

Parameter of Product

LC-S5050-04004-RGBY-000

Detail: 5.4x5.0x1.6mm Top SMD

Date : 2014-11-15

Formal Specification



Shenzhen LED COLOR opto electronic CO.Ltd

LC-S5050-04004-RGBY-000

Description

Features

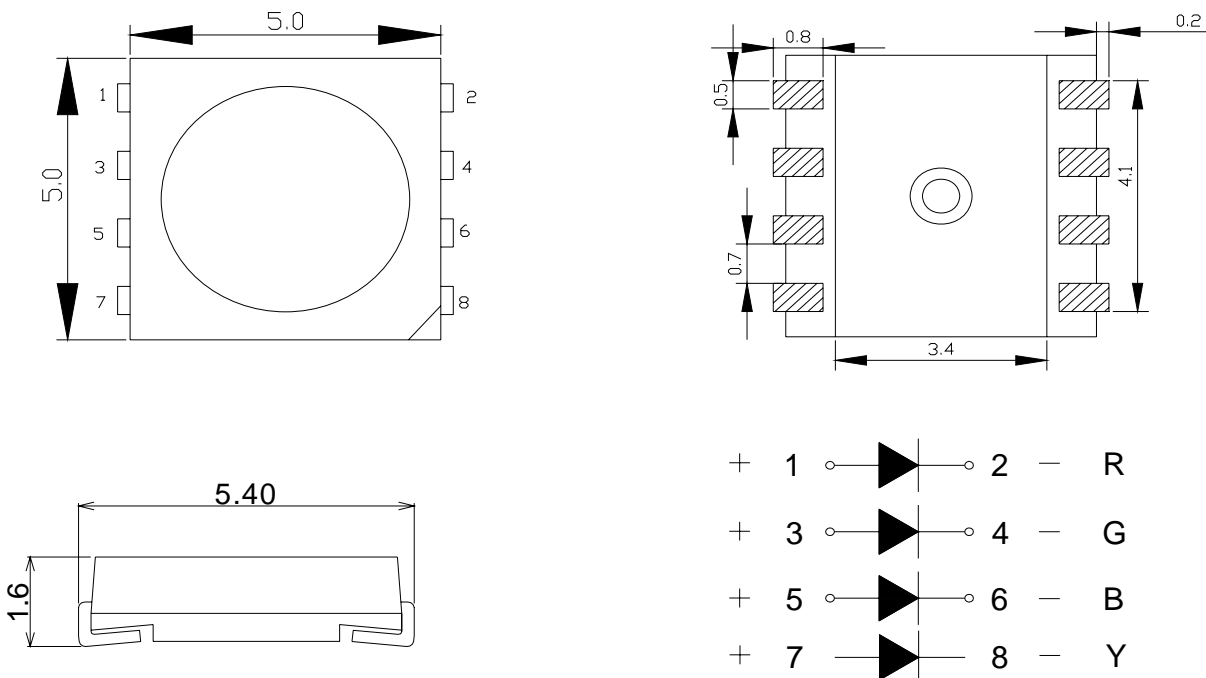
Extremely wide viewing angle
Suitable for all SMT assembly and solder process.
Available on tape and reel

Applications

Optical indicator
Indoor lighting
Interior automotive lighting
Backlight for LCD, switch and Symbol, display
Article lamp
Advertisement

Package Dimensions(

Recommended Soldering PATTERN



Notes:

1. All dimension units are millimeters. (
2. All dimension tolerance is ± 0.15 mm unless otherwise noted.(

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4. Electrical / Optical Characteristics at Ta=25°C

(Thermal Pad Temperature @25°C)

| Parameter(| SYMBOL | TESTCONDITIONS | UNIT | MIN | TYP | MAX | |
|--------------------------|---------|----------------|------------|-----|-----|-----|-----|
| Forward Voltage | Vf | If=4*20 mA | V | 1.8 | 3.2 | 3.4 | |
| Reverse Current | Ir | Vr=5V | μ A | - | - | 5 | |
| Viewing Angle | 2 θ 1/2 | If=4*20 mA | deg | - | 120 | - | |
| Color Rendering Index() | RA | If=4*20 mA | - | 70 | 80 | 90 | |
| Dominant Wavelength | R | Wd | If=4*20 mA | nm | 620 | 625 | 630 |
| | G | | | | 515 | 520 | 525 |
| | B | | | | 460 | 465 | 470 |
| | Y | | | | 585 | 590 | 595 |
| Luminous Flux () | R | Φv | If=4*20 mA | lm | 2 | - | 3 |
| | G | | | | 6 | - | 7 |
| | B | | | | 1 | - | 2 |
| | Y | | | | 2 | - | 3 |

1. θ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

2.the above luminous intensity measurement allowance tolerance ±10%.

3.The above luminous flux intensity measurement allowance tolerance ± 0.5Lm.

