

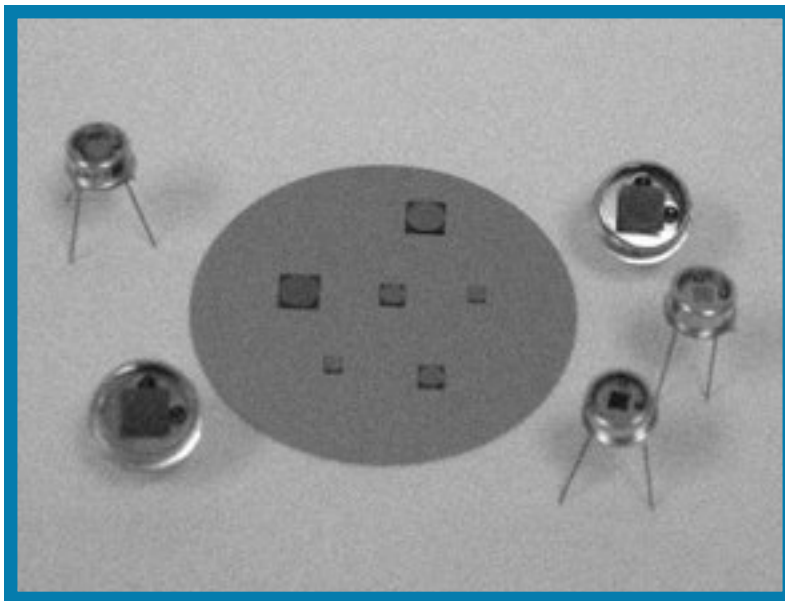
# GPD

GAP 500    GAP 1000  
GAP 2000    GAP 3000  
                  GAP 5000

*OPTOELECTRONICS CORP.*

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## Large Area InGaAs Photodiodes



- **High Responsivity**
- **High Shunt Resistance**
- **Low Capacitance: High Speed**
- **Planar Design for High Reliability**

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GPD Optoelectronics Corp.



### Electrical Characteristics @ 25 °C

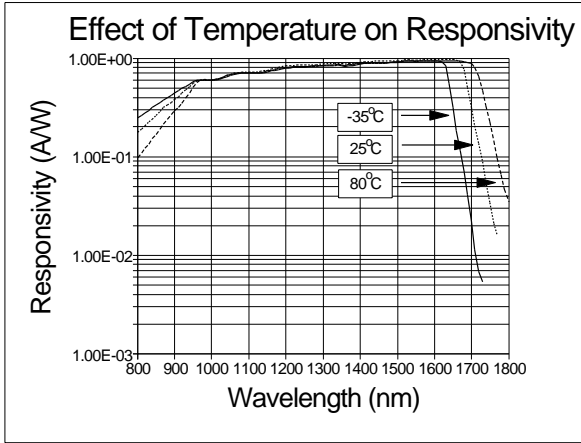
	GAP500	GAP1000	GAP2000	GAP3000	GAP5000
Active Diameter (mm.)	0.5	1.0	2.0	3.0	5.0
Responsivity @ 850nm	0.10 (0.20)	0.10 (0.20)	0.10 (0.20)	0.10 (0.20)	0.10 (0.20)
A/W min. (typ.)1300nm	0.80 (0.90)	0.80 (0.90)	0.80 (0.90)	0.80 (0.90)	0.80 (0.90)
1550nm	0.95	0.95	0.95	0.95	0.95
Dark Current nA max. (typ.)	30 (6)@5V	100 (25)@5V	200 (50)@1V	500 (200)@1V	10μA(5μA)@0.3V
C <sub>i</sub> @ 0V pF max (typ.)	40 (20)	120 (80)	500 (300)	1000 (600)	1500 (1000)
C <sub>i</sub> @ -5V pF max (typ.)	10 (8)	50(30)	150(100)@-3V	300(250)@-2V	n/a
Bandwidth 50 Ω -3dB	200 (5V)	40(5V)	5.3 (0V)	4.0(0V)	1.0(0V)
T <sub>r</sub> R <sub>L</sub> =50Ω ns (typ.)	2.5 (5V)	5.0 (5V)	50 (0V)	100 (0V)	300(0V)
R <sub>s</sub> MΩ min (typ.)	50 (125)	10 (50)	6 (30)	2.0 (8)	25KΩ (50KΩ)
NEP (1550 nm)pW/√Hz min.	.008	.01	.03	.05	0.28
Linear range (±0.2dB) dBm	+10	+10	+8	+8	+8
Case Style (standard)	TO-46 (mod.)	TO-46 (mod.)	TO-5	TO-5	TO-8

