

# Whaley Electronics Specification

**2RF58ST-083(660/940)**

**SPO<sup>2</sup> Sensor (SPO<sup>2</sup> 传感器)LED**

## ★ Description 描述

We are specializing in the production of SPO<sup>2</sup> sensor; it matched with detector assembly with my company production. The sensor 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 SPO<sup>2</sup> 传感器，它与我公司生产的接收管配套使用。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

- Lead frame molded packages.  
模制的引线框架封装。
- Two and three or four lead designs.  
两、三、四支脚设计
- Bi-wavelengths or triple wavelengths LEDs.  
双波长或三波长发光二极管。
- 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

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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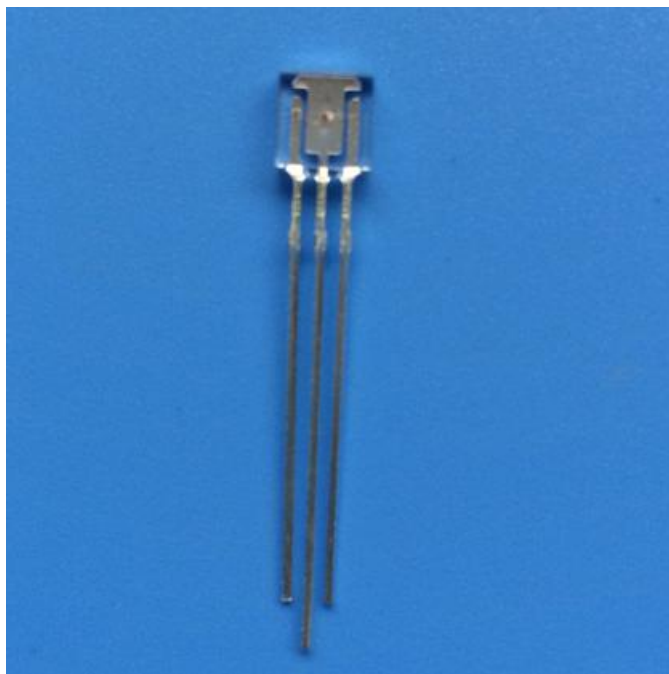
## ★Model No. List 产品列表

Our Photo Optic Components line includes both emitter and detector assemblies. The emitter series include one Red LED at 660nm and an accompanying Infrared LED at 940nm. We offer three choices of packaging: clear epoxy molded lead frame and leadless ceramic or COB. You may use the pairing table below to conveniently match your needs to our offering.

我们的血氧传感器元器件包括发射管和接收管。发射管包含一个波长为 660nm 的红光二极管和一个波长在 940nm 范围内的红外发光二极管。我们可以提供带针脚的树脂封装和无针脚 PCB 封装以及 COB 封装三种形式。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 型号	RED 红光	IR1 红外波长	IR2 红外波长	Package 封装
660/940	2RF58ST-083	660nm	940nm	N/A	3-Pin,树脂封装带针脚

## ★ 2RF58ST-083(660/940)Photo:



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## ★Absolute Maximum Ratings at TA=25℃

(在 25℃环境下之最大绝对额定值)

Parameter 参数	Symbol 符号	Max.最大值	Unit 单位	Note 备注
Power Dissipation 功率消耗	P <sub>d</sub>	60	mW	---
Forward Current 正向电流	I <sub>F</sub>	20	mA	---
Peak Forward Current 正 向最大电流	I <sub>FP</sub>	100	mA	1/10 Duty cycle, 0.1ms pulse width (1/10 周期, 0.1ms 脉宽)
Reverse Voltage 反向电压	V <sub>R</sub>	5	V	---
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 3 Seconds (260 度小于 3 秒)

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

(660nm 红光 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 <sub>F</sub>	--	1.8	2.2	V	I <sub>F</sub> =20mA
Dominate Wavelength 主波长	λ <sub>D</sub>	--	645	--	nm	I <sub>F</sub> =20mA
Peak Wavelength 峰值波长	λ <sub>p</sub>	657	660	665	nm	I <sub>F</sub> =20mA
Spectral Line Half-width 带宽	Δλ	--	15	--	nm	I <sub>F</sub> =20mA
Power Dissipation 功率	I <sub>V</sub>	4	--	9	mW	I <sub>F</sub> =20mA
Reverse Current 反向电流	I <sub>R</sub>	--	--	10	uA	V <sub>R</sub> =5V

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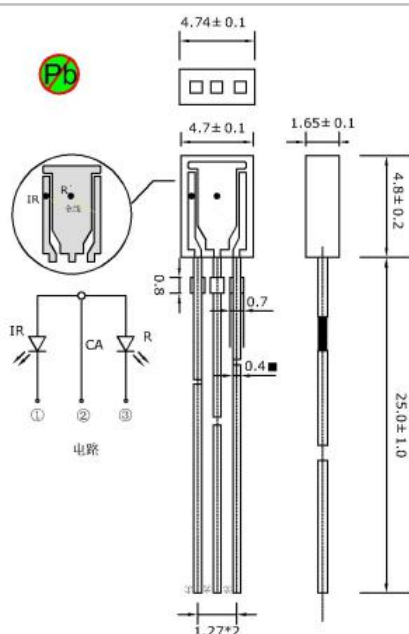
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## ★Electrical / Optical Characteristics at TA=25℃

(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	VF	1.1	1.20	1.75	V	IF=20mA
Peak Wavelength 峰值波长	$\lambda_p$	930	940	950	nm	IF=20mA
Spectral Line Half Width 光谱半宽度	$\Delta\lambda$	--	50	--	nm	IF=20mA
Radiant Power 辐射 功率	Po	1.7	--	4.0	mW	IF=20mA
Reverse Current 反向电流	IR	--	--	10	uA	VR=5V

## ★2RF58ST-083(660/940) Dimension:



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