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# Snowdragon Industrial Co.,Ltd

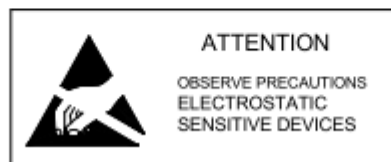
## DATA SHEET

**MODEL N.O.: SDP15WCOB49YC-W1**

**SDP20WCOB49YC-W1**

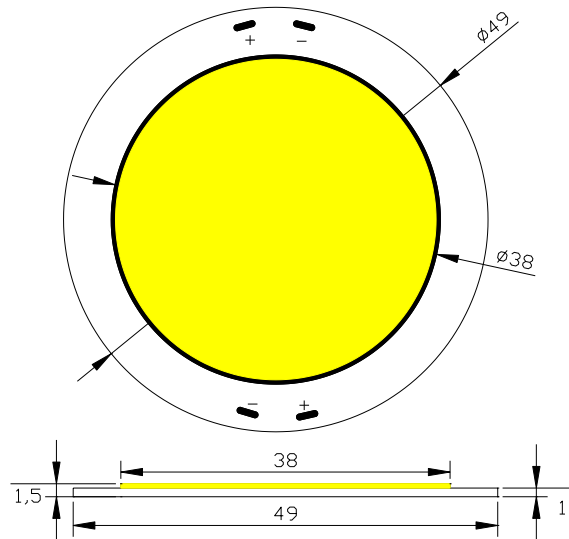
**ENG. N.O.: 13042301**

PREPARED BY	CHECKED BY	APPROVED BY
<b>CUSTOMER APPROVED SIGNATURES</b>		



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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°C) :

Items	Symbol	Absolute maximum Rating		Unit
		White (15W)	White(20W)	
Power Dissipation *	P <sub>D</sub>	15200	19600	mW
DC Forward Current	I <sub>F</sub>	400	400	mA
Peak Pulse Forward Current*	I <sub>FP</sub>	800	800	mA
Reverse Voltage	V <sub>R</sub>	--	--	V
LED Junction Temperature	T <sub>j</sub>	125	125	°C
Operating Temperature	T <sub>op</sub>	-30 ~ +80	-30 ~ +80	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +100	-40 ~ +100	°C
Manual Soldering Temperature	T <sub>sol</sub>	Max.350°C ± 20°C for 3 sec Max		

\*Pulse width ≤ 0.1msec Duty cycle ≤ 1/10

Typical Electrical & Optical Characteristics ( Ta = 25°C):

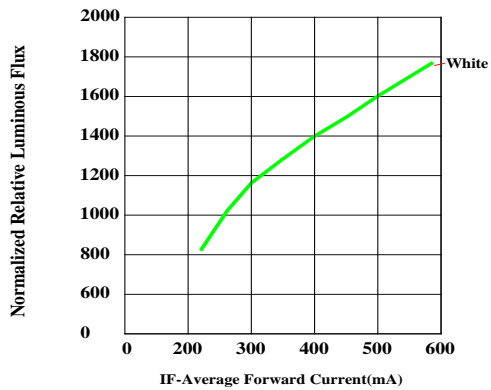
Part No	Color Temperature	Forward Voltage(V)			Test Condition	Viewing Angle	Luminous Flux
		Min.	Avg.	Max.			
SDP15WCOB49YC-W1	6000-6500K	--	38	--	I <sub>F</sub> =400 mA	120	1400-1500lm
SDP20WCOB49YC-W1	6000-6500K	--	49	--	I <sub>F</sub> =400 mA	120	1900-2000lm

Notes

1. Absolute maximum ratings Ta=25°C.
2. Tolerance of measurement of forward voltage ±0.1V.
3. Tolerance of measurement of Luminous Flux ±5%.

