

◆ **Introduction:**

S-39BGPD19-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.

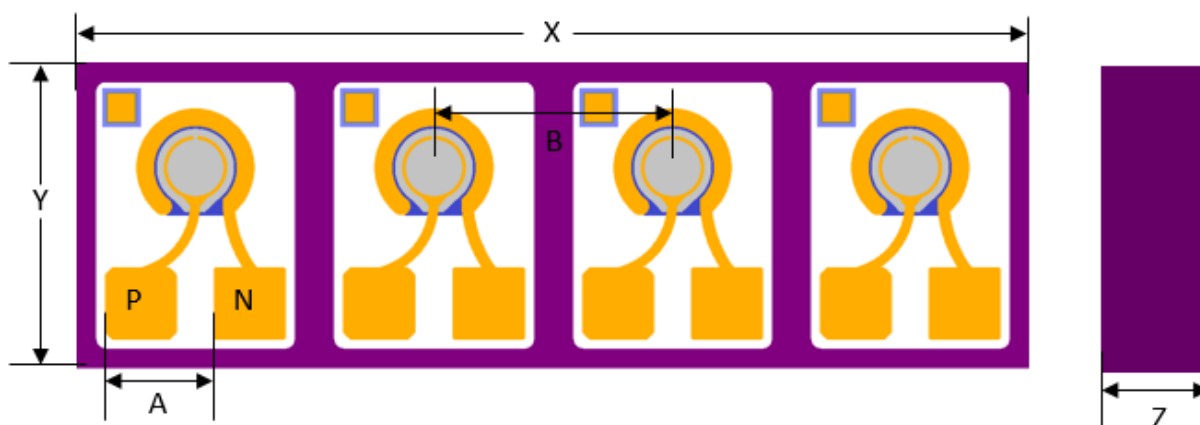
◆ **Key Features:**

- Optical aperture: 60μm
- Low capacitance
- Low dark current
- 100% testing and inspection
- RoHS compliant

◆ **Applications:**

- 40-Gigabit Ethernet
- ROSAs for QSFP+4×10 Gb/s
- Multimode datacom and telecom

◆ **Physical Parameters:**



Symbol	Die Dimension					Aperture D	Pad	
	X	Y	Z	A	B		P	N
Min	975	295	135	110	245		70*70	70*70
Typ	1000	320	150	115	250	Φ60	75*75	75*75
Max	1025	345	165	120	255		80*80	80*80
Unit	μm	μm	μm	μm	μm	μm	μm*μm	μm*μm

◆ 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	λ		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
-53dB Bandwidth	BW	$V_R=2V$ $\lambda=850nm$	8			GHz