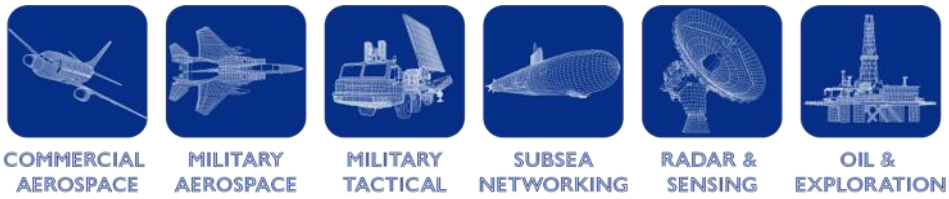
105-00038
1.25Gbps to 10.3125Gbps 850nm 5-Pin ROSA

Features:

- 5-pin LC ROSA with separate PD bias for RSSI
- High performance GaAs PIN photodiode with separate transimpedance amplifier
- Low electrical parasitic
- TO-46 package
- Data rates from 1.25Gbps to 10.3125Gbps
- Separate detector bias pin for receive power monitoring

COTSWORKS 850nm 1.25G-10.3125G ROSA is suited to a wide variety of multimode fiber applications.



Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit	Notes
Storage Temperature	T_{sto}	–55	105	°C	
Case Operating Temperature	T_{OP}	–40	95	°C	
Incident Optical Power	P	-	3	dBm	
Power Supply Voltage	I_F	–0.3	3.6	V	
Hand Lead Soldering Temperature	-	-	260	°C	(1)
ESD Exposure (Human Body Model)	-	-	225	V	(2)

Notes:
1) Hand solder for 10 seconds.
2) Proper ESD conditions should be employed while attaching to host board.

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Opto-Electronic Specifications

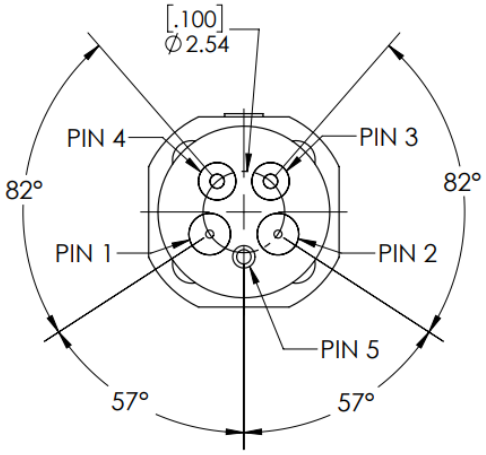
(Unless otherwise noted, V_{CC} = 3.3V, AC-coupled to 50Ω (100Ω differential), –40°C ≤ T_C ≤ 95°C.)

Parameter	Test Condition	Symbol	Min.	Typ.	Max.	Unit	Notes
Data Rate	-	DR	1.25	---	10.3125	Gbps	
Supply Voltage	-	V_{CC}	3.14	3.3	3.47	V	
Supply Current	P_R = 0µW R_L = 50 Ω AC-Coupled	I_{CC}	---	35	50	mA	(1)
Input Optical Wavelength	-	λ_p	830	850	870	nm	
Optical Saturation	-		---	0	---	dBm	
Optical Overload	-	P_{MAX}	2	5	---	dBm	
Output Impedance	-	Z_{OUT}	40	50	60	Ω	
Optical Return Loss	P_R = –12dBm	ORL	12	---	---	dB	(1)
Responsivity	CW input	R	0.4	0.5	---	A/W	
Sensitivity, OMA	DR = 1.25Gbps	S	---	-19	-16	dBm	(3)
	DR = 4.25Gbps		---	-19	-16		
	DR = 10.0Gbps		---	-14	-12		
Rise/Fall Time	$P_{R,OMA}$ = –12dBm	t_r/t_f	---	50	95	ps	(2) (4)

Notes:

1) P_R is the average optical power at the fiber face.
2) $P_{R,OMA}$ is the peak to peak optical power at the fiber face (Optical Modulation Amplitude). $P_{R,OMA} = \frac{2P_R(ER-1)}{ER+1}$ where ER is the extinction ratio (linear) of the optical source.
3) Sensitivity is measured with an optical source with an extinction ratio of 3dB.
4) Rise / Fall times are corrected for optical source Rise / Fall times. $T^2{}_{TIA} = T^2{}_{MEASURED} - T^2{}_{OPTICAL}$.

Pin Identification



PIN #	Description	Pin Diameter
1	VOUT+	9 mil
2	VOUT–	9 mil
3	VPD	17.5 mil
4	VCC	17.5 mil
5	GND (CASE)	17.5 mil

Notes:

1) Mechanical dimensions shown here are in units of mm.

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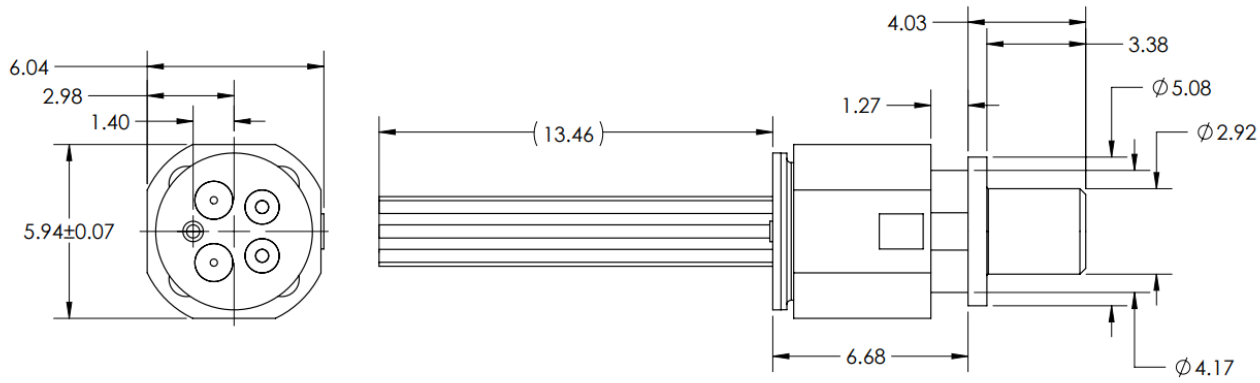
Standard Mechanical Dimensions



Mechanical dimensions shown here are in units of mm.

Warnings:

Handling Precautions: This device is susceptible to damage as a result of electrostatic discharge (ESD). A static free environment is highly recommended.

Laser Safety: Radiation emitted by laser devices can be dangerous to human eyes. Avoid eye exposure to direct or indirect radiation

Ordering Information

Contact COTSWORKS Sales for information and pricing.

Contact COTSWORKS for mechanical dimensional information, lead times and configuration options.

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