

PRODUCT SPECIFICATION

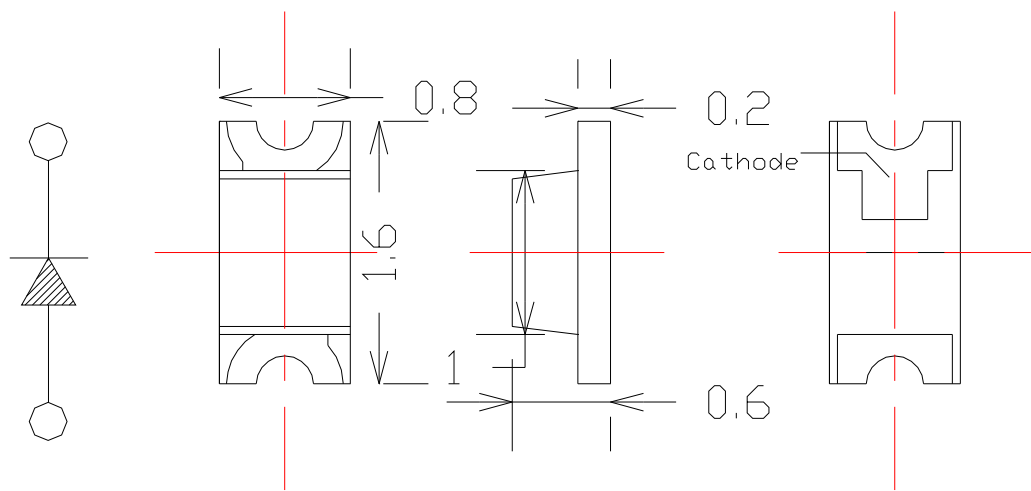
Part No: 0603white

Colour: white

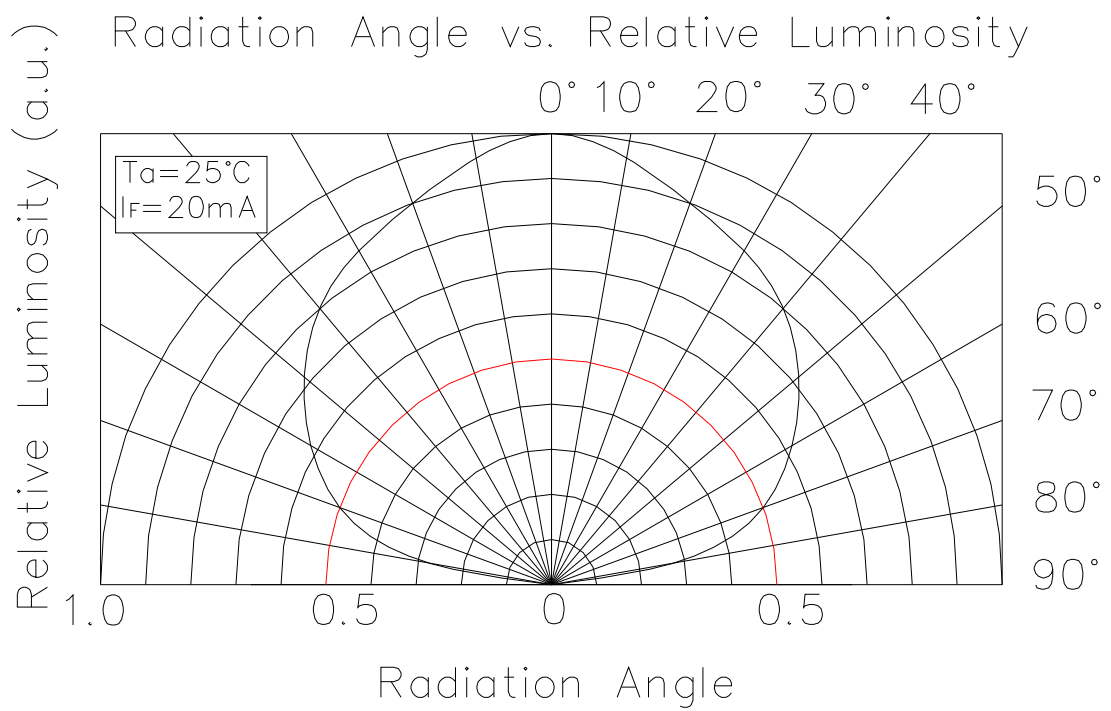
Customer Approved	Checked	Prepared

SMD-LED 0603 white

■ Outline Dimension:



■ View Angle:



SMD-LED 0603 white

■ Absolute Maximum Ratings (Ta = 25°C)

Items	Symbol	Absolute maximum Rating	Unit
Power Dissipation	P _D	120	mW
Forward Current(DC)	I _F	25	mA
Peak Forward Current	I _{FP}	100	mA
Reverse Voltage	V _R	5	V
Operation Temperature	T _{opr}	- 20~ + 75	°C
Storage Temperature	T _{stg}	- 30~ + 80	°C
Lead Soldering Temperature	T _{sol}	Max.260°C for 5 sec Max. (3min from the base of the epoxy bulb)	

