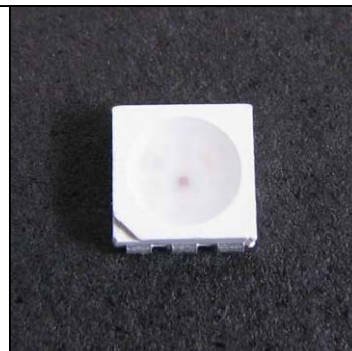
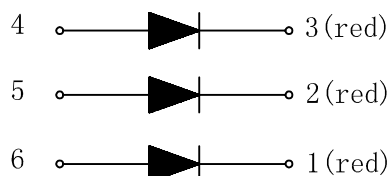
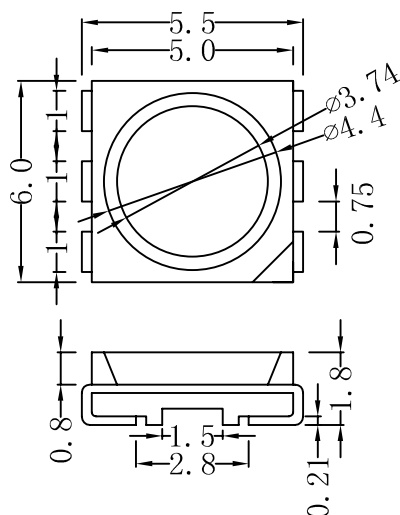


Features

- 1) PLCC SMD LED.
- 2) LOW POWER CONSUMPTION.
- 3) LOW CURRENT REQUIREMENT.
- 4) PLCC SMD IS EASY TO RELEASE HEAT.
- 5) VARIOUS COLORS AND LENS TYPES AVAILABLE.
- 6) LONG LIFE-SOLID STATE RELIABILITY.
- 7) PACKAGE:1000PCS/REEL.



Package Dimensions



Notes:

1. All dimensions are in millimeters.
2. Tolerance is $\pm 0.1 < 0.004''$ unless otherwise noted.
3. Specifications are subject to change without notice.



MODEL: OS-S2023FCRGB
 COLOR: RGB FULL COLOR
 SMD LED(PLCC-6)

Selection Guide

Part No.	Emitting Color	Lens Type	luminous(lm) @60mA		Viewing Angle
			Min.	Typ.	2 θ 1/2
OS-S2023FCRGB	RGB	Water Clear	12	14	120°

Note:

1. $\theta 1/2$ is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

Electrical/Optical Characteristics at Ta=25°C

Symbol	Parameter	Min.	Typ.	Max.	Units	Test Conditions
$\lambda D(R)$	Dominate Wavelength	620	622	625	nm	$I_F=60mA$
$\lambda D(G)$	Dominate Wavelength	522.5	523	525	nm	$I_F=60mA$
$\lambda D(B)$	Dominate Wavelength	460	461.5	462.5	nm	$I_F=60mA$
Φ	Luminous Flux				lm	$I_F=60mA$
V_F R/G/B	Forward Voltage	2/3/3		2.4/3.4 /3.4	V	$I_F=60mA$
IR	Reverse Current			5	uA	$V_R=5V$

Absolute Maximum Ratings at Ta=25°C

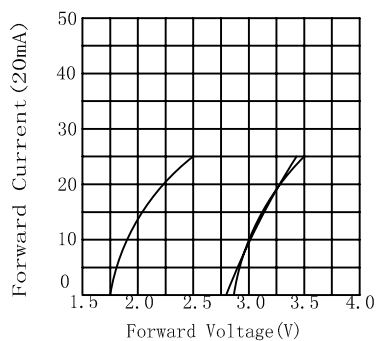
Item	Parameter	Units
Power dissipation	245	mW
DC Forward Current	60	mA
Peak Forward Current	180	mA
Reverse Voltage	5	V
Operating/Storage Temperature	-25°C to +65°C / -40°C to +85°C	

Note:

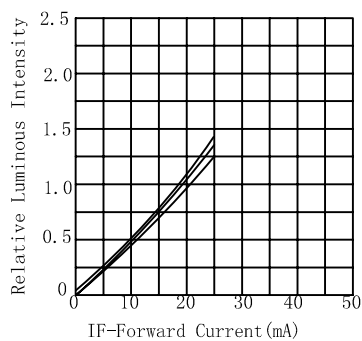
1. 1/10 Duty Cycle, 0.1ms Pulse Width.

