

◆ **Introduction:**

S-40BGPD10-G is a front-side illuminated GaAs PIN chip array 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.

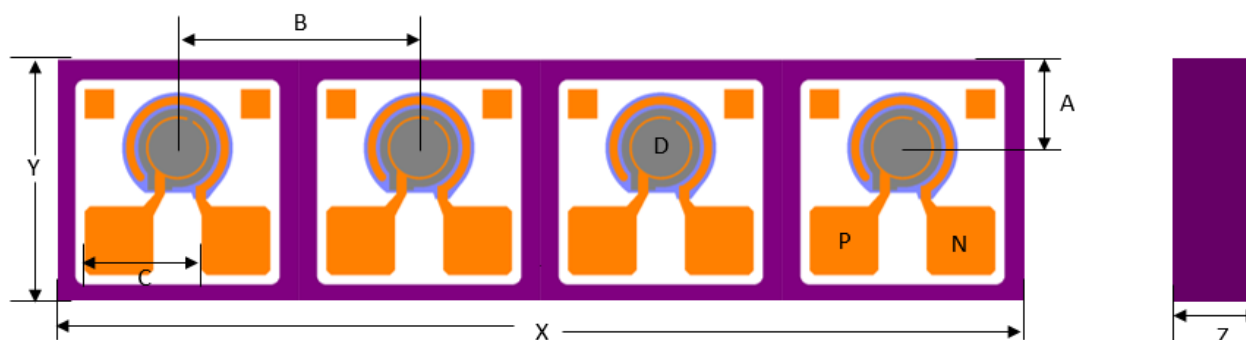
◆ **Key Features:**

- Optical aperture: 60μm
- Low capacitance
- Low dark current
- Top-sided coplanar GS contact pads
- Operating temperature range:-40 to +85°C
- 100% testing and inspection
- RoHS compliant

◆ **Applications:**

- Datacom
- Parallel multimode fiber optical communication

◆ **Physical Parameters:**



| Symbol | Die Dimension |     |     |    |     |     | Aperture | Pad   |       |
|--------|---------------|-----|-----|----|-----|-----|----------|-------|-------|
|        | X             | Y   | Z   | A  | B   | C   |          | P     | N     |
| Min    | 975           | 225 | 135 | 85 | 245 | 115 |          | 65*65 | 65*65 |
| Typ    | 1000          | 250 | 150 | 90 | 250 | 120 | Φ60      | 70*70 | 70*70 |
| Max    | 1025          | 275 | 165 | 95 | 255 | 125 |          | 75*75 | 75*75 |
| Unit   | μm            | 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  | $\lambda$ |                             | 840 | 850  | 860  | nm    |
| Breakdown Voltage | $V_{BR}$  | $I_D=1\mu A$                | 30  |      |      | V     |
| Dark Current      | $I_D$     | $V_R=2V$                    |     | 0.1  | 5    | nA    |
| Responsivity      | $R_e$     | $V_R=2V$<br>$\lambda=850nm$ | 0.5 |      |      | A/W   |
| Capacitance       | C         | $V_R=2V$                    |     | 0.15 | 0.20 | pF    |
| -3dB Bandwidth    | BW        | $V_R=2V$<br>$\lambda=850nm$ | 12  |      |      | GHz   |