

Spec. No.: HL1616-4P020W-NNNN: 660A6-905B

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# SPECIFICATION

Model Name: Multi Emitters

Model NO. : HL1616-4P020W

Customer No.:

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## Multi Emitters

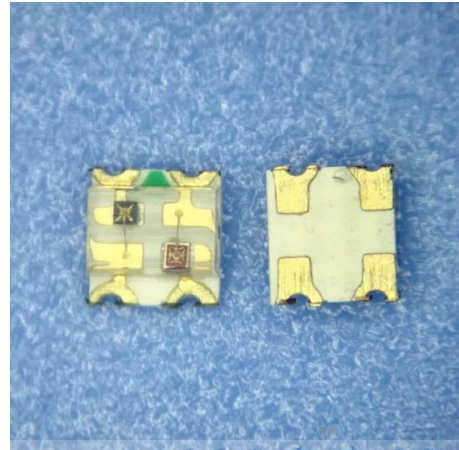
### HL1616-4P020W (660/905)

#### ■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	Package
Multi Emitters	HL1616-4P020W	660 nm	905 nm	2-Pin, COB

#### ■Absolute Maximum Ratings

(Ta= 25℃)

Parameter	Symbol	Max.	Unit	Note
Power Dissipation	P <sub>d</sub>	60	mW	---
Forward Current	I <sub>F</sub>	20	mA	---
Peak Forward Current	I <sub>FP</sub>	100	mA	1/10 Duty cycle, 0.1ms pulse width
Reverse Voltage	V <sub>R</sub>	5	V	---
Operating Temperature	T <sub>opr</sub>	-25~+85	℃	---
Storage Temperature	T <sub>Stg</sub>	-40~+100	℃	---
Soldering Temperature	T <sub>SO1</sub>	260	℃	260℃ for 3 Seconds

#### ■Electrical/Optical Characteristics

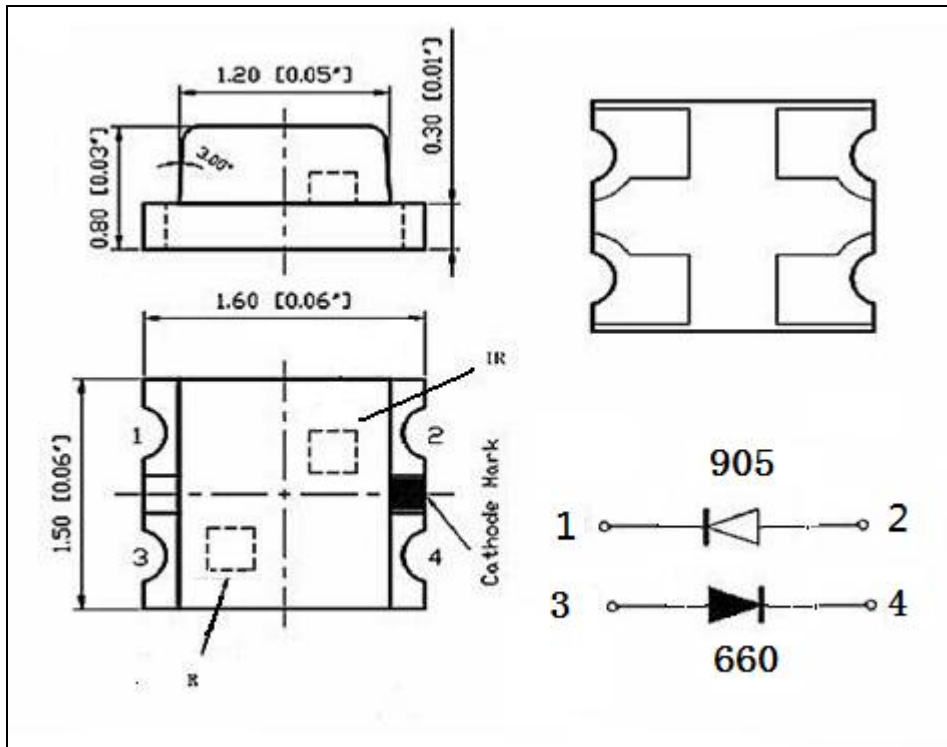
(Ta= 25℃)

Parameter	Symbol	Min.		Typ.		Max.		Units	Test Conditions
		IRED	RED	IRED	RED	IRED	RED		
Forward Voltage	V <sub>F</sub>	--	1.8	1.35	--	1.7	2.4	V	I <sub>F</sub> =20mA
Reverse Current	I <sub>R</sub>	--	--	--	--	10	10	uA	V <sub>R</sub> =5V
Radiant Power	P <sub>o</sub>	1.5	9	--	--	4	11	mW	I <sub>F</sub> =20mA
Peak Wavelength	λ <sub>p</sub>	--	--	895	660	--	--	nm	I <sub>F</sub> =20mA
Spectral Line Half-width	Δλ	--	--	50	15	--	--	nm	I <sub>F</sub> =20mA

## Multi Emitters

### HL1616-4P020W (660/905)

#### ■ Dimension:



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

#### ■ 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  $30^{\circ}\text{C}$  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  $30^{\circ}\text{C}$  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  $260^{\circ}\text{C}$  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.