

Spec. No.: HL4055-2D090T-CA2X

Issued Date: 2021-01-19

# SPECIFICATION

Model Name: Detector

Model NO. : PD-090

New Model: No.:HL4055-2D090T

Customer No.:

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Approved by: Judy

Customer approved by: \_\_\_\_\_



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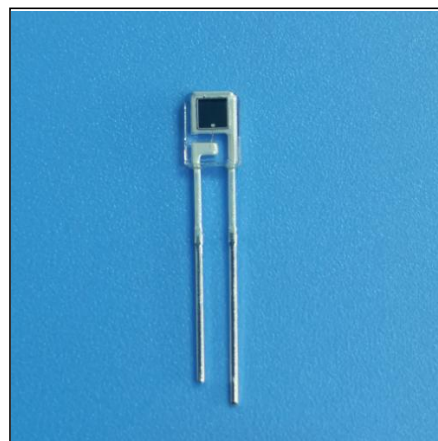
# Detector

## ■Features

- Especially suitable for applications of 940nm.
- Short switching time

## ■Applications

- SPO2
- Optical module
- IR Remote controls of various equipment



Name	Model No.	Chip Size		Package
Detector	PD-090	5.25mm <sup>2</sup>	2.29mm×2.29mm	2-Pin, clear epoxy molded lead frame

## ★Absolute Maximum Ratings at Ta=25℃

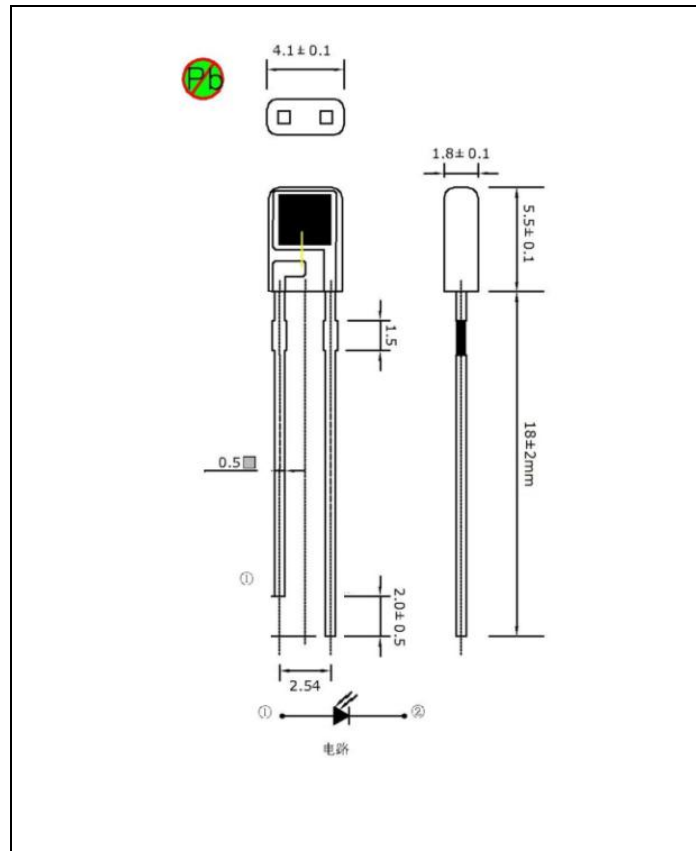
Parameter 参数	symbol 符号	Max.最大值	unit 单位	Note 备注
Operating Temperature	T <sub>opr</sub>	-25~+85	℃	---
Storage Temperature	T <sub>stg</sub>	-40~+100	℃	---
Soldering Temperature	T <sub>S01</sub>	≤260	℃	260℃ for 5 Seconds (260 度)

## ■Electrical / Optical Characteristics at TA=25 ℃

Parameter(参数)	Symbol	Min.	Typ.	Max.	Units	Test Conditions
	符号	最小值	典型值	最大值	单位	测试条件
Forward Voltage	V <sub>F</sub>	0.5	--	1.3	V	IF=10mA,H=0
Reverse Breakdown	V <sub>BR</sub>	35	--	--	V	IR=100uA,H=0
Reverse Dark Current	I <sub>D</sub>	--	--	20	nA	VR=10V,H=0
Light current	I <sub>L</sub>	--	135	--	uA	VR=5V,H as 1mw/cm2@940nm
Peak Sensing Wavelength	λp	--	940	--	nm	--
Spectral Bandwidth	Λ <sub>0.5</sub>	400	--	1100	nm	--
Junction Capacitance	C <sub>J</sub>	--	5	--	pF	VR=3V,H=0,F=1MHz

