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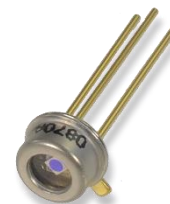
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AUSTRIA



## LAPD-1-06-17-TO46

- InGaAs PIN Photodiode
- Ø 1 mm active area
- 0.6 – 1.7 µm spectral range
- Low Dark Current
- High Responsivity



### Description

**LAPD-1-06-17-TO463** is an InGaAs PIN photodiode with an active area diameter of **1 mm**, offering a very low dark current and excellent spectral sensitivity range from 0.6 to 1.7 µm. **LAPD-1-06-17-TO463** comes in a **hermetically sealed TO-46** Package with flat glass window. It is widely used for spectral analysis, power monitoring, SWIR camera, light detection, and LIDAR applications.

### Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Reverse Voltage	$V_R$	10	V
Reverse Current	$I_R$	2	mA
Forward Current	$I_F$	5	mA
Operating Temperature	$T_{OPR}$	- 40    + 85	°C
Storage Temperature	$T_{STG}$	- 40    + 85	°C
Soldering Temperature (max. 5s)	$T_{SOL}$	max. 260	°C



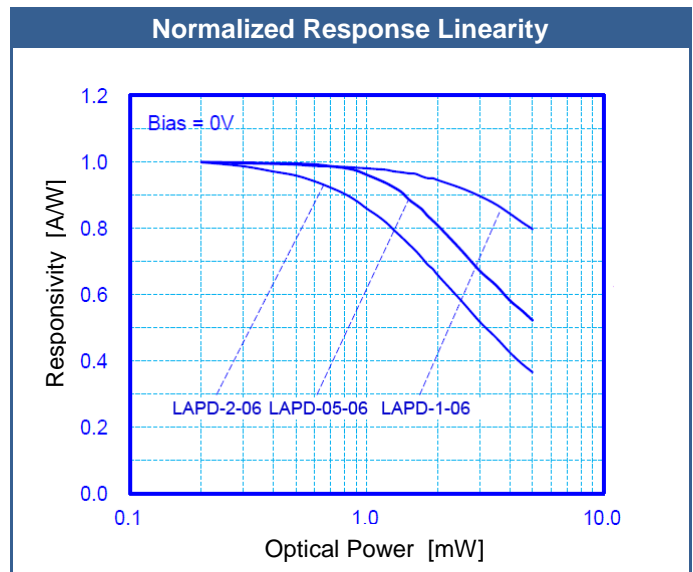
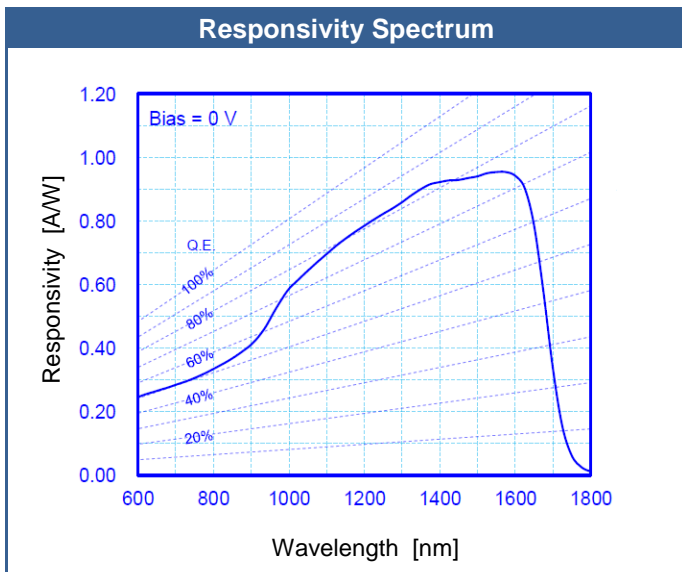
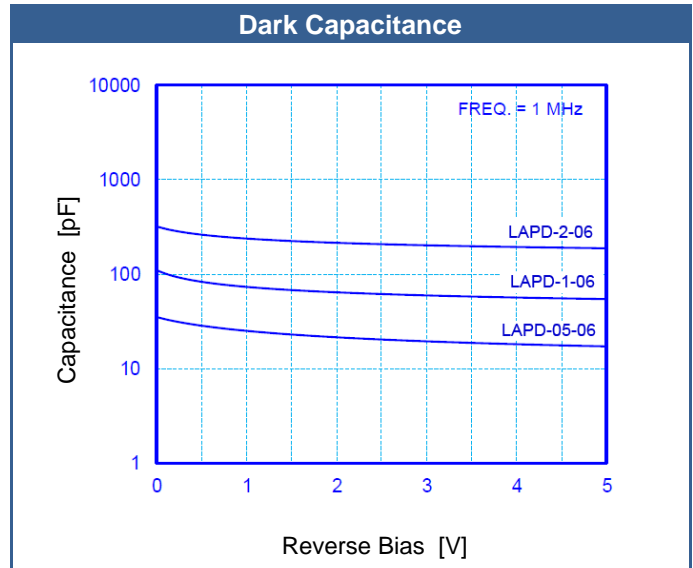
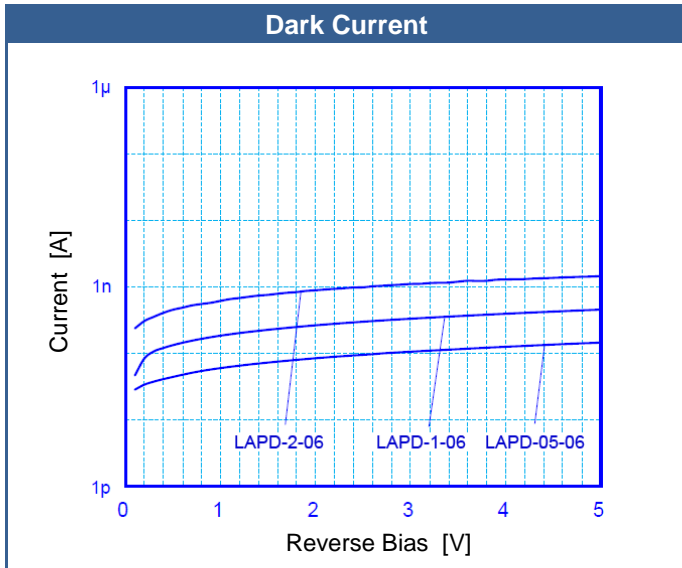
### Electro-Optical Characteristics ( $T_{CASE} = 23^\circ\text{C}$ )