### Maximum Ratings

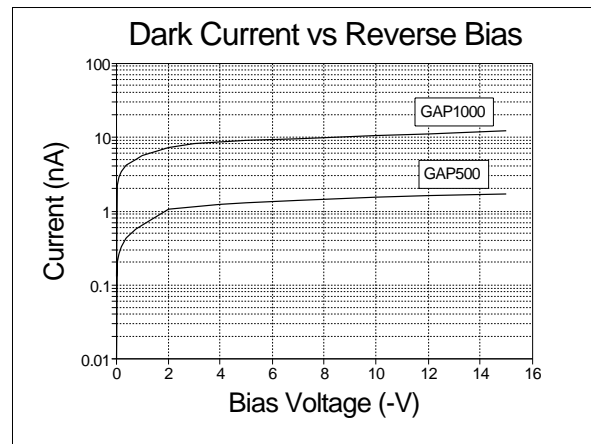
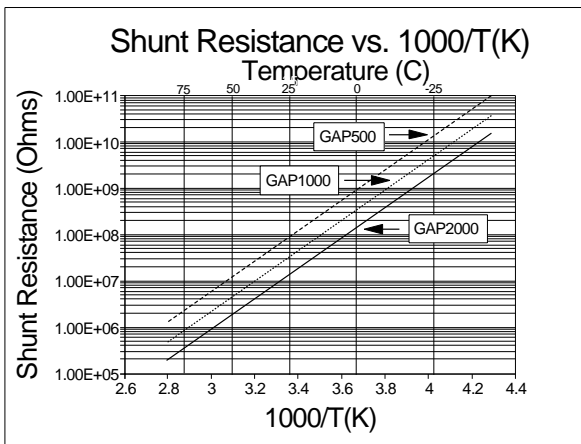
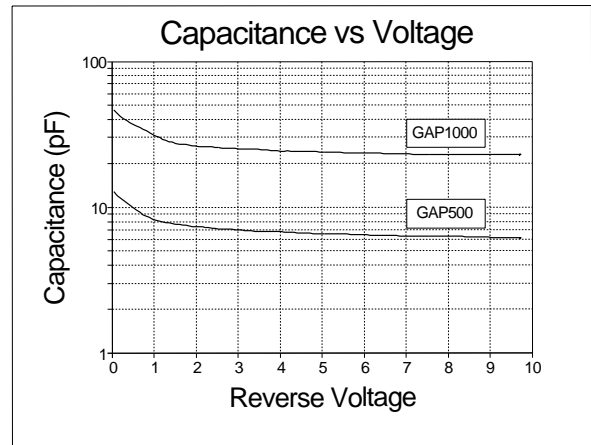
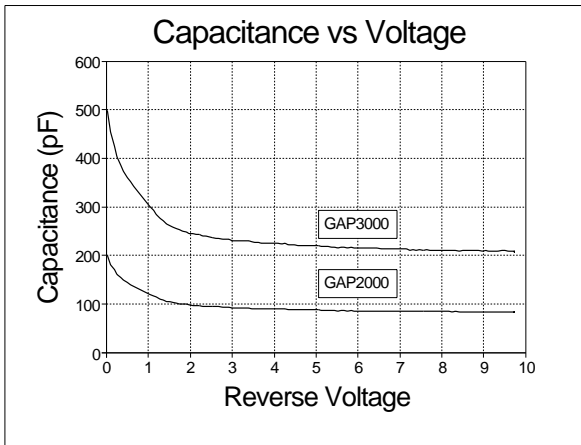
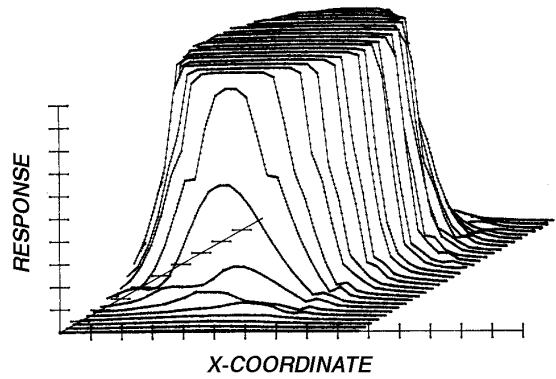
	GAP500	GAP1000	GAP2000	GAP3000	GAP5000
Storage Temperature °C	-40 to 125	-40 to 125	-40 to 125	-40 to 125	-40 to 125
Operating Temperature °C	-40 to 85	-40 to 85	-40 to 85	-40 to 85	-40 to 85
Reverse Voltage V	20	20	3	2	2
Reverse Current mA	10	10	10	10	10
Forward Current mA	10	10	10	10	10
Power Dissipation mW	100	100	50	50	50



