

## Features:

- 5-pin LC ROSA with separate PD bias for RSSI
- High performance GaAs PIN photodiode with separate transimpedance amplifier
- Low electrical parasitic
- TO46 package
- Data rates from 6Gbps to 10.3125Gbps
- 830nm to 870nm input wavelengths
- Separate detector bias pin for receive power monitoring
- Low bias currents and voltages



**COTSWORKS 850nm 6G-10.3125G ROSA is suited to a wide variety of multimode fiber applications.**



COMMERCIAL  
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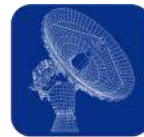
MILITARY  
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MILITARY  
TACTICAL



SUBSEA  
NETWORKING



RADAR &  
SENSING



OIL &  
EXPLORATION

## Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit	Notes
Storage Temperature	T <sub>sto</sub>	-40	95	°C	
Case Operating Temperature	T <sub>OP</sub>	-40	85	°C	
Power Supply Voltage	I <sub>F</sub>	-0.4	4	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.

## Opto-Electronic Specifications

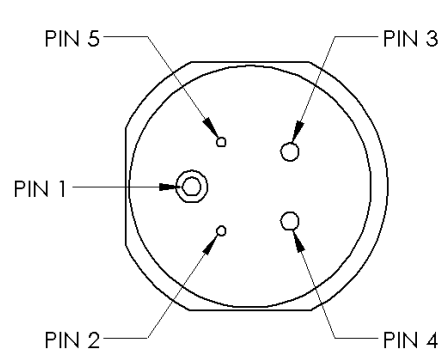
(Unless otherwise noted,  $3.0V < V_{CC} < 3.5V$ , AC-coupled to  $50\Omega$  (100 $\Omega$  differential),  $T_{OP} = 25\pm 3^{\circ}C$ .)

Parameter	Test Condition	Symbol	Min.	Typ.	Max.	Unit	Notes
<b>PIN</b>							
Data Rate	-	DR	6	-	10.3125	Gbps	
Supply Voltage	-	$V_{CC}$	3	3.3	3.5	V	
Supply Current	AC-Coupled	$I_{CC}$	-	35	50	mA	(1)
Input Optical Wavelength	-	$\lambda_P$	830	850	870	nm	
Optical Overload	-	$P_{MAX}$	6	-	-	dBm	
Output Impedance	-	$Z_{OUT}$	40	50	60	$\Omega$	
Sensitivity	DR = 10.3125Gbps	S	-	-	-12	dBm	(3)
Rise / Fall Time	$P_{R,OMA} = -12dBm$	$t_r / t_f$	-	30	50	ps	(2) (4)

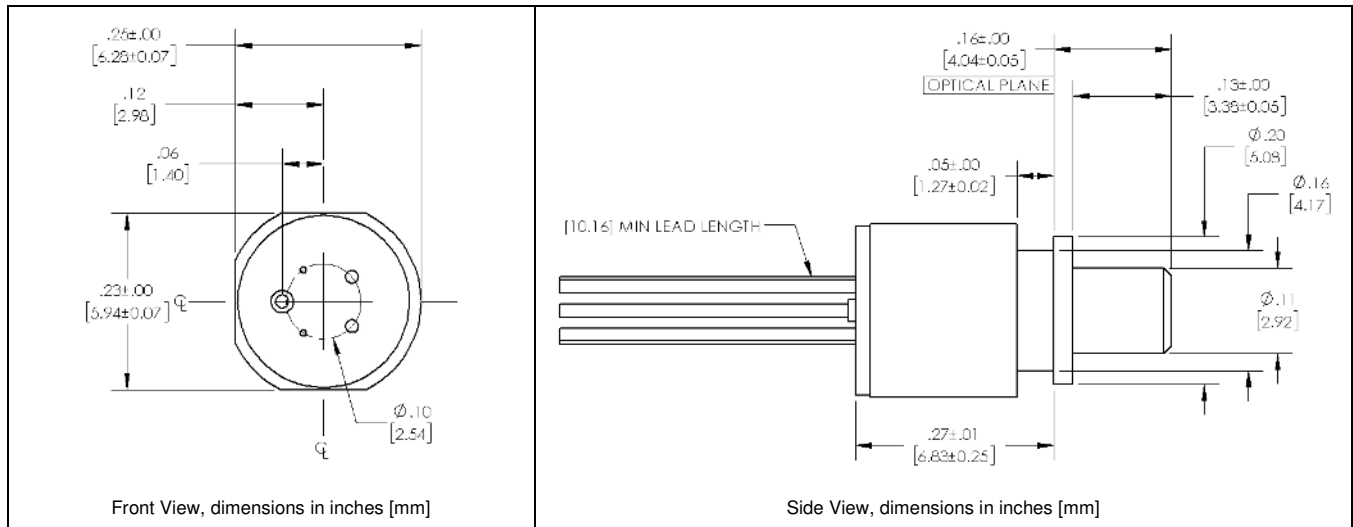
### Notes:

- $P_R$  is the average optical power at the fiber face.
- $P_{R,OMA}$  is the peak to peak optical power at the fiber face (Optical Module Amplitude)  $P_{R,OMA} = \frac{2P_R(ER-1)}{ER+1}$  where ER is the extinction ratio (linear) of the optical source.
- Sensitivity is measured with an optical source with an extinction ratio greater than or equal to 3dB, PRBS31, BER =  $10^{-12}$ .
- 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	GND (CASE)	17.5 mil
	2	DOUT-	9 mil
	3	VCC	17.5 mil
	4	VPD	17.5 mil
	5	DOUT+	9 mil
<b>Notes:</b> 1) N/A.			

## Standard Mechanical Dimensions



## 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.