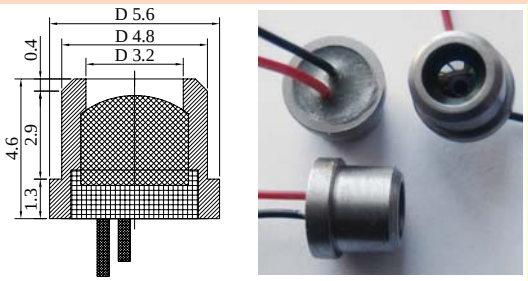
Optically Immersed 4.2 μm Photodiode — PD42Su, PD42Sr

Peak wavelength	λ_{max}	μm	4.0÷4.2	
Spectral range	$\lambda_{0.1}$	μm	PD42Su/Sr WB	PD42Su/Sr NB
			2.75÷4.6	3.6÷4.6
Current sensitivity	S_I	A/W	≥0.8	
Shunt Resistance	R_0	Ohm	≥30	
Detectivity	$D^*_{\lambda_{max}}$	$cmHz^{1/2}W^{-1}$	$\geq 1\times10^{10}$	
Switching time	τ	ns	≤20	

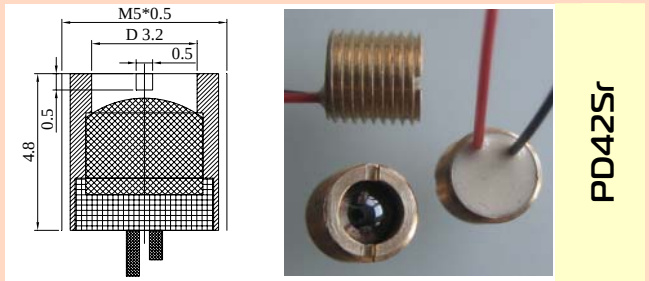
Model	Sensitive area, mm	Lens material	Field of view, deg.	Optical axis deviation, deg.	Operation conditions, °C	Lifetime, hrs	Polarity
PD42Su/Sr	∅ 3.2	Si	~15	≤5	-25÷+60*	>80 000	Red wire or long wire (and red point on house) – positive

* -25÷+100°C on request

Product view



PD42Su



PD42Sr

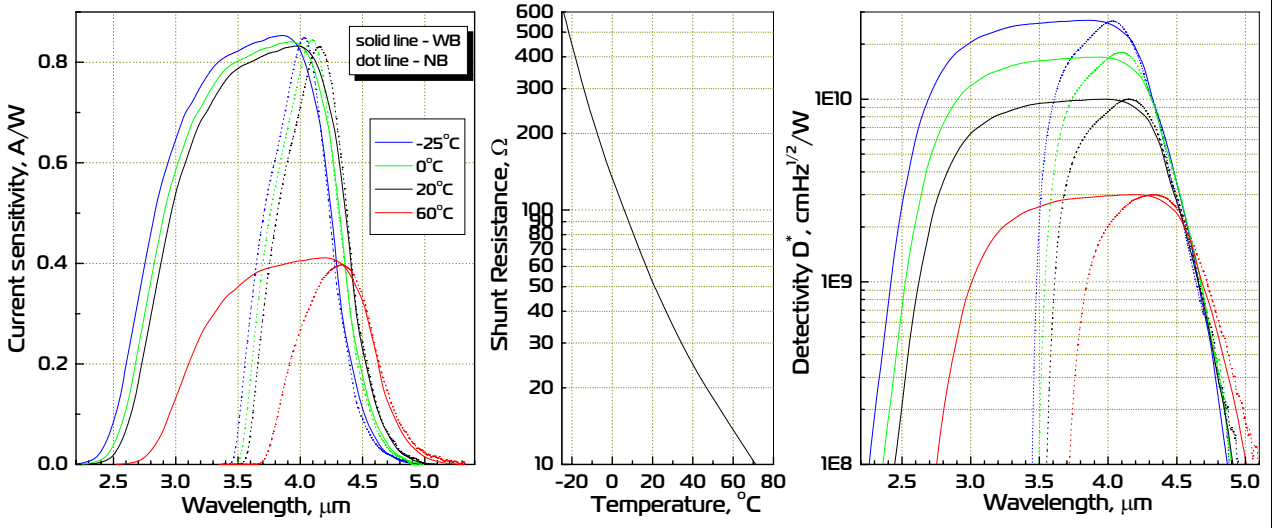
Features

Growth of narrow gap semiconductor alloys onto n^+-InAs substrate; Back side illuminated Flip-chip design of PDs; Optical coupling through the use of chalcogenide glasses and Si lenses with antireflection coating

Ambient and high temperature operation; No bias required; Short time constant; High value of shunt resistance; Operation from DC to VHF; Highest long term stability

Photodiode could be equipped with preamplifier that is designed for conversion of PD photocurrent into a convenient output voltage and is adjusted for the particular PD taking into account the Ro value and frequency range. Other packages are available upon request. Angle of view is small and thus we recommend adjusting PD position regarding to the emission system before final evaluation/use of the devices.

Spectral response and shunt resistance vs. temperature



Product specifications are subject to change without prior notice due to improvements or other reasons. Updated 23.11.12

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