

Spec. No.: HL4055-2D016-ND1X: 660A5940B

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# SPECIFICATION

Model Name: Multi Emitters

Model NO. : 2RF58ST-038D

Customer No.:

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# Multi Emitters

2RF58ST-038(660/940)

## ■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 | IR2R413UT-038 | 660 nm | 940 nm | 2-Pin, clear epoxy molded lead frame |

## ■Absolute Maximum Ratings

(Ta= 25℃)

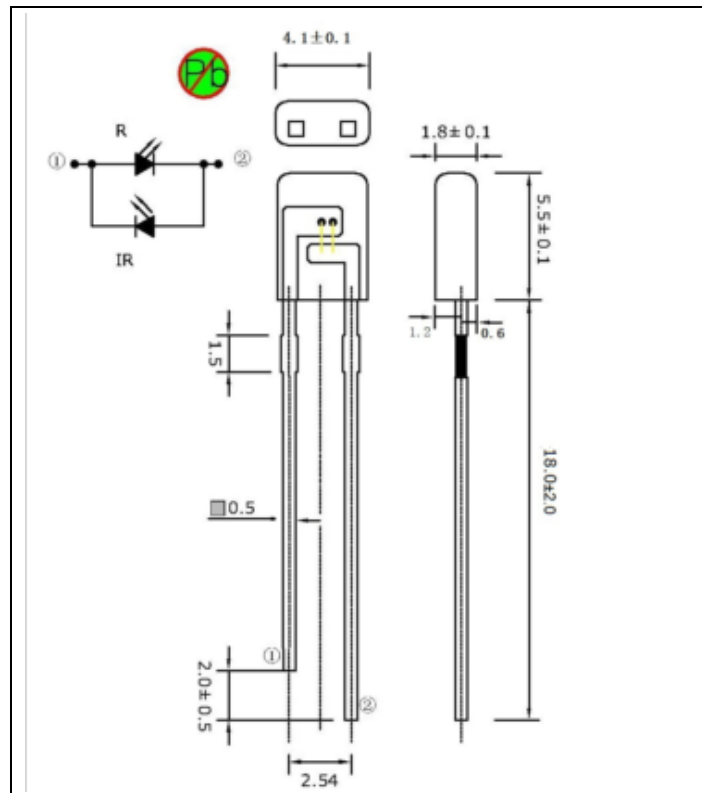
| Parameter             | Symbol           | Max.     | Unit | Note                              |
|-----------------------|------------------|----------|------|-----------------------------------|
| Power Dissipation     | P <sub>d</sub>   | 60       | mW   | ---                               |
| Forward Current       | I <sub>F</sub>   | 20       | mA   | ---                               |
| Peak Forward Current  | IFP              | 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>S01</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 | 1.55 | --  | 1.75 | 2.4 | V     | IF=20mA         |
| Reverse Current          | I <sub>R</sub> | --   | --  | --   | --  | 10   | 10  | uA    | VR=5V           |
| Radiant Power            | P <sub>o</sub> | 1.7  | 4   | --   | --  | 4.0  | 9   | mW    | IF=20mA         |
| Peak Wavelength          | λ <sub>p</sub> | --   | --  | 940  | 660 | --   | --  | nm    | IF=20mA         |
| Spectral Line Half-width | Δλ             | --   | --  | 50   | 15  | --   | --  | nm    | IF=20mA         |

#### ■ Dimension:



**Notes:** 1. All dimensions are in millimeters

2. Tolerances unless dimensions  $\pm 0.1$  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°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.