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EPD-1300-5-0.3

- Selective Photodiode
- Sensitivity Range: 800-1750 nm
- Active Area: Ø 300 µm
- Package: 5 mm clear epoxy

Description

EPD-1300-5-0.3 is a selective photodiode based on InGaAs with an active area of Ø300 µm, mounted on a lead frame and encapsulated in a standard clear 5 mm epoxy package.
The PD is specified with a sensitivity range of 800 – 1750 nm and a peak at 1600 nm.

Maximum Ratings

Parameter	Symbol	Values Min.	Values Max.	Unit
Temperature Coefficient of I_{PH}	$T_C(I_{PH})$		7.4	%/K
Operating Temperature	T_{CASE}	- 40	+ 85	°C
Storage Temperature	T_{STG}	- 40	+ 100	°C

Optical and Electrical Characteristics (T_{CASE}=25°C)

Parameter	Symbol	Conditions	Values Min.	Values Typ.	Values Max.	Unit
Sensitive Area Diameter	D			300		µm
Max. Sensitivity Wavelength (>90%)	λ_P	V_R=0V	800		1750	nm
Peak Sensitivity Wavelength	λ_{Peak}	V_R=0V		1600		nm
Spectral Bandwidth at 50%	$\Delta\lambda_{0.5}$	V_R=0V		680		nm
Breakdown Voltage *	V_R	I_R=10µA	5			V
Dark Current	I_D	V_R=5V		15	40	pA
Shunt Resistance	R_{TH}	V_R=10mV	3	5		GΩ
Responsivity at 1300 nm	S_λ	V_R=0V		0.9		A/W
Noise Equivalent Power	NEP	*λ=1300nm*		$4x10^{-15}$		$W/\sqrt{Hz}$
Specific Detectivity	D*	*λ=1300nm*		$4.5x10^{12}$		$cm \cdot \sqrt{Hz} \cdot W^{-1}$
Junction Capacitance	C_J	V_R=0V		11		pF
Photo Current at 1300 nm *	i_{PH}	V_R=0V E_E=1mW/cm²		0.95		µA

** for information only*

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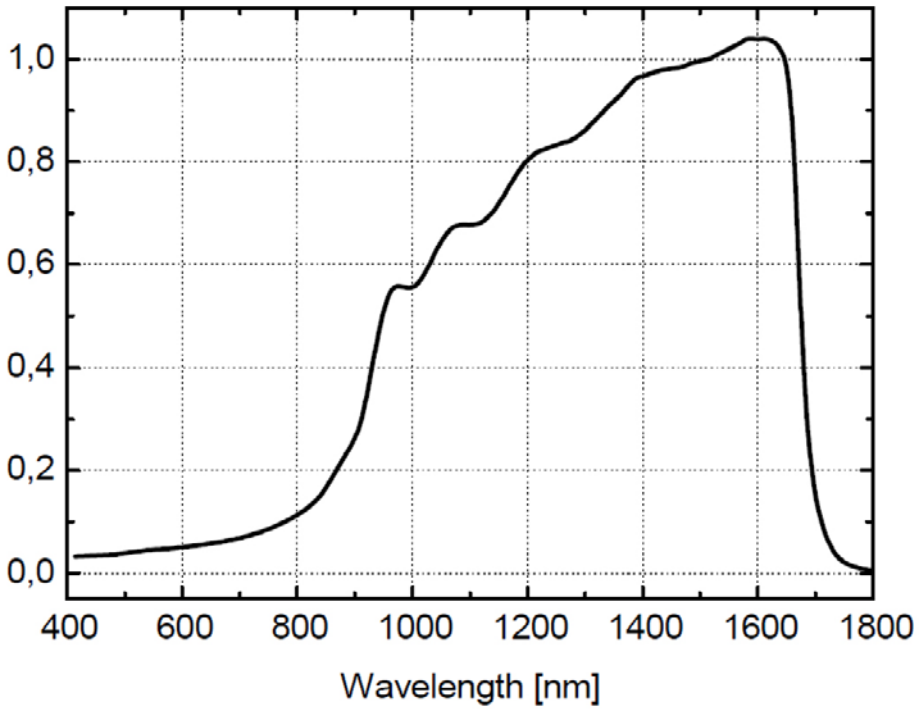
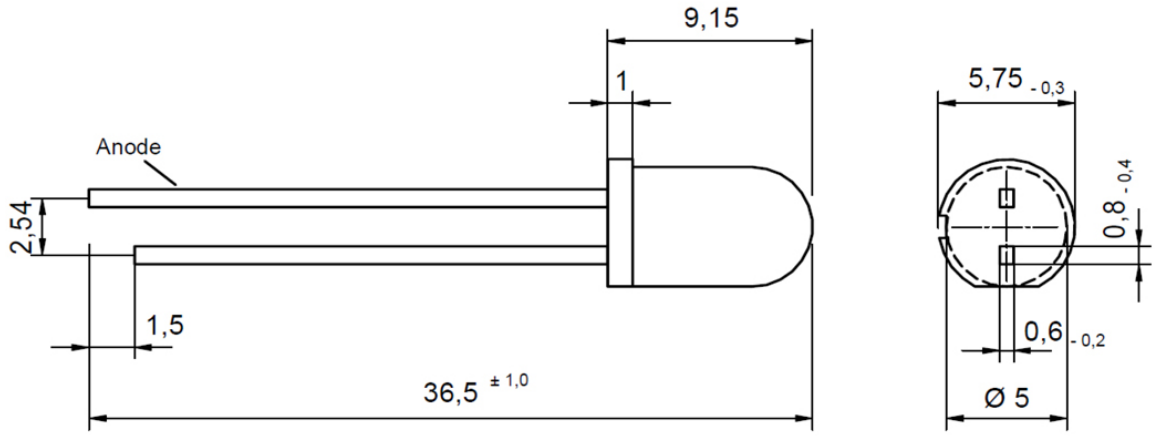
Preformance Characteristics

Spectral Response (typical)



Outline Dimensions

EPD-1300-5-0.3 **5 mm epoxy**



All Dimensions in mm

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Precautions

Operation:

- Check your connection circuits before turning on the PD.
- Mind the PD polarity: PD anode is marked by long pin.
- DO NOT connect the PD to the multimeter.

Soldering:

- Do avoid overheating of the PD
- Do avoid electrostatic discharge (ESD)
- Do avoid mechanical stress, shock, and vibration
- Do only use non-corrosive flux
- Do not apply current to the PD until it has cooled down to room temperature after soldering

Static Electricity:

PDs are **sensitive to electrostatic discharge (ESD)**. Precautions against ESD must be taken when handling or operating these PDs. Surge voltage or electrostatic discharge can result in complete failure of the device.