# Snowdragon Industrial Co.,Ltd

## DATA SHEET

**MODEL N.O.: SDP5WCOB20FC-W1**

**SDP7WCOB20FC-W1**

**ENG. N.O.: 13042501**

| PREPARED BY | CHECKED BY | APPROVED BY |
|---|---|---|
| | | |
| CUSTOMER APPROVED SIGNATURES | | |
| | | |



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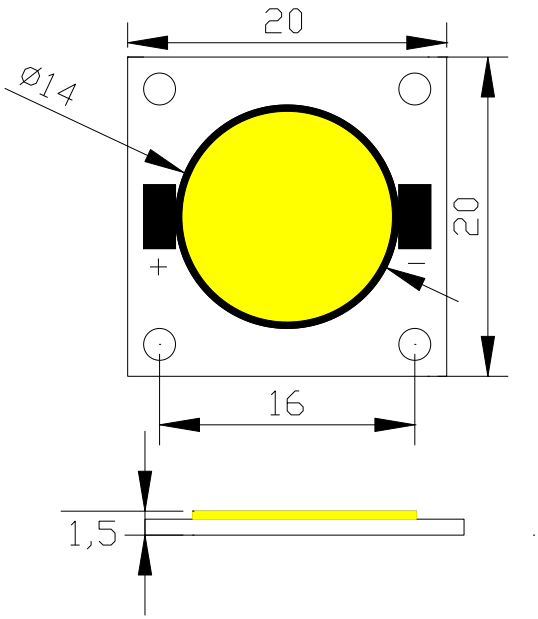
■ Mechanical Dimensions:




Note:

1. All dimensions are in millimeters

2. All dimensions without tolerances are for reference only.

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Absolute Maximum Ratings (Ta = 25℃) :

| Items | Symbol | Absolute maximum Rating ( | | Unit |
|---|---|---|---|---|
| | | White (**5W**) | White(**7W**) | |
| Power Dissipation * | $P_D$ | 5100 | 7100 | mW |
| DC Forward Current | $I_F$ | 320 | 320 | mA |
| Peak Pulse Forward Current* | $I_{FP}$ | 600 | 600 | mA |
| Reverse Voltage | $V_R$ | -- | -- | V |
| LED Junction Temperature | $T_j$ | 125 | 125 | ℃ |
| Operating Temperature | $T_{op}$ | -30 ~ +80 | -30 ~ +80 | ℃ |
| Storage Temperature | $T_{stg}$ | -40 ~ +100 | -40 ~ +100 | ℃ |
| Manual Soldering Temperature | $T_{sol}$ | Max.350°C±20°C for 3 sec Max | | |

*Pulse width≦0.1msec Duty cycle≦1/10

Typical Electrical & Optical Characteristics ( Ta = 25℃**)**:

| Part No | Color Temperature | Forward Voltage(V) | | | Test Condition | Viewing Angle | Luminous Flux |
|---|---|---|---|---|---|---|---|
| | | Min. | Avg. | Max. | | | |
| SDP5WCOB20FC-W1 | 6000-6500K | -- | 16 | -- | $I_F$ =320 mA | 120 | 400-500lm |
| SDP7WCOB20FC-W1 | 6000-6500K | -- | 23 | -- | $I_F$ =320 mA | 120 | 600-700lm |

Notes

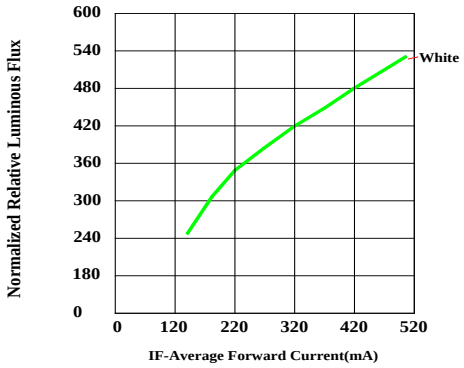
1.Absolute maximum ratings Ta=25℃.

2.Tolerance of measurement of forward voltage±0.1V.

3.Tolerance of measurement of Luminous Flux ±5%.