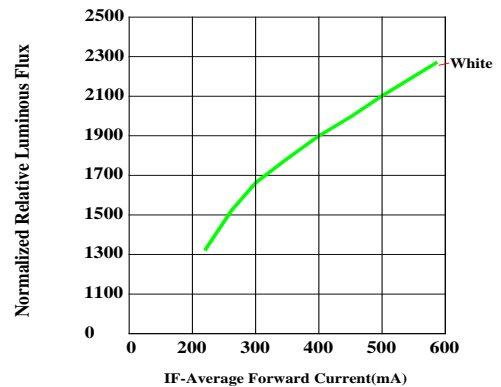
Typical Electrical/ Optical Characteristics Curves  
 (Ta=25 °C Unless Otherwise Noted) :

**15W**

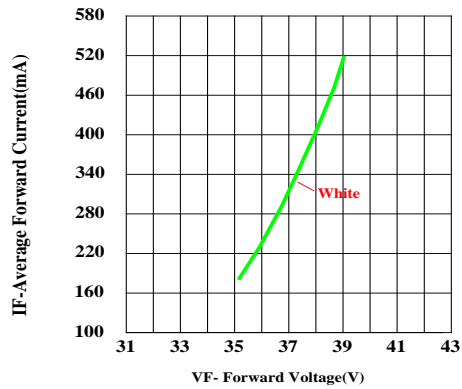


Relative Luminous Flux vs. Forward Current for White

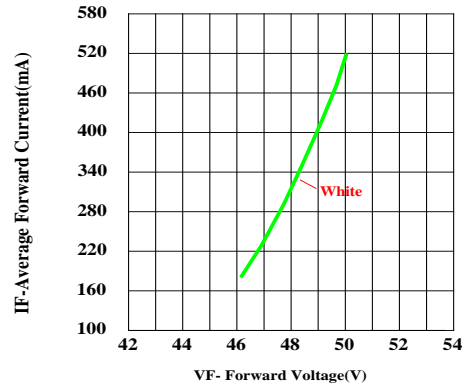
**20W**



Relative Luminous Flux vs. Forward Current for White

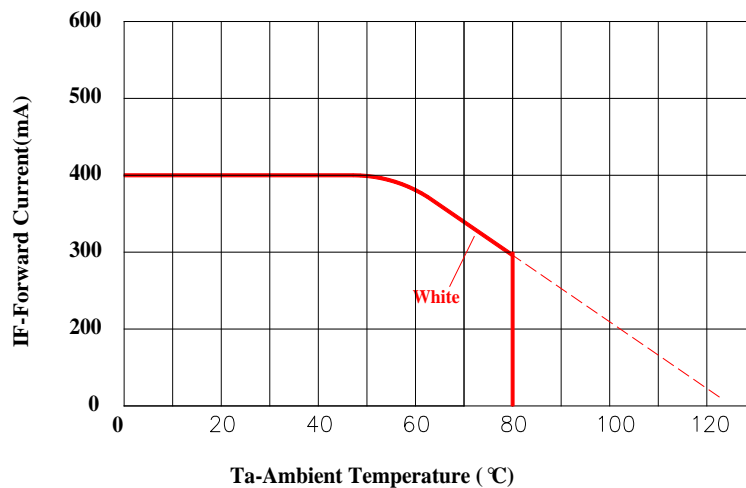


Forward Current vs. Forward Voltage for White

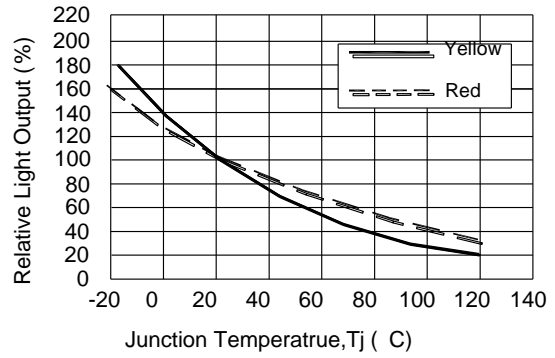
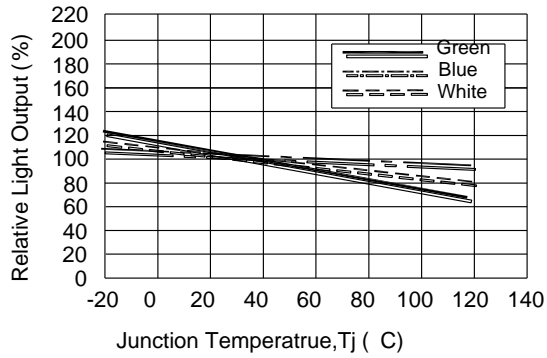