ADD: Building G , Debaoli Technology Park, Baitian Village , Longgang District, Shenzhen China
 TEL:86-755-28862096 28862095 FAX:86-755-28862095
 E-mail: sales@optosun.com Http:// www.optosun.com

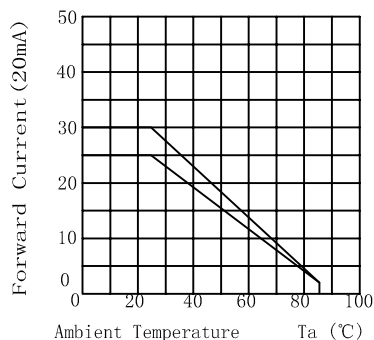
5050RGB OS-S2023FCRGB



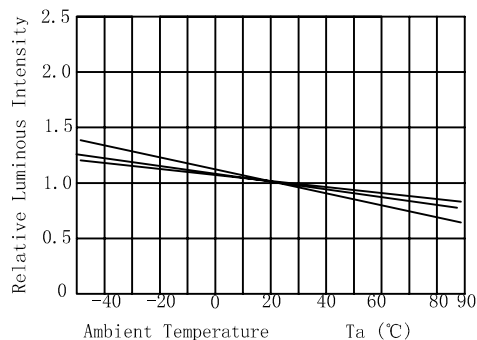
Forward Current VS Forward Voltage



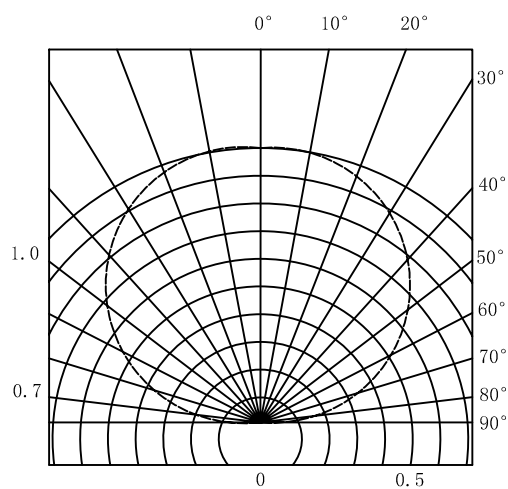
Luminous Intensity VS Forward Current



Forward Current VS Derating Curve



Luminous Intensity VS Ambient Temperature



Spatial Distribution



MODEL: OS-S2023FCRGB
COLOR: RGB FULL COLOR
SMD LED(PLCC-6)

Reliability

Test items and results

Test Item	Test Conditions	Test time/ cycle	Sample size	Ac/Re	Result
DC Operating Life	Ta=25°C ± 5°C IF=20mA	1000HRS	50pcs	0/1	0/50
High Temperature / High Humidity	Ta=85°C ± 5°C RH=85%~95%	1000HRS	50pcs	0/1	0/50
Thermal Shock	100°C ~ -10°C 5min. 5min.	50cycle	50pcs	0/1	0/50
Temperature Cycle	-40°C ~ 25°C ~ 85°C ~ 25°C 30min. 5min. 30min. 5min.	50cycle	50pcs	0/1	0/50
High Temperature Storage	Ta=100°C ± 5°C	1000HRS	50pcs	0/1	0/50
Low Temperature Storage	Ta=-35°C ± 5°C	1000HRS	50pcs	0/1	0/50
Solder Heat	Ta=260°C ± 5°C RH=55 ± 20%	5 ± 1 Second	50pcs	0/1	0/50

Criteria for Judging The Damage

Measuring item	Symbol	Test conditions	Criteria for Judgment	
			Min.	Max.
Forward voltage	VF	IF=20mA		U. S. L. * × 1.1
Reverse current	IR	VR=5V		U. S. L. * × 2.0
Luminous intensity	IV	IF=20mA	L. S. L. ** × 0.7	

Note:

1 U. S. L. * : Upper Standard Level

2 L. S. L. ** : Lower Standard Level

Average life

Item	Symbol	Min.	Typ.	Max.	Unit	Conditions
Average life	L(h)		50000		h	If=15mA

ADD: Building G , Debaoli Technology Park, Baitian Village , Longgang District, Shenzhen China
TEL:86-755-28862096 28862095 FAX:86-755-28862095
E-mail: sales@optosun.com Http:// www.optosun.com