

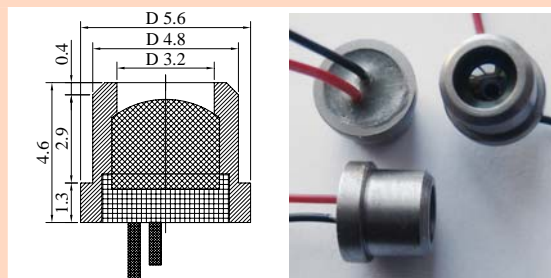
# Optically Immersed 2.9 μm Photodiode

# PD29Su, PD29Sr

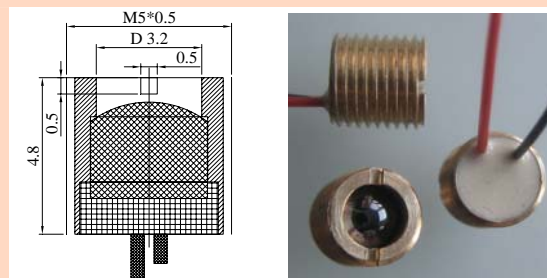
Peak wavelength	$\lambda_{\max}$	μm	2.9
Current sensitivity	$S_I$	A/W	≥0.6
Shunt Resistance	$R_0$	Ohm	≥1000
Detectivity	$D^*_{\lambda_{\max}}$	$\text{cmHz}^{1/2}\text{W}^{-1}$	≥4×10 <sup>10</sup>
Voltage sensitivity	$S_U$	V/W	≥600
Switching time	$\tau$	ns	≤20

Model	Sensitive area, mm	Lens material	Field of view, deg.	Optical axis deviation, deg.	Operation conditions, °C	Lifetime, hrs	Polarity
PD29Su/Sr	Ø 3.2	Si	~15	≤5	-25÷+60	>80 000	Red wire (red point on house) – positive, Black or/and short wire– negative

Product view



PD29Su



PD29Sr

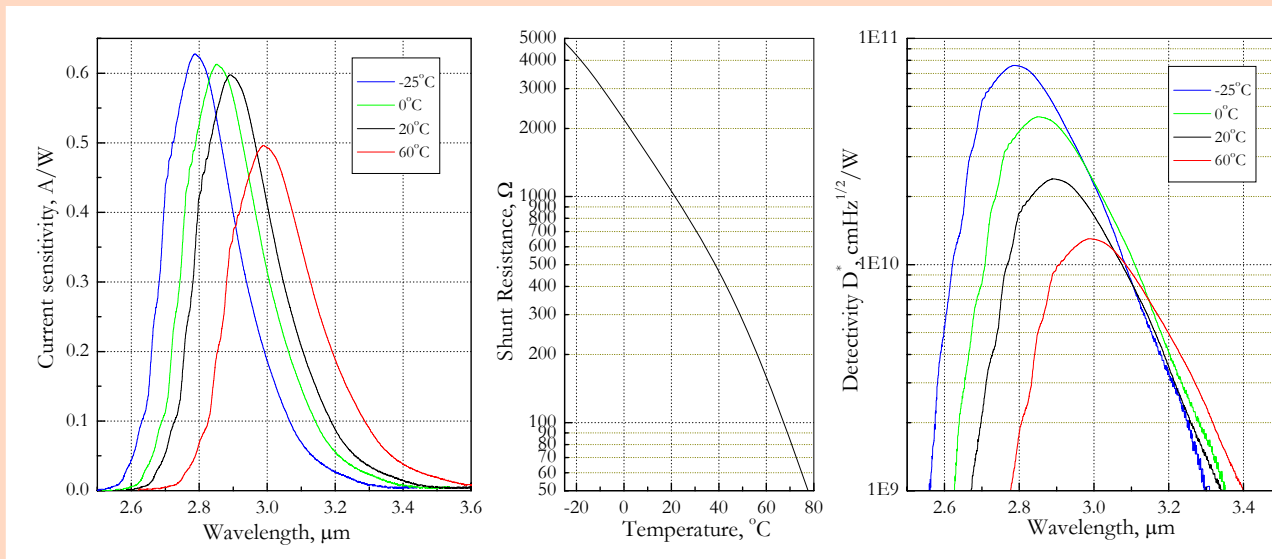
Features

Growth of narrow gap semiconductor alloys onto n<sup>+</sup>-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 R<sub>0</sub> 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 3.11.11



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