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### Plot of Surface Response for GAP 2000 at 1300 nm



Extended short-wavelength response also available.

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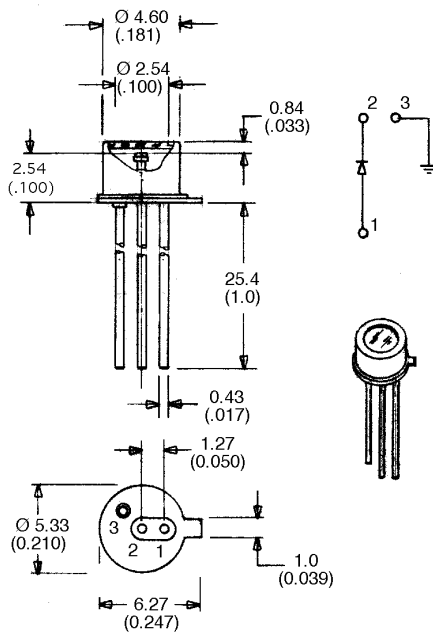


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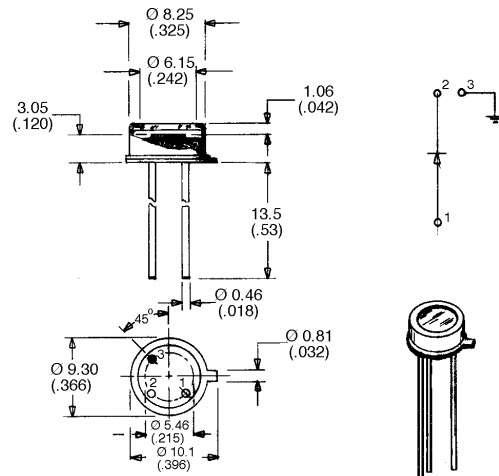
## Package Outlines

Dimensions in mm (in.) Many other packages (including lensed packages) available.

### TO-46 (modified)



### TO-5



GPD Optoelectronics Corp. (formerly Germanium Power Devices) has been a manufacturer of power transistors and diodes since 1973 and a manufacturer of infrared photodetectors for more than ten years. GPD offers Germanium p-n, p-i-n, APD and InGaAs p-i-n high-speed and large area photodetectors for infrared radiation detection and telecommunications applications. GPD can offer you a photodetector that meets your technical and cost requirements.

GPD maintains an inspection system in accordance with MIL-I-45208. Photodiodes are subjected to Bellcore testing requirements (TA-NWT-00093), MIL-STD-883 test methods and/or customer specifications.

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