



ROITHNER LASERTECHNIK GmbH

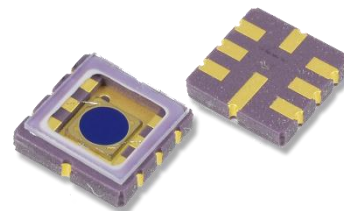
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LAPD-1-06-17-LCC

- 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-LCC 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-LCC** comes in a hermetically sealed **6CLCC 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 ($T_{CASE} = 23^\circ\text{C}$)

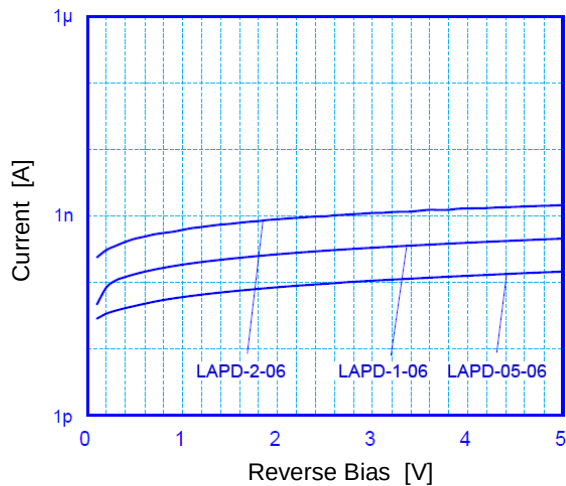
Parameter	Symbol	Condition	min.	typ.	max.	Unit
Spectral Range	λ		0.6		1.7	µm
Aperture Diameter	$\varnothing$			950		µm
Peak Sensitivity	λ_P	$V_R=0\text{ V}$		1.55		µm
Dark Current	I_D	$V_R=5\text{ V}$		2	5	nA
Shunt Resistance	R_{SH}	$V_R=10\text{ mV}$	20	80		MΩ
Capacitance	C_J	@ 1 MHz, $V_R=0\text{ V}$		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_λ	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

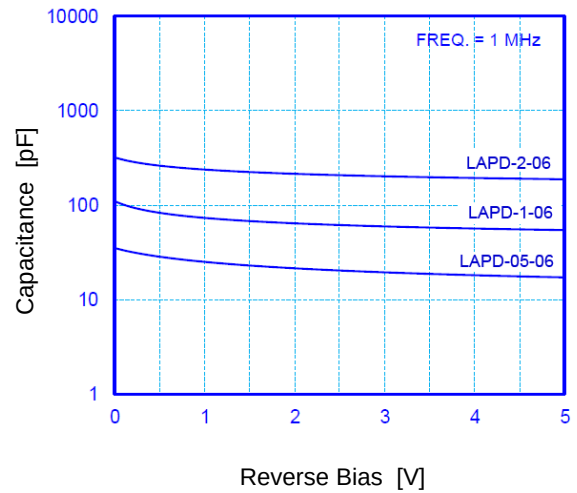


Performance Characteristics ($T_{CASE} = 23^{\circ}C$)

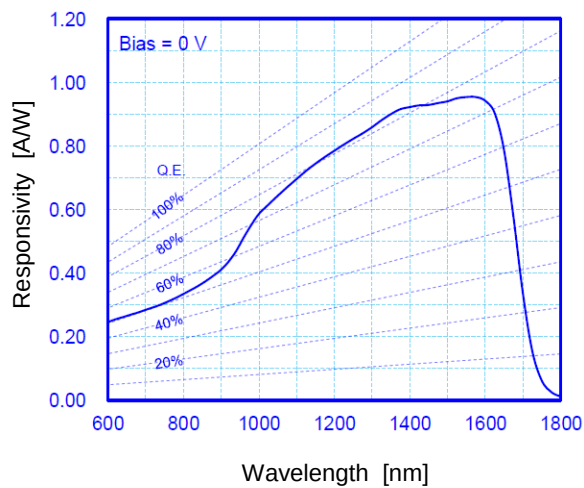
Dark Current



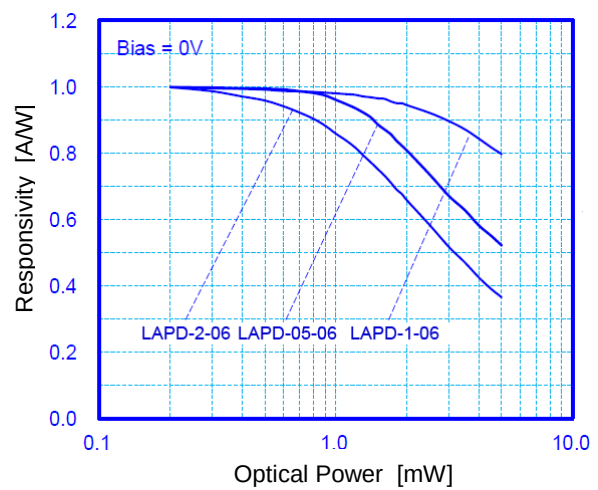
Dark Capacitance



Responsivity Spectrum



Normalized Response Linearity





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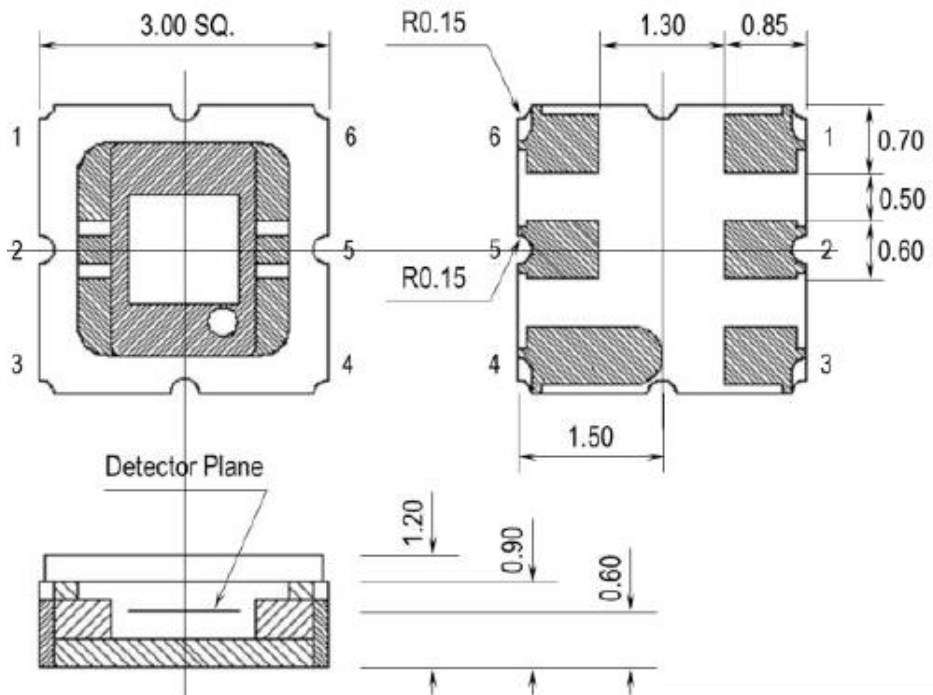
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Outline Dimensions

6CLCC



1,3,4,6	CATHODE
2,5	ANODE

All dimensions in mm

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