5. Absolute Maximum Ratings at Ta=25°C

(Thermal Pad Temperature @25°C)

| Parameter | SYMBOL | ABSOLUTE MAXIMUM RATING | UNIT |
|----------------------------------|--------|-------------------------|------|
| D.C Forward Current | If | 4*20 | mA |
| Pulse Forward Current | Ifp | 30 | mA |
| Reverse Voltage | Vr | 5 | V |
| Power Dissipation | Pd | 4x0.065 | W |
| Operating Temperature | Topr | -25~+85 | °C |
| Storage Temperature | Tstg | - 40~+100 | °C |
| Soldering Temperature (Reflow) (| Tsld | max.260 < 5 sec | °C |

6. Luminous Flux Rank

Test Current 4*20mA

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| | RED | | GREEN | | Blue | | Yellow | |
|--------------------|-----|-----|-------|-----|------|-----|--------|-----|
| Luminous Flux Rank | C | D | D | E1 | B | C | C | D |
| Luminous Flux (lm) | 2-3 | 3-4 | 3-4 | 4-5 | 1-2 | 2-3 | 2-3 | 3-4 |

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7. Forward Voltage Rank

Test Current 4*20mA

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| Rank (等级) | V1 | V2 | V3 | V4 | V5 | V6 | V7 | V8 |
|--------------|----------|----------|----------|----------|----------|----------|----------|----------|
| Voltage (电压) | 1.8-2.0V | 2.0-2.2V | 2.2-2.4V | 2.4-2.6V | 2.6-2.8V | 2.8-3.0V | 3.0-3.2V | 3.2-3.4V |

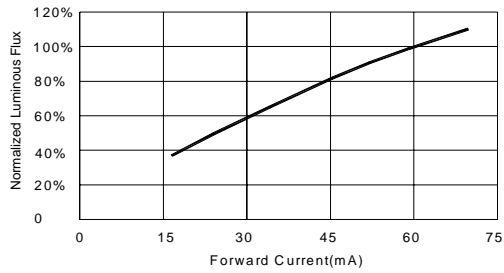
8. Dominant Wavelength Rank

Test Current 4*20mA

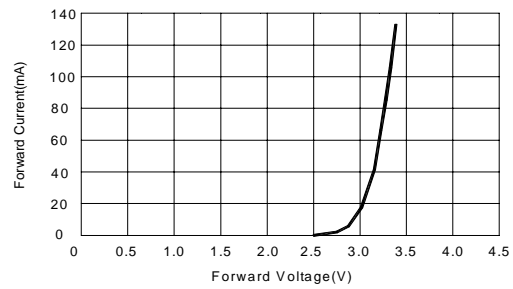
| | Red | | Green | | Blue | | Yellow | |
|--------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Dominant Wavelength Rank | HR1 | HR2 | PG2 | PG3 | BL5 | BL6 | YL7 | YL8 |
| Dominant Wavelength(nm) | 620-625 | 625-630 | 515-520 | 520-525 | 460-465 | 465-470 | 585-590 | 590-595 |

9. Typical optical characteristics curves

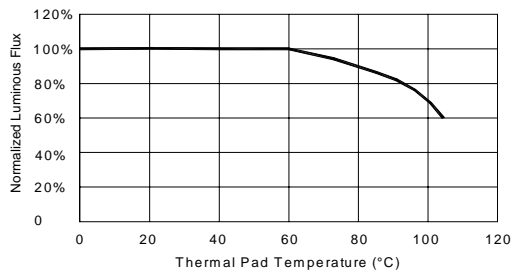
Forward Current vs. Typical Relative Luminous Flux



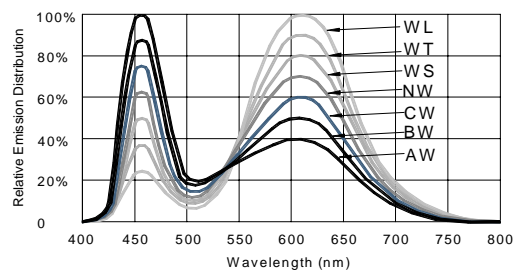
Forward Voltage vs. Forward Current



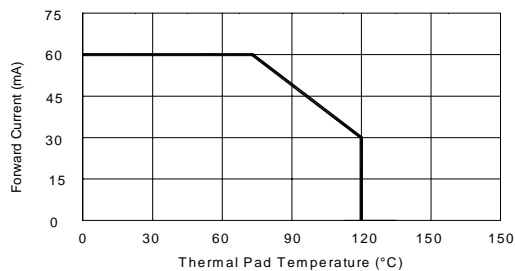
Thermal Pad Temperature vs. Relative Light Output



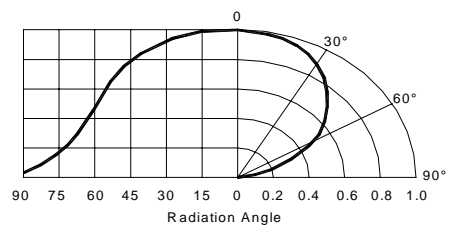
Wavelength Characteristics



Thermal Pad Temperature vs. Forward Current



Typical Radiation Pattern 120°



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10. Packaging Standard:

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