



IBSG Infra Red Photodiodes



IBSG Co., Ltd manufactures and tests a complete range of optoelectronic devices. Epitaxy process units include LPE and MOCVD plants. The manufacturing process provides economic efficiency and reliability, combined with the most up-to-date techniques like thin-layer and quantum-well creation.

No other company in the world manufactures a complete family of LED's in the 1600 to 3000nm spectral range and only very few companies manufacture a family of semiconductor lasers of 1600 to 4600nm range. IBSG has been successful in the rapidly changing mid IR photodiodes market. They have been at the forefront in developing higher power and novel structure diodes, extending LED lifetime and stability, designing new thermo-cooled LED's, creating novel position-sensitive photodiodes, and interfacing lasers, LED's and photodiodes with optical fibre.





Standard IBSG Photodiodes

IBSG photodiodes are available in the following packages: TO-18, TO-18 with parabolic reflector, TO-18 with parabolic reflector and window, TO-5 with thermocooler and thermoresistor, TO-5 with parabolic reflector, thermocooler and thermoresistor.

PD24-02 – photodiode with cut-off wavelength (at 10%) 2.4 μ m and 0.2mm sensitive area.

PD24-05 – photodiode with cut-off wavelength (at 10%) 2.4 μ m and 0.5mm sensitive area.

PD24-10 – photodiode with cut-off wavelength (at 10%) 2.4 μ m and 1.0mm sensitive area.

PD24-20 – photodiode with cut-off wavelength (at 10%) 2.4 μ m and 2.0mm sensitive area.

PD36-02 – photodiode with cut-off wavelength (at 10%) 3.6 μ m and 0.2mm sensitive area.

PD36-03 – photodiode with cut-off wavelength (at 10%) 3.6 μ m and 0.3mm sensitive area.

PD36-05 – photodiode with cut-off wavelength (at 10%) 3.6 μ m and 0.5mm sensitive area.

Model	Sensitive Area Dia.	Package	Cut-off wavelength	Peak Wavelength	Responsivity
PD24-02	0.2mm	TO-18 TO-18+PR TO-18+PRW	2.4 μ m	2.0 to 2.2 μ m	0.9 to 1.1A/W
PD24-05	0.5mm				
PD24-10	1.0mm				
PD24-20	2.0mm				
PD36-02	0.2mm	TO-5 TO-5+PR	3.6 μ m	2.8 to 3.4 μ m	1.0 to 1.2A/W
PD36-03	0.3mm				
PD36-05	0.5mm				

Note:

IBSG photodiodes are based on heterostructures with a wide band-gap window. PD24 is based on GaInAsSb/GaAlAsSb structure, whilst PD36 is based on InAs/InAsSbP structure. Fast response time make them suitable for detection of high-frequency modulated IR laser radiation. These photodiodes can operate in photovoltaic regime or at reverse bias.