



## InGaAs THERMOELECTRIC COOLED PHOTODIODES

| Model No.       | Active Diameter (mm) | Operating Temperature (°C) | Peak Wavelength (typ) μm | Cutoff Wavelength (50%) (typ) (μm) | Responsivity @ λ <sub>PK</sub> (min/typ) (A/W) | Shunt Resistance (typ) (MΩ) | Dark Current (max) (nA) | Capacitance (typ) @ 0V (pF) | Bandwidth w/ 50 Ω @ 0 V (MHz) | Rise time w/ 50 Ω @ 0 V (ns) | NEP @ λ <sub>PK</sub> typ (W/Hz <sup>1/2</sup> ) | Linearity (±0.2 dB @ 0 V) (dBm) | Case Style            |
|-----------------|----------------------|----------------------------|--------------------------|------------------------------------|------------------------------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------------|------------------------------|--------------------------------------------------|---------------------------------|-----------------------|
| GAP1000TE1      | 1                    | -10                        | 1.52 ± 0.1               | 1.65 ± 0.1                         | 0.95/1.0                                       | 550                         | 3 @ 5 V                 | 80                          | 40                            | 8.8                          | 5.1E-12                                          | 10                              | TO5/TO37/<br>TO8/TO66 |
| GAP2000TE1      | 2                    |                            |                          |                                    |                                                | 125                         | 20 @ 2 V                | 300                         | 11                            | 32                           | 1.1E-11                                          | 8                               |                       |
| GAP3000TE1      | 3                    |                            |                          |                                    |                                                | 110                         | 50 @ 2 V                | 600                         | 5                             | 70                           | 1.1E-11                                          |                                 |                       |
| GAP5000TE1      | 5                    |                            |                          |                                    |                                                | 25                          | 100 @ 0.1 V             | 1000                        | 3                             | 117                          | 2.4E-11                                          |                                 |                       |
| GAP1000TE1/2.05 | 1                    | -10                        | 1.77 ± 0.1               | 2.02 ± 0.1                         | 0.9/1.0                                        | 5                           | 500 @ 1 V               | 500                         | 6.4                           | 55                           | 5.4E-11                                          | 6                               | TO5/TO37/<br>TO8/TO66 |
| GAP2000TE1/2.05 | 2                    |                            |                          |                                    |                                                | 0.8                         | 1100 @ 1 V              | 1600                        | 2                             | 176                          | 1.3E-10                                          |                                 |                       |
| GAP3000TE1/2.05 | 3                    |                            |                          |                                    |                                                | 0.14                        | 1360 @ 0.5 V            | 4000                        | 0.8                           | 440                          | 3.2E-10                                          |                                 |                       |
| GAP1000TE1/2.2  | 1                    |                            |                          |                                    |                                                | 0.56                        | 1250 @ 1 V              | 1000                        | 3.18                          | 110                          | 1.6E-10                                          |                                 |                       |
| GAP2000TE1/2.2  | 2                    | -10                        | 1.97 ± 0.1               | 2.17 ± 0.1                         | 0.9/1.0                                        | 0.012                       | 5000 @ 1 V              | 4000                        | 0.795                         | 440                          | 1.1E-09                                          | 6                               | TO5/TO37/<br>TO8/TO66 |
| GAP3000TE1/2.2  | 3                    |                            |                          |                                    |                                                | 0.048                       | 6250 @ 0.5 V            | 8000                        | 0.397                         | 881                          | 5.5E-10                                          |                                 |                       |
| GAP1000TE1/2.6  | 1                    | -10                        | 2.17 ± 0.1               | 2.57 ± 0.1                         | 0.9/1.0                                        | 0.04                        | 8000 @ 0.5 V            | 1000                        | 3.2                           | 110                          | 6.0E-10                                          | 6                               | TO5/TO37/<br>TO8/TO66 |
| GAP2000TE1/2.6  | 2                    |                            |                          |                                    |                                                | 0.015                       | 32000 @ 0.5 V           | 4400                        | 0.8                           | 440                          | 9.8E-10                                          |                                 |                       |
| GAP3000TE1/2.6  | 3                    |                            |                          |                                    |                                                | 0.005                       | 50000 @ 0.5 V           | 10000                       | 0.35                          | 1000                         | 1.7E-09                                          |                                 |                       |

