

## GAP300/VIS, GAP500/VIS, GAP1000/VIS, GAP1500/VIS GAP200/VIS, GAP3000/VIS, GAP5000/VIS

### 0.5 to 1.7 $\mu\text{m}$ Response

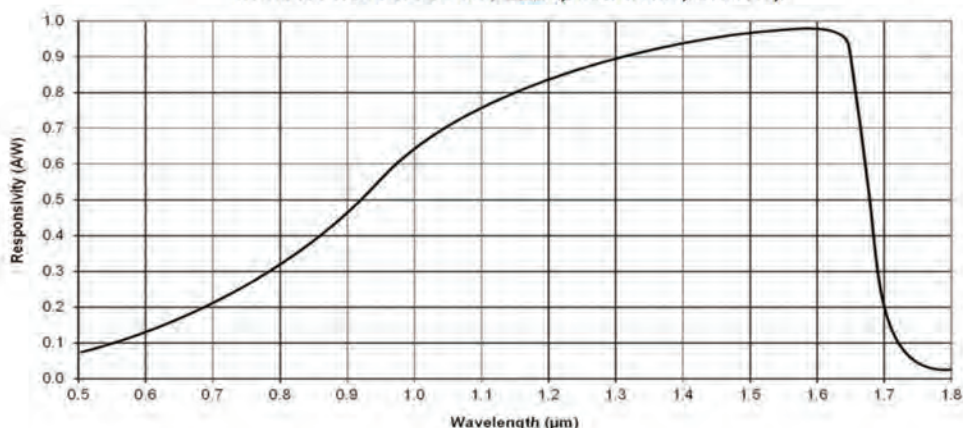
Electrical Characteristics @ 23 °C  $\pm$  2 °C

Parameter	GAP300/VIS	GAP500/VIS	GAP1000/VIS	GAP1500/VIS	GAP2000/VIS	GAP3000/VIS	GAP5000/VIS	Units
Active Diameter	0.3	0.5	1	1.5	2	3	5	mm
Peak Wavelength (typ)	1.6 $\pm$ 0.1	1.6 $\pm$ 0.1	1.6 $\pm$ 0.1	1.6 $\pm$ 0.1	1.6 $\pm$ 0.1	1.6 $\pm$ 0.1	1.6 $\pm$ 0.1	$\mu\text{m}$
Cutoff Wavelength (50%)	1.7 $\pm$ 0.1	1.7 $\pm$ 0.1	1.7 $\pm$ 0.1	1.7 $\pm$ 0.1	1.7 $\pm$ 0.1	1.7 $\pm$ 0.1	1.7 $\pm$ 0.1	$\mu\text{m}$
Responsivity @ 650 nm (typ)	0.14	0.14	0.14	0.14	0.14	0.14	0.14	A/W
@ 850 nm (typ)	0.32	0.32	0.32	0.32	0.32	0.32	0.32	A/W
@ 1300 nm (typ)	0.9	0.9	0.9	0.9	0.9	0.9	0.9	A/W
@ 1550 nm (typ)	0.95	0.95	0.95	0.95	0.95	0.95	0.95	A/W
Shunt Resistance (typ)	250	125	50	40	30	8	1.5	M $\Omega$
Dark Current @ 5 V (typ)	1	6	25	50	50 (1V)	200 (1V)	200 (0.1V)	nA
Capacitance @ 5 V (typ)	4	8	30	75	300 (0V)	600 (0V)	1800 (0V)	pF
Bandwidth w/ 50 $\Omega$ @5 V (typ)	800	400	100	42	10 (0V)	5 (0V)	2 (0V)	MHz
Rise time w/ 50 $\Omega$ @ 5 V (typ)	0.4	1	3	8	33 (0V)	66 (0V)	200 (0V)	ns
NEP @ $\lambda_{\text{PEAK}}$ @ $V_R = 5$ V (typ)	18x10 <sup>-15</sup>	44x10 <sup>-15</sup>	89x10 <sup>-15</sup>	125x10 <sup>-15</sup>	100x10 <sup>-15</sup> (0V)	200x10 <sup>-15</sup> (0V)	460x10 <sup>-15</sup> (0V)	W/Hz <sup>1/2</sup>
Linearity ( $\pm$ 0.2 dB)@ 5 V (typ)	8	8	8	8	6 (0V)	6 (0V)	6 (0V)	dBm
Case Style	TO-46	TO-46	TO-46	TO-46	TO-5	TO-5	TO-8	

### Maximum Ratings

Parameter	GAP300/VIS	GAP500/VIS	GAP1000/VIS	GAP1500/VIS	GAP2000/VIS	GAP3000/VIS	GAP5000/VIS	Units
Storage Temperature	-40 to 125	-40 to 125	-40 to 125	-40 to 125	-40 to 125	-40 to 125	-40 to 125	°C
Operating Temperature	-40 to 85	-40 to 85	-40 to 85	-40 to 85	-40 to 85	-40 to 85	-40 to 85	°C
Reverse Voltage	20	20	20	15	3	2	2	V
Reverse Current	10	10	10	10	10	10	10	mA
Forward Current	10	10	10	10	10	10	10	mA
Power Dissipation	100	100	100	100	50	50	50	mW

InGaAs Photodiode VIS/NIR Spectral Responsivity



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