Forward Current vs. Forward Voltage for White

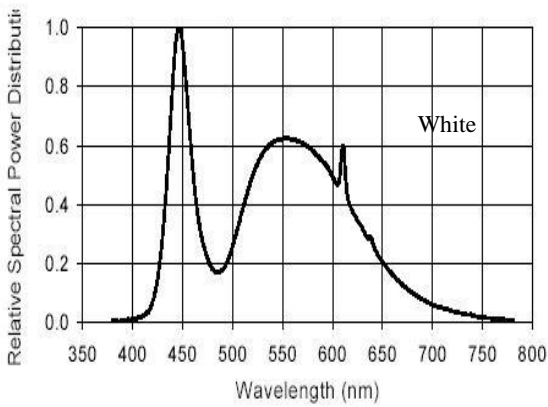
**Forward Current VS Ambient Temperature**



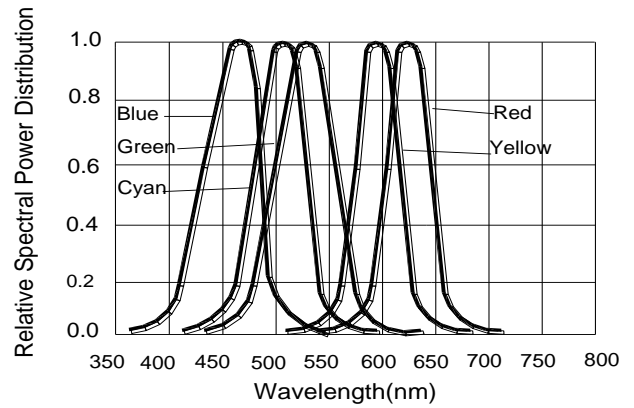
**Light Output Characteristics**



**Wavelength Characteristics**

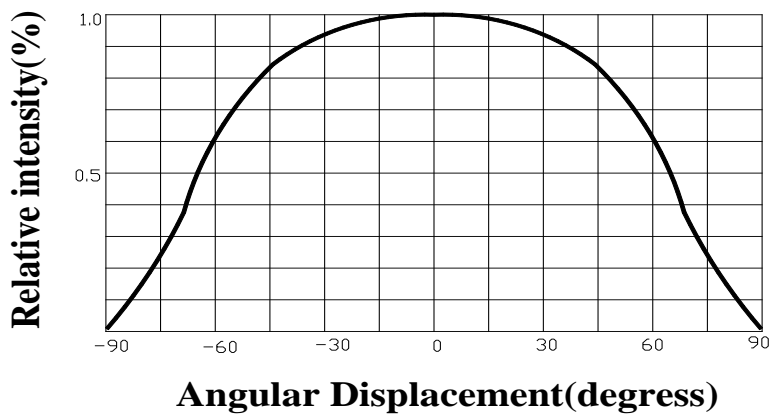


Relative Intensity vs Wavelength (nm)



Relative Intensity vs. Wavelength(nm)

**Angular displacement VS Relative intensity**



## Reliability

### 1. Test Items And Results

	Test Item	Reference Standard	Test Conditions	Test Hours/cycle	Units Tested	Ac/Re
Operation Test	Operating Life Test		(15W) $T_A=25^{\circ}\text{C}\pm 5^{\circ}\text{C}$ , IF=400mA (20W) $T_A=25^{\circ}\text{C}\pm 5^{\circ}\text{C}$ , IF=400mA	1000 Hrs	22	0/22
Environment Test (	High Temperature Storage	JEITA ED-4701 200 201	$T_A=100^{\circ}\text{C}\pm 5^{\circ}\text{C}$	1000 Hrs	22	0/22
	Low Temperature Storage (	JEITA ED-4701 200 201	$T_A= - 40^{\circ}\text{C}\pm 5^{\circ}\text{C}$	1000 Hrs	22	0/22
	High Temperature.& Humidity Storage		$T_A=85^{\circ}\text{C}\pm 5^{\circ}\text{C}$ , RH=85% $\pm 5\%$ RH	1000 Hrs	22	0/22
	Thermal Shock	JEITA ED-4701 300 307	$-40^{\circ}\pm 5^{\circ}\text{C} \leftrightarrow +85^{\circ}\text{C}\pm 5^{\circ}\text{C}$ 30min dwell / 5 min transfer	50 Cycles	22	0/22
Soldering Test	Solder ability		$350\pm 5^{\circ}\text{C}$ , $5 \pm 1$ sec	1 time Over 95%Wetting	22	0/22
	Resistance to Soldering Heat (		$350\pm 5^{\circ}\text{C}$ , $5 \pm 1$ sec	1 time	22	0/22

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