

Spec. No.: HL4710-8P029B-NNNN

Issued Date: 2017-7-28

SPECIFICATION

Model Name: Reflective Blood Sensor

Model NO. : HL4710-8P029B

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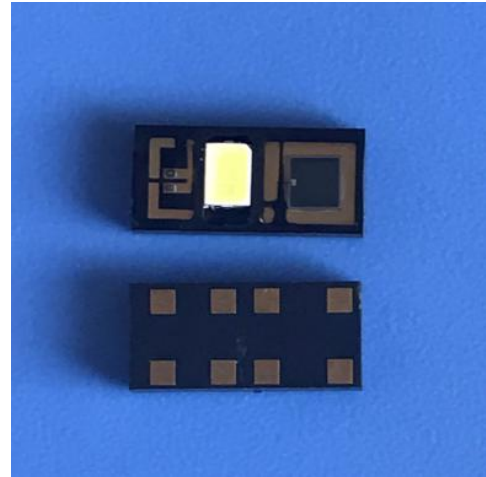
<http://www.szwhaley.com/>

■Features

- Lead frame molded packages
- Two and three or four leads designs
- Bi-wavelengths or triple wavelengths LEDs
- Matching detector response

■Applications

- SPO2
- Blood analysis
- Medical instrumentation
- Radiometric instruments



Name	Model	RED	IR	PD	LED	Package
Reflector Blood Sensor	HL4710-8P029B	660 nm	905nm	2.30*2.30mm	3020 White	8-Pin, COB

■Absolute Maximum Ratings

(Ta= 25℃)

Parameter	Symbol	Max.	Unit	Note
Power Dissipation	P _d	60	mW	---
Forward Current	I _F	20	mA	---
Peak Forward Current	IFP	100	mA	1/10 Duty cycle,0.1ms pulse width
Reverse Voltage	V _R	5	V	---
Operating Temperature	T _{opr}	-25~+85	℃	---
Storage Temperature	T _{Stg}	-40~+100	℃	---
Soldering Temperature	T _{S01}	260	℃	260℃ for 3 Seconds

■Electrical/Optical Characteristics

(Ta= 25℃)

Parameter	Symbol	Min.		Typ.		Max.		Units	Test Conditions
		905	660	905	660	905	660		
Forward Voltage	V _F	--	1.8	1.35	--	1.75	2.3	V	IF=20mA
Reverse Current	I _R	--	--	--	--	10	10	uA	VR=5V
Radiant Power	P _o	1.5	4	--	--	2.5	9	mW	IF=20mA
Peak Wavelength	λ _p	--	--	895	660	--	--	nm	IF=20mA
Spectral Line Half-width	Δλ	--	--	50	15	--	--	nm	IF=20mA

PD:

