

1310/1550 nm 2.5 Gb/s PIN Data Sheet

Part Number: PI2A-7000

Applications: 1.25 / 2.5 Gb/s

Absolute Maximum Ratings (T = 25°C):

Parameter	Symbol	Unit	Value
Forward Current	I_F	mA	10
Reverse Voltage	V_R	V	15
Reverse Current	I_R	mA	1
Operating Temperature	T_{op}	°C	0 to 90
Storage Temperature	T_{stg}	°C	-40 to +100

Electro-optical Characteristics (T = 25°C, unless noted otherwise):

Parameter	Symbol	Unit	Min.	Typ.	Max.	Test Condition
Aperture	D	μm	78	80	82	
Responsivity	R	A/W	0.80 0.90	0.85 0.95		$\lambda = 1310 \text{ nm}$ $\lambda = 1550 \text{ nm}$
Dark Current	I_D	nA		0.1	1.0	$V_R = 3 \text{ V}$
Breakdown Voltage	V_B	V	20			$I_R = 1 \mu\text{A}$
Capacitance	C	pF		0.5	0.65	$V_R = 3 \text{ V}$ $f = 1 \text{ MHz}$
Rise/Fall Time	τ_r/τ_f	ps		90/90	110/110	$V_R = 2 \text{ V}$ 20-80%
Cut-off Frequency	f_c	GHz	3.0	3.9		$V_R = 2 \text{ V}$ $R_L = 50 \Omega$

Chip configuration:

1. Anode contact on top (epi) surface; cathode on substrate back surface.
2. Die size (typical): 400 μm (Wide) x 400 μm (Long) x 160 μm (Thick); Tolerance: +/- 12.5 μm .
3. Bond pad size: 75 μm round