

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

AK2H-9030-4x Series

TYPE NAME: AK2H-9030-4F

Product Description:

The LuxNet AK2H-9080-x 5-pin Long Reach 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 APD TO ball lens with cap window and LC port. The product is designed for 2.5G Long-haul optical communication systems, where low optical return loss is required. The LC-type optical port with fiber stub transmits light into the APD 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	85	
Solder Reflow Temperature	T _{stg}	°C		260	10 seconds max.
Power Supply Voltage	V _P	V	-0.5	6.0	
Optical Power	P _{in}	dBm		-6	

Electro-Optical Characteristics (T = 25°C, V_{cc} = 3.3V, λ = 1310nm unless noted otherwise):

Parameter	Symbol	Unit	Min.	Typ.	Max.	Test Condition
APD Break down voltage	V _{BR}	V	32		46	I _d = 10uA
Supply Voltage	V _{cc}	V	3.0	3.3	3.6	
Supply Current	I _{cc}	mA	40	48	60	V _{cc} = 3.3V
Output Voltage (Differential)	V _{op}	mV	320	400	480	R _L = 100Ω
Responsivity	R	KV/W		140		λ = 1310nm, P = 1.5uW, AC Coupled, R _L = 50Ω
Sensitivity	S	dBm			-32	λ = 1310nm, 2 ²³ - 1 PRBS, BER = 10 ⁻¹⁰ , ER = 9~10dB
High Frequency Bandwidth (-3dB)	BW	GHz	1.5	1.8		R _L = 50Ω
Low Frequency Bandwidth (-3dB)	BW1	KHz		25		R _L = 50Ω
Wavelength	λ	nm	1260	1310	1620	
Rise/Fall Time	τ _r /τ _f	ps		150/150		20%-80%
Dark Current	I _d	nA		30	50	V = 0.9 * V _{BR}
Optical Return Loss	ORL	dB		-40	-27	
Overload Power	P _{load}	dBm	-10			2 ²³ - 1 PRBS, BER = 10 ⁻¹⁰ , ER = 9~10dB

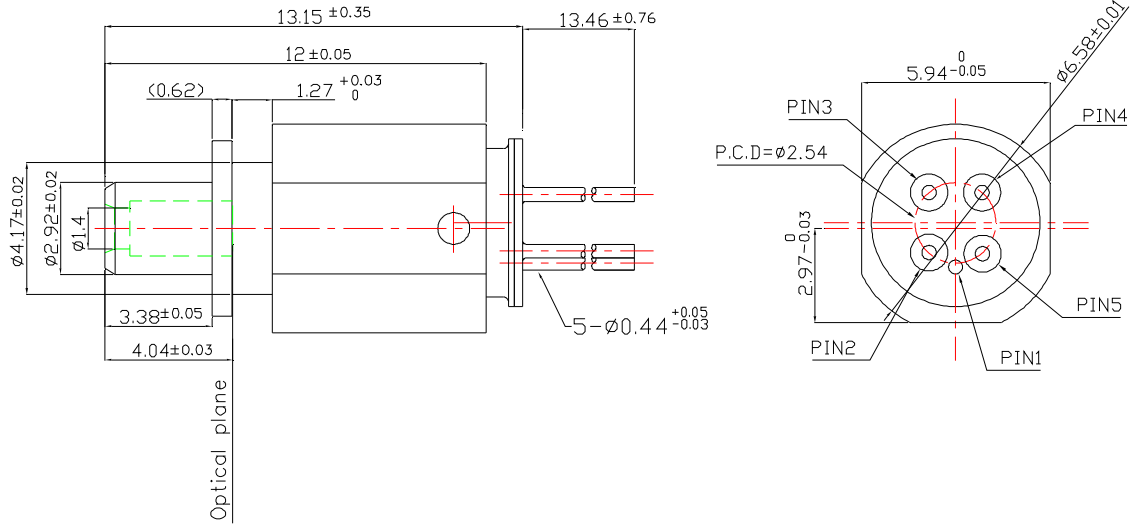
* Specifications are subject to change without notice.

* Screening per customer-specified reject limits is available.

Version 1.1

AK2H-9030-4F (5pin APD-ROSA)

Dimensions: (mm)
All dimensions are nominal



PINOUT

AK2H-9030-4F	
Pin Number	Function
1	Gnd
2	Non-Inverted Output (D+)
3	Vapd
4	Vcc
5	Inverted Output (D*)

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* Screening per customer-specified reject limits is available.