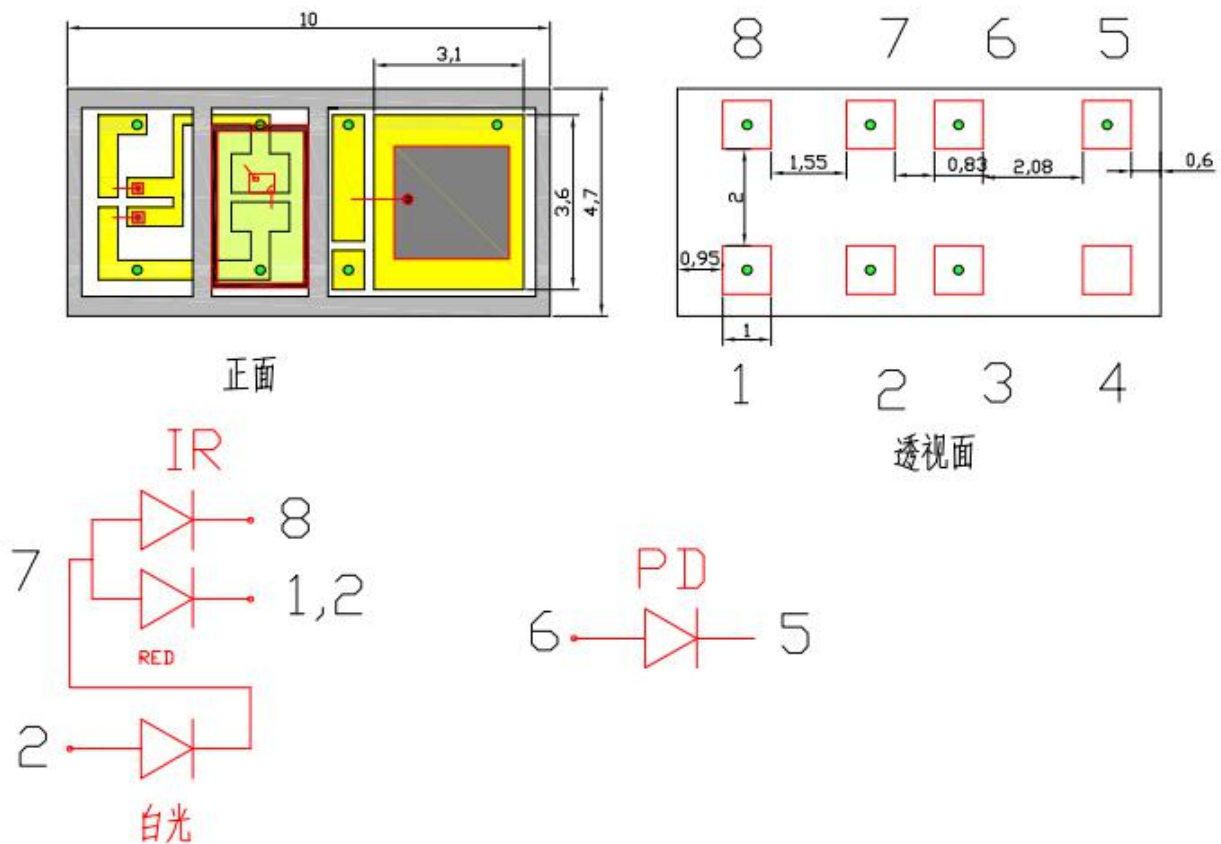
Parameter	Symbol	Min.	Typ.	Max.	Units	Test Conditions
Forward Voltage	V_F	--	--	1.25	V	IF=20mA
Reverse Breakdown Voltage	V_{BR}	80	--	--	V	IR=10uA
Dark Current	I_D	--	--	10	nA	VR=10V
Short Circuit current	I_{sc}	36	46	--	uA	Note(1)
Open Circuit Voltage	V_{op}	0.3	0.4	--	V	Note(1)
Peak Sensing Wavelength	λ_p	--	980	--	nm	--
Spectral Bandwidth	$\Delta 0.5$	450	--	1000	nm	--
Junction Temperature	T_J	--	150	--	°C	--

■Electrical/Optical Characteristics

(Ta= 25℃) FOR 3020 WHITE

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Flux	Φ	11		12	Lm	IF=20mA
Viewing Angle	2θ 1/2		120		Deg	
Chromaticity Coordinate	CCT	17000		19000	K	
Color Coordinates	X	--		--	--	
	Y	--		--	--	
Forward Voltage	VF	2.8		2.9	V	
Color Rendering Index	CRI	--	--	--	Ra	
Reverse Current	IR	--	--	5	μA	VR=5V

■Dimension:



Notes: 1. All dimensions are in millimeters
2. Tolerances unless dimensions ± 0.1 mm

■ Storage and Soldering Condition

1. Do not open moisture proofs bag before the products are ready to use
2. Before opening the package, the LEDs should be kept at 30°C or less and 90% RH or less.
3. The LEDs should be used within a year.
4. After opening the package, the LEDs should be kept at 30°C or less and 70% RH or less.
5. The LEDs should be used within 168 hours (7 days) after opening the package.
6. 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. Baking treatment: $60\pm 5^{\circ}\text{C}$ for 24 hours.

7. When soldering, do not put stress on the LEDs during heating.
8. After soldering, do not warp the circuit board
9. Each terminal is to go to the tip of soldering iron temperature less than 260°C for 5 seconds within once in less than the soldering iron capacity 25W. Leave tow 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.