# Detector

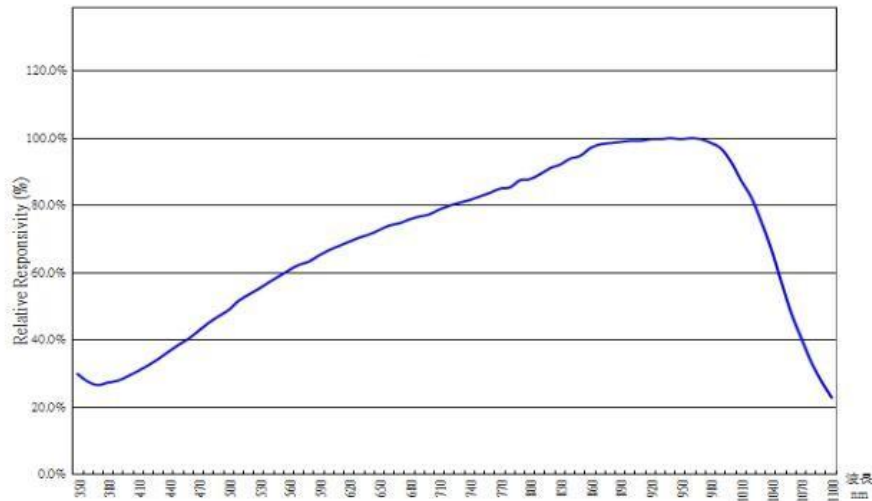
## ■Dimension:



**Notes:** 1.All dimensions are in millimeters  
2.Tolerances unless dimensions  $\pm 0.1$ mm

# Detector

## ■ Typical electrical / Optical characteristic curves (Ta=25°C)



## ■ Storage and Soldering Condition

一、Please read the following notes before using the product: 使用本产品前请阅读以下说明:

### 1. Over-current-proof 过电流保护

Customer must apply resistors for protection; otherwise slight voltage shift will cause big current change (Burn out will happen).

客户必须用电阻器保护; 否则微小的电压变化会引起较大的电流变化 (将会发生烧坏)。

### 2. Storage 储存

2.1 Do not open moisture proofs bag before the products are ready to use.

2.2 在产品准备使用前不要打开防潮袋

2.3 Before opening the package, the LEDs should be kept at 30°C or less and 85% RH or less. 打开包装前, LED应保持在30° C以下或小于85%湿度

2.4 The LEDs should be used within a year. 未拆包的LED应在一年内使用.

2.5 After opening the package, the LEDs should be kept at 30°C or less and 65% RH or less. 打开包装后, LED应保持在温度30° C以下或湿度小于等于65%。

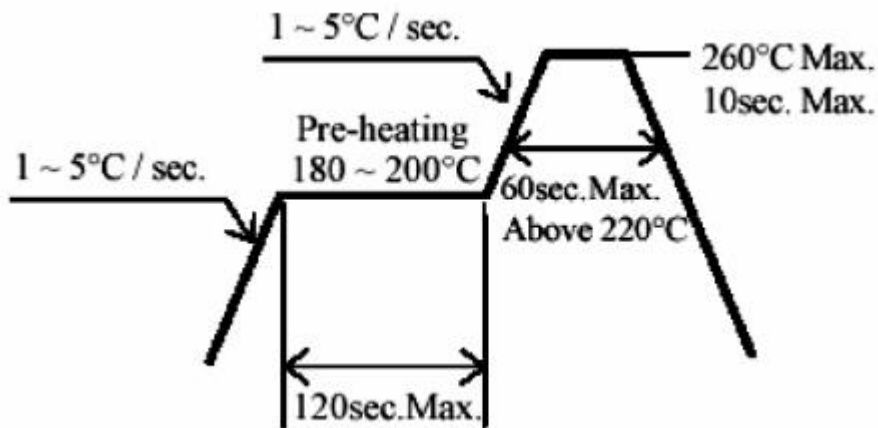
2.6 The LEDs should be used within 4 weeks after opening the package. 打开包装后, LED应在4周内使用 If the moisture adsorbent material (silica gel) has fabled away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions. 如果干燥剂挥发完或LED已经超过存储时间, 应采用下列条件进行烘烤处理。

Baking treatment: 65±5°C for 24 hours. 烘烤处理65±5°C 24小时

### 3. Soldering Condition 焊接条件

3.1 Pb-free solder temperature profile 无铅焊料温度分布

## Detector



3.2 When soldering, do not put stress on the LEDs during heating. 焊接时，加热期间不要对按压LED.

3.3 After soldering, do not warp the circuit board. 焊接后，不要扭曲电路板

#### 4. Soldering Iron烙铁

Each terminal is to go to the tip of soldering iron temperature  $300\text{-}350^{\circ}\text{C}$  for 2 seconds once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder. 每个端子的烙铁温度小于 $300\text{-}350^{\circ}\text{C}$ 持续2秒一次，低于烙铁容量25W。离开两秒多间隔，做每个端子焊接。请小心焊接，因为产品的损坏通常在手焊时开始。

#### 5. Repairing 返工

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing. LED已焊接完成后不应返工。当必须要返工时，应使用双头烙铁（如下图）。应事先确认LED的特性是否会因修复而损坏或不会被损坏。

