

◆ **Introduction:**

S-13BGPD19-G is a front-side illuminated GaAs PIN chip with a mesa structure. This product has high responsivity, low dark current, and excellent reliability. It is ideally suited for low cost, high-speed data communication designs.

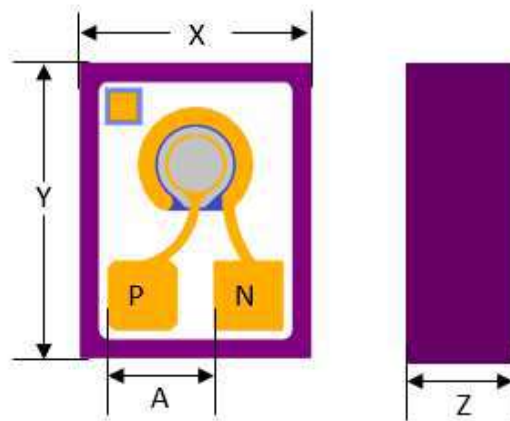
◆ **Key Features:**

- Optical aperture: 60 $\mu$ m
- Low capacitance
- Low dark current
- 100% testing and inspection
- RoHS compliant

◆ **Applications:**

- 14Gbps InfiniBand
- 10GBASE-SR Ethernet
- 8Gbps Fiber Channel

◆ **Physical Parameters:**



Symbol	Die Dimension				Aperture	Pad	
	X	Y	Z	A	D	P	N
Min	225	295	135	110		70*70	70*70
Typ	250	320	150	115	$\Phi$ 60	75*75	75*75
Max	275	345	165	120		80*80	80*80
Unit	$\mu$ m	$\mu$ m	$\mu$ m	$\mu$ m	$\mu$ m	$\mu$ m* $\mu$ m	$\mu$ m* $\mu$ m

◆ **Absolute Maximum Rating:**

Parameter	Symbol	Rating		Unit
		Min	Max	
Operation Voltage	$V_{OP}$		10	V
Forward Current	$I_F$		10	mA
Reverse Current	$I_R$		3	mA
Operating Temperature	$T_{OP}$	-40	85	°C
Storage Temperature	$T_C$	-45	125	°C

◆ **Specifications (T=25°C) :**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
Wavelength Range	$\lambda$		840	850	860	nm
Dark Current	$I_D$	$V_R=2V$		0.1	5	nA
Responsivity	$R_e$	$V_R=2V$ $\lambda=850nm$	0.5	0.6		A/W
Capacitance	C	$V_R=2V$		0.15	0.20	pF
-3dB Bandwidth	BW	$V_R=2V$ $\lambda=850nm$	8			GHz