

# Whaley Electronics Specification

PD-120

Detector Assembly (接收管)

## ★ Description 描述

We are specializing in the production of high sensitivity detector receiver; it matched with SPO2 sensor with my company production. The detector assembly of high precision; stable performance; according to the peak wavelength characteristics, widely used in pulse oximetry and other medical products.

我们专业生产高灵敏度光敏二极管接收管，它与我公司生产的 SPO2 传感器配套使用。产品精度高、性能稳定，根据峰值波长特性，广泛应用于脉搏血氧仪等医疗产品。

## ★Features 特点

- Low Cost 低损耗
- High efficiency 效率高
- Compact Package 精密的封装
- Fast Response 快速响应
- Lead frame construction 引线框架结构
- Matching detector response 匹配检测器的响应

## ★Applications 应用

- SPO2 血氧饱和度
- Blood analysis 血液分析
- Medical instrumentation 医疗仪器
- Radiometric instruments 辐射测量仪器
- Copier 复印机
- Elevator 电梯
- High speed photo detector copier detector 高速 光电探测器 复印机检测器

Typical application: blood oxygen sensor, finger clip type / ear clip type oxygen probe, the soft silica oxygen probe, medical apparatus and instruments.

典型应用：血氧传感器，指夹式/耳夹式血氧探头，软硅胶血氧探头，医疗器械

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

(25℃环境下之电性/光学特性)

Parameter(参数)	Symbol	Min.	Typ.	Max.	Units	Test Conditions
	符号	最小值	规格值	最大值	单位	测试条件
Forward Voltage 正向电压	$V_F$	0.5	--	1.3	V	IF=10mA,H=0
Reverse Breakdown Voltage 反向击穿电压	$V_{BR}$	35	--	--	V	IR=100uA,H=0
Reverse Dark Current 反向暗电流	$I_D$	--	--	10	nA	VR=5V,H=0
Light current 亮电流	$I_L$	--	45	--	uA	VR=5V,H as 1mw/cm2@940nm
Rise time 起动时间	Tr	--	40	--	ns	VR=20V; $\lambda$ =850nm, RL=50 $\Omega$
Fall time 结束时间	Tf	--	40	--	ns	VR=20V; $\lambda$ =850nm, RL=50 $\Omega$
Responsively 敏感度	R	0.4	--	--	A/W	@650nm
Peak Sensing Wavelength 峰值响应波长	$\lambda_p$	--	940	--	nm	--
Spectral Bandwidth 光谱带宽	$\Lambda_{0.5}$	400	--	1100	nm	--
Junction Capacitance 结电容	$C_J$	--	44	--	pF	VR=3V,H=0,F=1MHz

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## ★Model No. List 产品列表

We offer two choices of packaging: clear epoxy molded lead frame and COB. You may use the pairing table below to conveniently match your needs to our offering.

我们可以提供带针脚的树脂封装和 COB 封装两种形式。接收管与发射管光谱匹配，请参考下表以方便您选择所需的产品：

Name 品名	Model No.型号	Active area 接收面积		Package 封装
Detector Assembly 接收管	PD-120	7.81mm	2.794mm×2.794mm	2-Pin, 树脂封装, 带针脚

## ★Absolute Maximum Ratings at Ta=25℃

Parameter 参数	symbol 符号	Max.最大值	unit 单位	Note 备注
Operating Temperature 操作温度	T <sub>opr</sub>	-25~+85	℃	---
Storage Temperature 贮藏温度	T <sub>Stg</sub>	-40~+100	℃	---
Soldering Temperature 焊接温度	T <sub>S01</sub>	≤260	℃	260℃ for 5 Seconds (260 度小于等于 5 秒)

