = 50Ω
Output Voltage (differential)	V _{op}	mV			330	P _{in} = 100 μW, R _L = 50Ω
Responsivity	R	KV/W		6.3		λ=1310nm P _{in} = 7.5μW, AC Coupled, R _L = 50Ω
Upper -3dB Bandwidth	BW	GHz	1.65	2.05	2.5	R _L = 50Ω
Sensitivity	S	dBm		-26	-24	λ=1310nm @2.5G, 2 ²³ - 1 PRBS, BER= 10 ⁻¹⁰
Wavelength	λ	nm	1100	1310	1650	
Rise/Fall Time	τ _r /τ _f	ps		150/150		V _{cc} =3.3V (20%-80%)
Dark Current	I _d	nA			20	V _r =-3.3V
Optical Return Loss	ORL	dB		-40	-27	

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

DI2E-9050-4D(LC-ROSA)

Dimensions: (mm)
 All dimensions are nominal



PINOUT

DI2E-9050-4D	
Pin Number	Function
1	Gnd
2	Vcc
3	Inverted Output(D*)
4	Non-Inverted Output(D)
5	PD Monitor (Vpd)

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