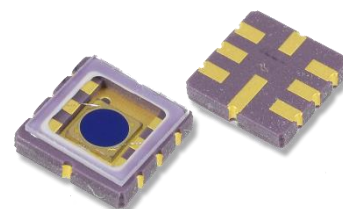




## LAPD-1-09-17-LCC

- InGaAs PIN Photodiode
- Ø 1 mm active area
- 0.9 – 1.7 µm spectral range
- Low Dark Current
- High Responsivity



### Description

**LAPD-1-09-17-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 0.9 to 1.7 µm. **LAPD-1-09-17-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	$V_R$	20	V
Reverse Current	$I_R$	10	mA
Forward Current	$I_F$	10	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 ( $T_{CASE} = 23^\circ\text{C}$ )

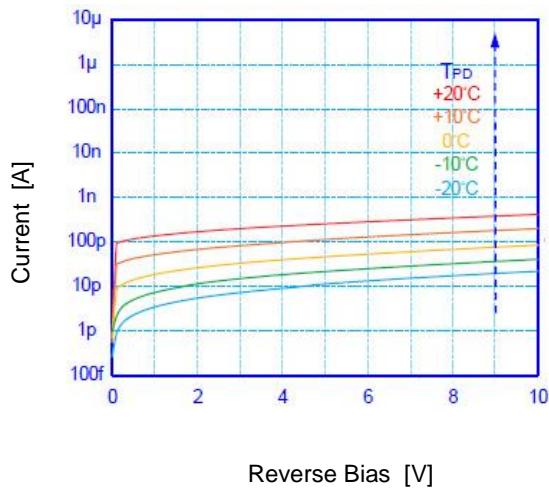
Parameter	Symbol	Condition	min.	typ.	max.	Unit
Spectral Range	$\lambda$		0.9		1.7	µm
Aperture Diameter	$\varnothing$			950		µm
Peak Sensitivity	$\lambda_P$	$V_R=0\text{ V}$		1.55		µm
Dark Current	$I_D$	$V_R=5\text{ V}$		1	2	nA
Shunt Resistance	$R_{SH}$	$V_R=10\text{ mV}$	50	200		MΩ
Capacitance	$C_J$	@ 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	$S_\lambda$	0.85 µm, 0 V	0.10	0.15		A/W
		1.3 µm, 0 V	0.80	0.90		A/W
		1.55 µm, 0 V	0.85	0.95		A/W
Saturation Power*	$P_S$	1.55 µm, 0 V, -0.2 dB	5	7		mW
Noise Equivalent Power	$NEP$	1.55 µm, 0 V, 1 KHz		1.2	2.4	$10^{-14}\text{ W}/\sqrt{\text{Hz}}$