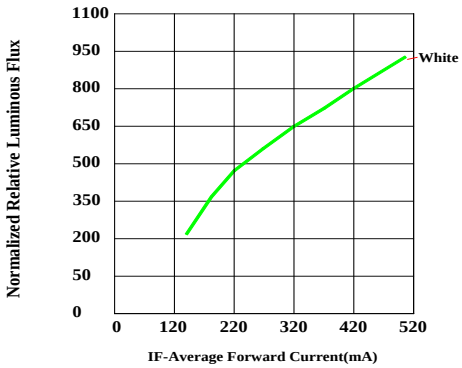
Typical Electrical/ Optical Characteristics Curves
(Ta=25℃ Unless Otherwise Noted)：

**5W**

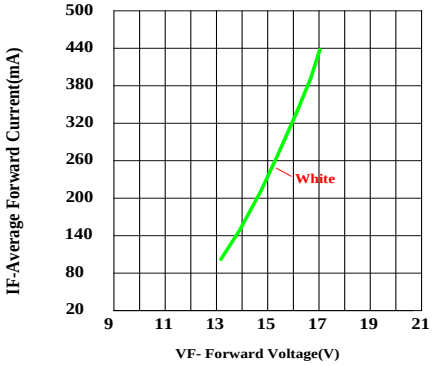



**Relative Luminous Flux vs. Forwa rd Current for White**

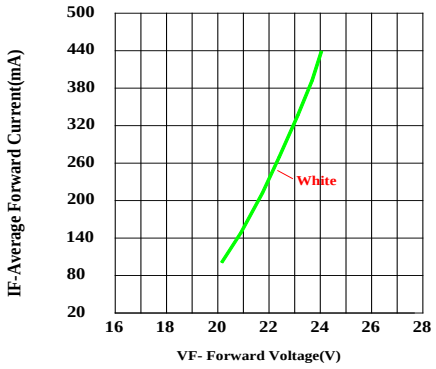
**7W**




**Relative Luminous Flux vs. Forwa rd Current for White**

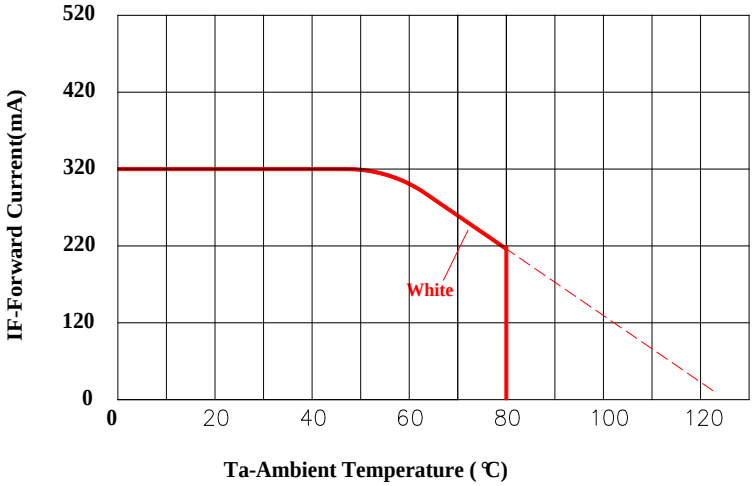



**Forward Current vs. Forward Volt age for White**

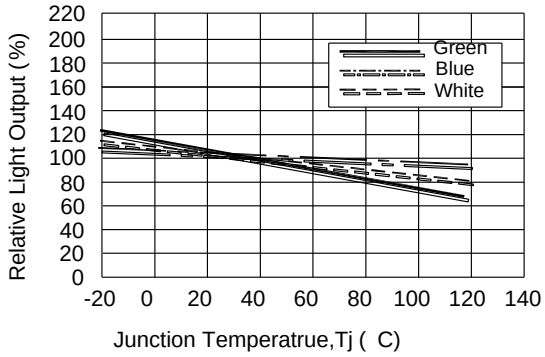


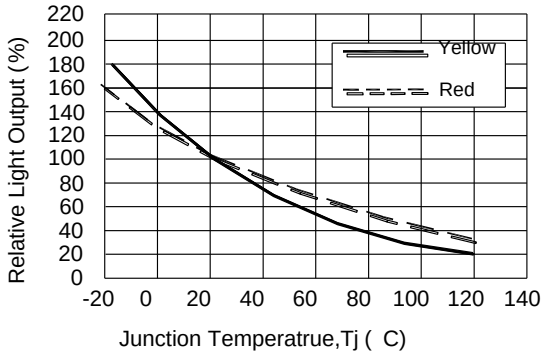

**Forward Current vs. Forward Volt age for White**

## Forward Current VS Ambient Temperature

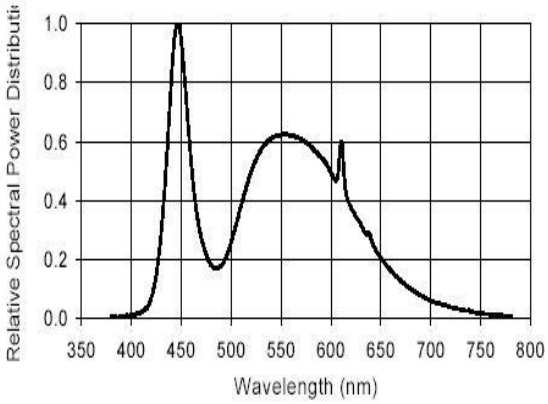


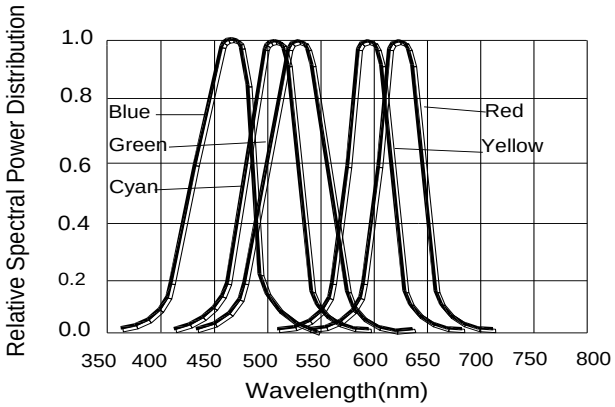
## Light Output Characteristics



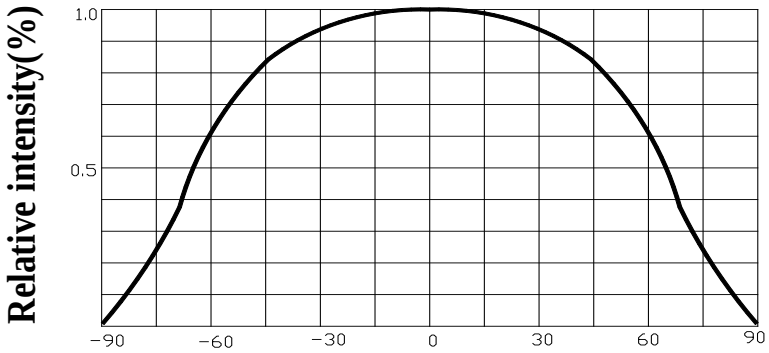

## Wavelength Characteristics




Relative Intensity vs. Wavelength(nm)

## Angular displacement VS Relative intensity




**Angular Displacement(degress)**

Reliability

1.Test Items And Results

