



AC6511 Series

1.25 Gbps Receiver in 5-pin ROSA Package



Features:

- Wide dynamic range with differential output
- Low power +3.3 V operation
- Wide operation temperature (-40°C to +85°C)
- High reliability
- Suitable for 1.25 Gbps applications needing receptacle style connectorization

Applications: Telecom and Datacom

Electrical/Optical Characteristics ($T_c=25^\circ\text{C}$)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Power Supply	V_{cc}	3.0	3.3	3.6	V
Supply Current ⁽¹⁾	I_{cc}		30	39	mA
Bandwidth	BW	0.8	1.0		GHz
Low-Frequency Cut Off	LF		50		kHz
Rise Time/Fall Time ^(2,3)	Tr/Tf			250	ps
Wavelength	λ	1100		1650	nm
Single Ended Output Impedance	R_o		50		Ohms
Saturation Power ^(3,4)	P_{sat}	+2	+3		dBm
Sensitivity ^(3,4)	P_{sens}		-26	-25	dBm
Conversion Gain ^(3,5)		10	13		kV/W
Differential Output Voltage	V_{diff}		240		mVpp

(1) No Loads

(2) 20% to 80% at -20 dBm input

(3) $\lambda=1550$ nm

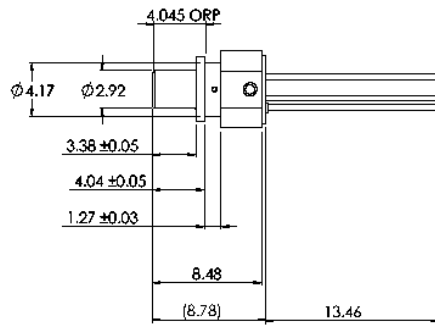
(4) BER = 10^{-10} , PRBS $2^{31}-1$, ER = 10 dB

(5) Single ended output voltage (peak to peak) to optical power swing (OMA)

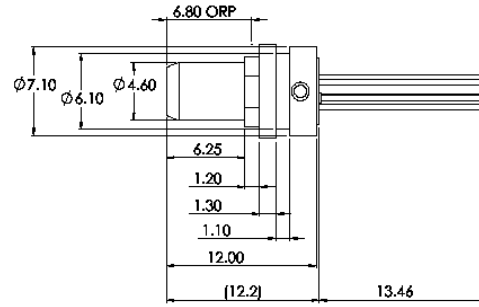
Absolute Maximum Ratings:

Parameter	Symbol	Min	Max	Unit
Case Temperature	T_c	-40	+85	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40	100	$^\circ\text{C}$
Humidity Range	RH	5	95	%
Amplifier Bias Voltage	V_{ccmax}		3.6	V
Input Optical Power	P_{max}		+6	dBm
Load Solder Temp. and Time			260 $^\circ\text{C}$, 10sec	

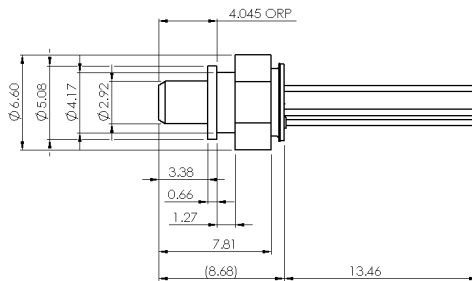
Outline Drawing (Customer special order is available):



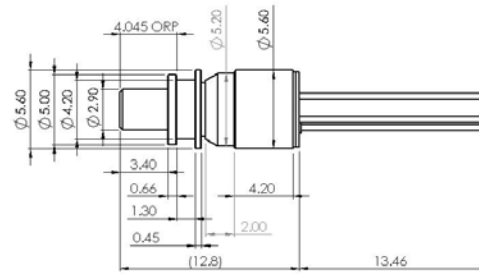
Plastic LC receptacle, Option L1



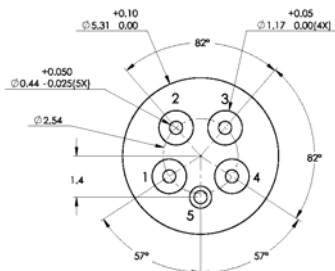
Plastic SC receptacle, Option S1



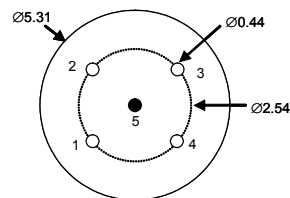
Metal LC receptacle, Option L2



Metal LC receptacle with -30dB ORL, Options L3 and L4



Bottom View for Pin-out "B" and "E"



Bottom View for Pin-out "F"

5-pin Pin-out Assignment			
Pin #	"B"	"E"	"F"*
1	Dout-P	V _{PD}	Dout-P
2	V _{CC}	Dout-N	V _{PD}
3	V _{PD}	Dout-P	V _{CC}
4	Dout-N	V _{CC}	Dout-N
5	GND	GND	GND

Note: "F" uses alternate 5-pin header. See Bottom View drawings

Ordering Information:**AC6511-W-YZ**

W = Pin-out: "B," "E," or "F" see table. (Custom pin-out available)

YZ = Receptacle type: "L1" for LC Plastic, "L2" for LC Metal, "L3" for LC metal (-30dB ORL), "L4" for LC metal (-30dB ORL) electrically isolated from header, "S1" for SC plastic

Example: **AC6511-B-L1** is an Archcom 5-pin, 1.25 Gbps ROSA with Type-B pin-out with low cost plastic LC receptacle

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