



## AC6210 Series

### 1.25 Gbps PIN-TIA in 4-pin TO 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 TO packaging

**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 <sup>(1)</sup>	$I_{cc}$		30	39	mA
Bandwidth	BW	0.8	1.0		GHz
Low-Frequency Cut Off	LF		50		kHz
Rise Time/Fall Time <sup>(2,3)</sup>	$T_r/T_f$			250	ps
Wavelength	$\lambda$	1100		1650	nm
Single Ended Output Impedance	$R_o$		50		Ohms
Saturation Power <sup>(3,4)</sup>	$P_{sat}$	+2	+3		dBm
Sensitivity <sup>(3,4)</sup>	$P_{sens}$		-26	-25	dBm
Conversion Gain <sup>(3,5)</sup>		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 0.9 A/W

(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	



### Pin-out Options:

**X="A", or "B", Pin-out Assignment Options** (Customer specific pin-out available)

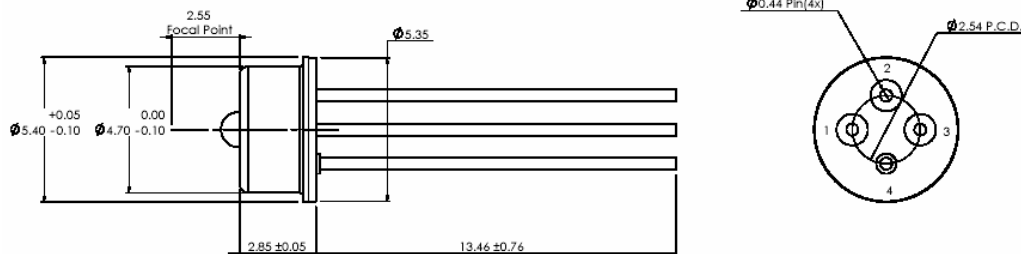
4-pin Pin-out Assignment		
Pin #	"A"	"B"
1	Vcc	Dout-P
2	Dout-N	Vcc
3	Dout-P	Dout-N
4	GND	GND

### Lens Options:

**Y = S for ball lens, Y = F for flat window**

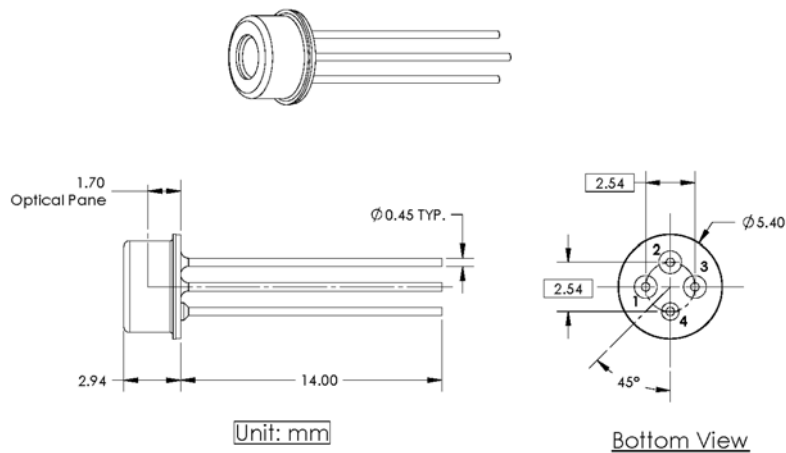
**Outline Drawings** (Customer special order is available):

**Y = S (ball lens)**





**Y = F (Flat Window)**



## Ordering Information:

**AC6210-X-Y**

**X** = Pin-out: "A," or "B," see table. (Custom pin-out available)

**Y** = TO-cap: "S" for ball lens, "F" for flat window

Example: **AC6210-A-S** is an Archcom 4-pin, 1.25 Gbps PIN-TIA TO-can with Type-A pin-out with ball lens.

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