| | Test Item | Reference Standard | Test Conditions | Test Hours/cycle | Units Tested | Ac/Re |
|---|---|---|---|---|---|---|
| Operation Test | Operating Life Test | | **5W**)$T_A$=25℃±5℃，IF=320mA<br>(**7W**)$T_A$=25℃±5℃，IF=320mA | 1000 Hrs | 22 | 0/22 |
| Environment Test | High Temperature Storage | JEITA ED-4701 200 201 | $T_A$=100℃±5℃ | 1000 Hrs | 22 | 0/22 |
| | Low Temperature Storage | JEITA ED-4701 200 201 | $T_A$= - 40℃±5℃ | 1000 Hrs | 22 | 0/22 |
| | High Temperature.& Humidity Storage | | $T_A$=85℃±5℃，<br>RH=85%±5%RH | 1000 Hrs | 22 | 0/22 |
| | Thermal Shock | JEITA ED-4701 300 307 | -40°±5℃ ←→+85℃±5℃<br>30min dwell / 5 min transfer | 50 Cycles | 22 | 0/22 |
| Soldering Test | Solder ability | | 350±5℃，5 ±1 sec | 1 time Over 95%Wetting | 22 | 0/22 |
| | Resistance to Soldering Heat | | 350±5℃，5 ±1 sec | 1 time | 22 | 0/22 |

Note：It is required that the LEDs should be attached heat-sink when these LEDs are Operating.

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