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

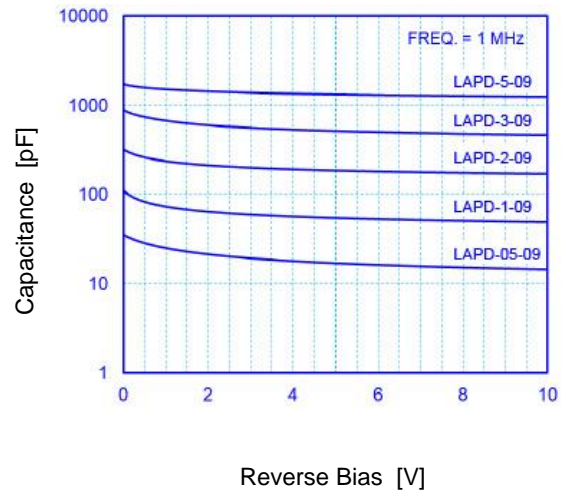


## Performance Characteristics ( $T_{CASE} = 23^{\circ}C$ )

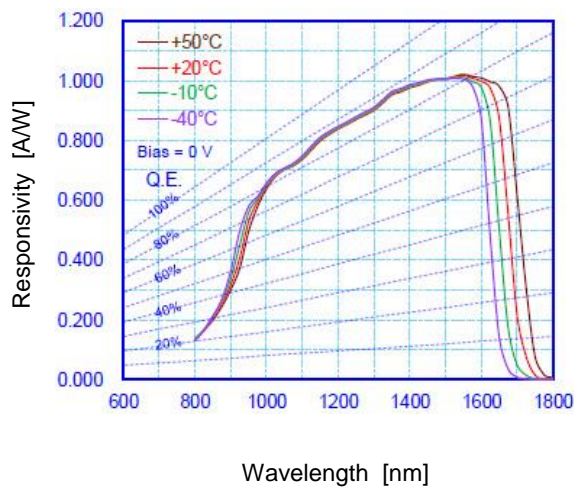
### Dark Current



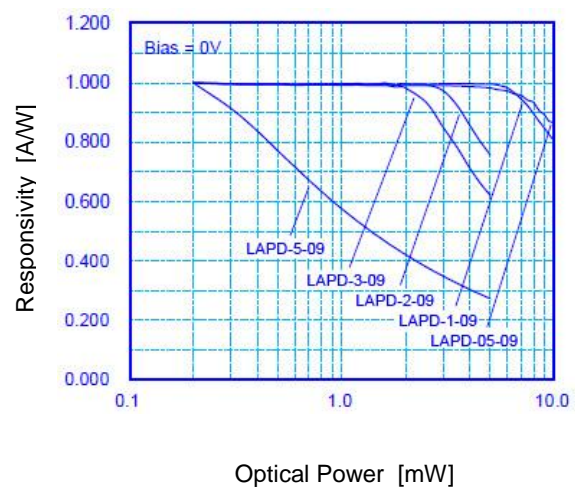
### Dark Capacitance



### Responsivity Spectrum



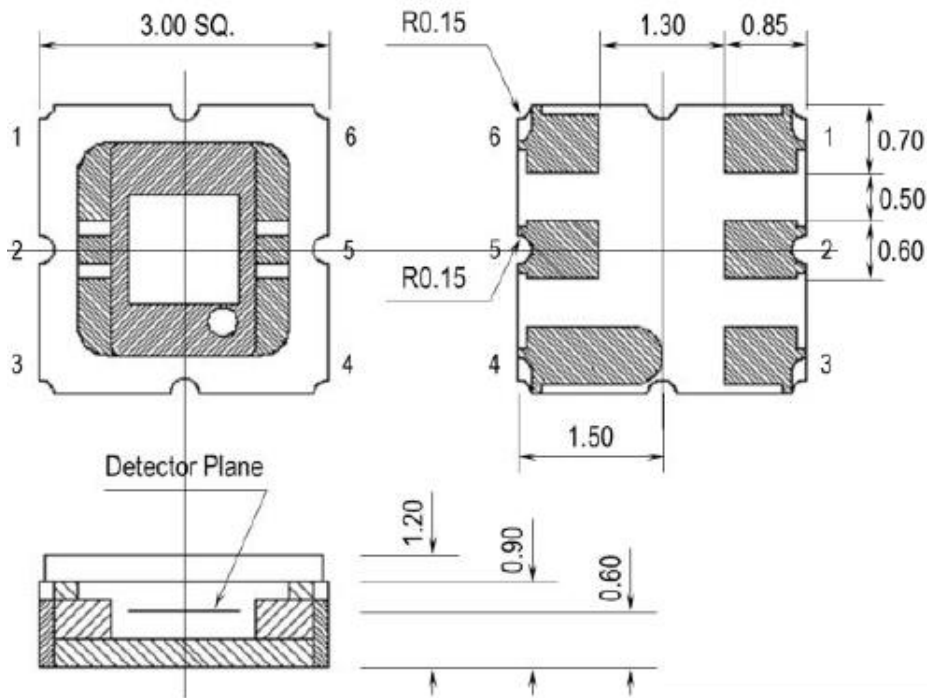
### Normalized Response Linearity





## 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