| Model No.       | Active Diameter (mm) | Operating Temperature (°C) | Peak Wavelength (typ) μm | Cutoff Wavelength (50%) (typ) (μm) | Responsivity @ λP (min/typ) (A/W) | Shunt Resistance (typ) (MΩ) | Dark Current (max) (nA) | Capacitance (typ) @ 0V (pF) | Bandwidth w/ 50 Ω @ 0 V (MHz) | Rise time w/ 50 Ω @ 0 V (ns) | NEP @ λ <sub>PK</sub> typ (W/Hz <sup>1/2</sup> ) | Linearity (±0.2 dB @ 0 V) (dBm) | Case Style |
|-----------------|----------------------|----------------------------|--------------------------|------------------------------------|-----------------------------------|-----------------------------|-------------------------|-----------------------------|-------------------------------|------------------------------|--------------------------------------------------|---------------------------------|------------|
| GAP1000TE2      | 1                    | -20                        | 1.51 ± 0.1               | 1.64 ± 0.1                         | 0.95/1.0                          | 1000                        | 2 @ 5 V                 | 80                          | 40                            | 8.8                          | 3.7E-12                                          | 10                              | TO8/TO66   |
| GAP2000TE2      | 2                    |                            |                          |                                    |                                   | 500                         | 10 @ 2 V                | 300                         | 11                            | 32                           | 5.3E-12                                          | 8                               |            |
| GAP3000TE2      | 3                    |                            |                          |                                    |                                   | 250                         | 20 @ 2 V                | 600                         | 5                             | 70                           | 7.5E-12                                          |                                 |            |
| GAP5000TE2      | 5                    |                            |                          |                                    |                                   | 50                          | 50 @ 0.1 V              | 1000                        | 3                             | 117                          | 1.7E-11                                          |                                 |            |
| GAP1000TE2/2.05 | 1                    | -20                        | 1.76 ± 0.1               | 2.01 ± 0.1                         | 0.9/1.0                           | 10                          | 200 @ 1 V               | 500                         | 6.4                           | 55                           | 3.7E-11                                          | 6                               | TO8/TO66   |
| GAP2000TE2/2.05 | 2                    |                            |                          |                                    |                                   | 1.5                         | 240 @ 1 V               | 1600                        | 2                             | 176                          | 9.6E-11                                          |                                 |            |
| GAP3000TE2/2.05 | 3                    |                            |                          |                                    |                                   | 0.34                        | 700 @ 0.5 V             | 4000                        | 0.8                           | 440                          | 2.0E-10                                          |                                 |            |
| GAP1000TE2/2.2  | 1                    |                            |                          |                                    |                                   | 0.98                        | 700 @ 1 V               | 1000                        | 3.18                          | 110                          | 1.2E-10                                          |                                 |            |
| GAP2000TE2/2.2  | 2                    | -20                        | 1.96 ± 0.1               | 2.16 ± 0.1                         | 0.9/1.0                           | 0.168                       | 2900 @ 1 V              | 4000                        | 0.795                         | 440                          | 2.9E-10                                          | 6                               | TO8/TO66   |
| GAP3000TE2/2.2  | 3                    |                            |                          |                                    |                                   | 0.084                       | 3600 @ 0.5 V            | 8000                        | 0.397                         | 881                          | 4.1E-10                                          |                                 |            |
| GAP1000TE2/2.6  | 1                    | -20                        | 2.16 ± 0.1               | 2.56 ± 0.1                         | 0.9/1.1                           | 0.088                       | 3600 @ 0.5 V            | 1000                        | 3.2                           | 110                          | 4.0E-10                                          | 6                               | TO8/TO66   |
| GAP2000TE2/2.6  | 2                    |                            |                          |                                    |                                   | 0.033                       | 14500 @ 0.5 V           | 4400                        | 0.8                           | 440                          | 6.5E-10                                          |                                 |            |
| GAP3000TE2/2.6  | 3                    |                            |                          |                                    |                                   | 0.011                       | 22700 @ 0.5 V           | 10000                       | 0.35                          | 1000                         | 1.1E-09                                          |                                 |            |