Parameter	Symbol	Condition	min.	typ.	max.	Unit
Spectral Range	$\lambda$		0.6		1.7	µm
Aperture Diameter	$\emptyset$			950		µm
Peak Sensitivity	$\lambda_P$	$V_R=0\text{ V}$		1.55		µm
Dark Current	$I_D$	$V_R=5\text{ V}$		2	5	nA
Shunt Resistance	$R_{SH}$	$V_R=10\text{ mV}$	20	80		MΩ
Capacitance	$C_J$	@ 1 MHz, $V_R=0\text{ V}$		120	160	pF
		@ 1 MHz, $V_R=5\text{ V}$		60	80	pF
3dB Bandwidth		$V_R=5\text{ V}$ (50Ω)	30	40		MHz
Responsivity	$S_\lambda$	0.65 µm, 0 V	0.20	0.25		A/W
		0.85 µm, 0 V	0.35	0.40		A/W
		1.30 µm, 0 V	0.80	0.85		A/W
		1.55 µm, 0 V	0.85	0.90		A/W
Saturation Power*	$P_S$	1.55 µm, 0 V, -0.2 dB	0.5	2		mW
Noise Equivalent Power	$NEP$	1.55 µm, 0 V, 1 KHz		2.5	5.0	$10^{-14}\text{ W}/\sqrt{\text{Hz}}$

\* measured at the aperture with an  $1/e^2$  beam diameter of 250 µm



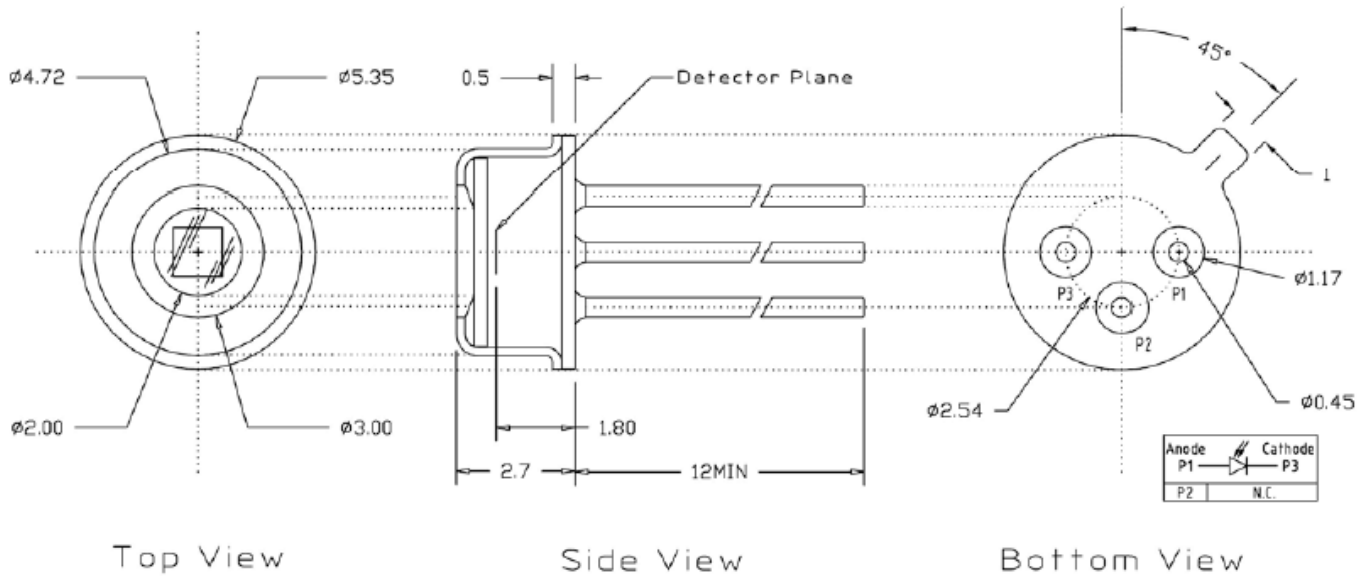
## Performance Characteristics ( $T_{CASE} = 23^{\circ}C$ )





## Outline Dimensions

TO-46



All dimensions in mm

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The above specifications are for reference purpose only and subjected to change without prior notice