PD5050 Series LED

Lead-Free Parts

PRELIMINARY

This is just a preliminary design
to let you evaluate the concept

LG-PD5050-D120

DATA SHEET

DOC.NO	:	QW0905- LG-PD5050-D120
REV.	:	A
DATE	:	24 – Aug.– 2021

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High sensitive PD detector

PD5050 series

LG-PD5050-D120

Features :

- Dimension:5.0mm x 5.0mm x 1.1mm with silicone molding encapsulant
- Fast response time & High photo sensitivity
- Small junction capacitance
- Package in 12.0mm carrier tape on 7" diameter reel
- Compatible with automatic placement equipment
- Compatible with reflow process

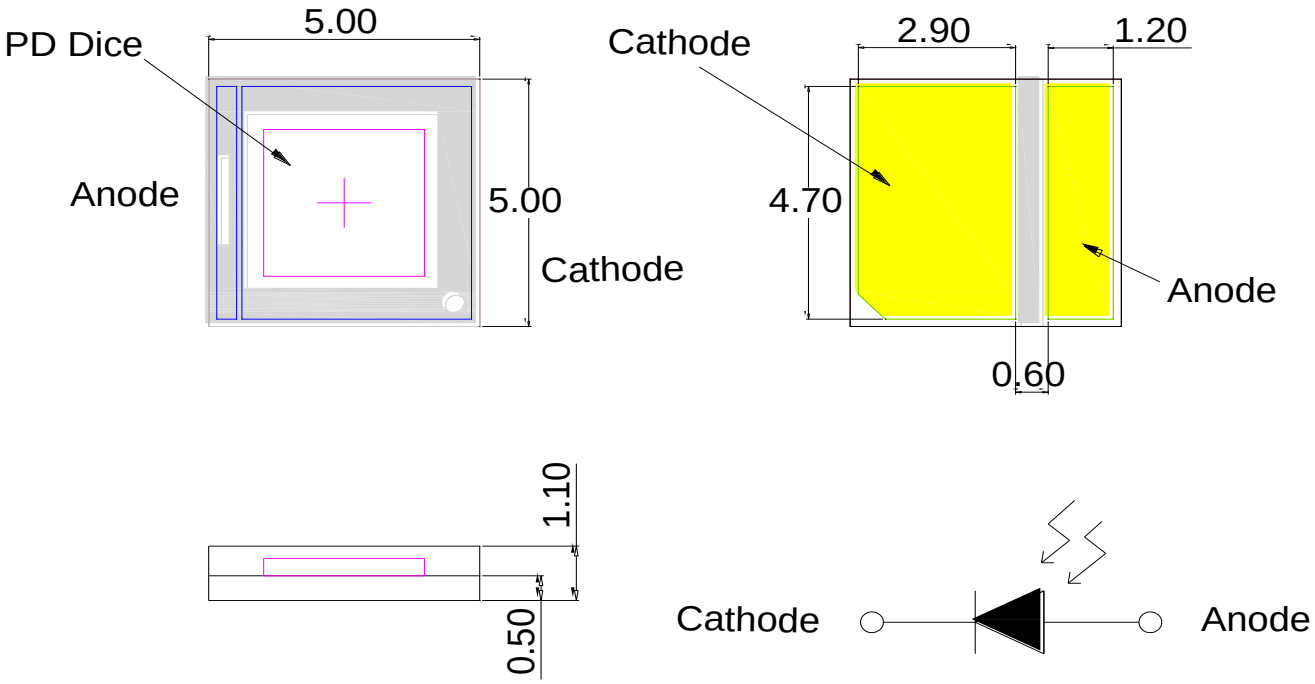
Typical Applications :

- Pulse Oximetry
- Position sensor
- Smoke detector
- Automatic Control System
- High speed photo detector

Device selection guide :

Part No	Material	Lens
LG-PD5050-D120	Silicon	Water clear

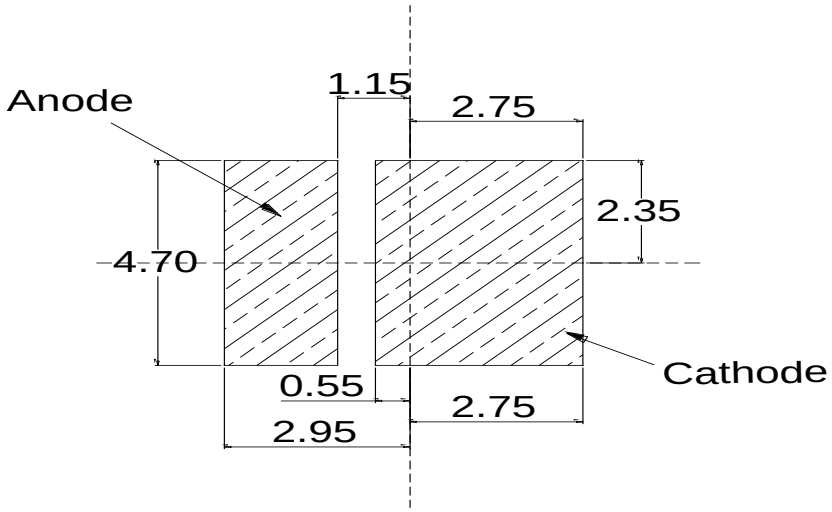
Package Dimensions



Note : 1.All dimension are in millimeter tolerance is ±0.1mm unless otherwise noted.

2.Specifications are subject to change without notice.

Recommended Soldering Pad Dimensions



Note:1.The tolerance unless mentioned is ±0.1mm,unit=mm.

Product Nomenclature

LG – PD 5050 – D120

A B C D

A	B	C	D
Title	Function type	Package Model	Dice dimension
LG: Ligitek	PD: Photo Diode	5050:5.0mm x 5.0mm x 1.1mm	D120:120mil square

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Ratings	UNIT
Reverse voltage	Vr	33	V
Operating Temperature	T_{opr}	-25 ~ +85	°C
Storage Temperature	T_{stg}	-40 ~ +100	°C
Soldering Temperature	Tsol	260	°C

Electrical / Optical Characteristics TA=25℃

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Sensitivity Wavelength Range	λ	----	300	----	1100	nm
Peak sensitivity wavelength	λ p	----	----	940	----	nm
Reverse dark Current	I_D	VR=10V Ee=0mW/cm^2	----	----	30	nA
Short-Circuit Current	Isc	Ee=1mw/cm^2 λ_P=940nm	----	80	----	uA
Reverse light Current	I_L	Vr=5V Ee=1mw/cm^2 λ_P=940nm	----	80	----	uA

Typical Electro-Optical Characteristics Curve