Pulse width ≤ 0.1msec duty ≤ 1/10

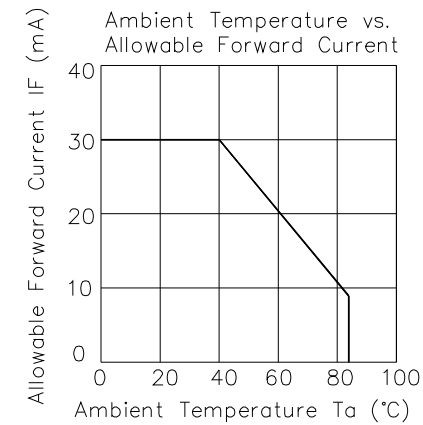
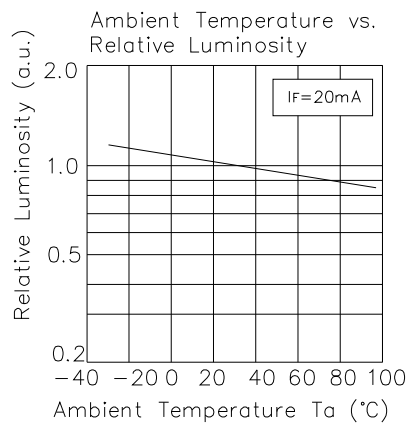
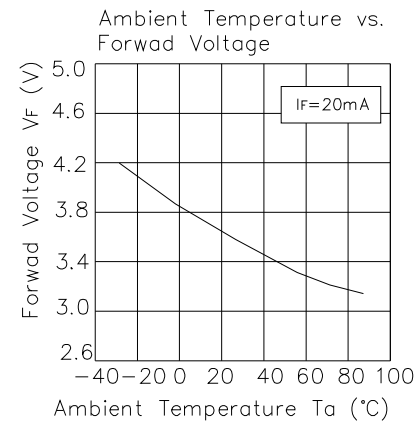
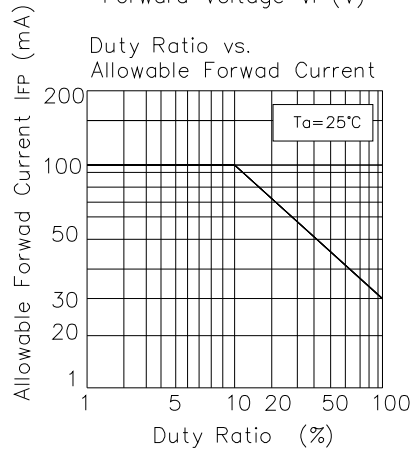
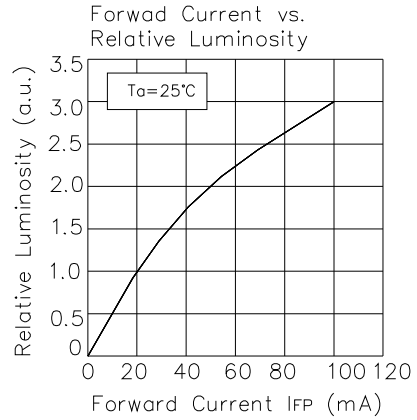
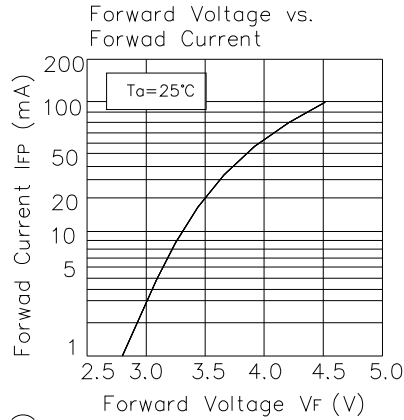
■ Typical Electrical & Optical Characteristics(Ta=25°)

Items	Symbol	Condition	Min	Typ	Max	Unit
Forward Voltage	V _F	I _F = 20mA	3.0	3.4	3.6	V
Reverse Current	I _R	V _R = 5V	---	---	50	μ A
Chromatic Coordinates	X, Y	I _F = 20mA	---	0.31,0.32	---	
Luminous Intensity	I _v	I _F = 20mA	110	140		mcd
View Angle	2 θ 1/2	I _F = 20mA	---	140	---	Deg

Rank	Luminous Intensity (mcd)	Rank	Luminous Intensity (mcd)	Rank	Luminous Intensity (mcd)
K	105~150	L	150~210		

SMD-LED 0603 white

■ Typical Electrical/Optical Characteristics Curves:



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■ Reliability Test :

Classification	Test Item	Standard Test Method	Test Conditions	Duration	Units Tested	Number of Damaged
Life Test	Operating Life Test	JIS7021:B4 MIL-STD-202:107D MIL-STD-750:1026	$T_A=25^{\circ}\text{C} \pm 5^{\circ}\text{C}$, $I_F=30\text{mA}$	1000h	22	0/22
Environment Test	High Temperature Storage	JIS7021:B10 MIL-STD-202:210A MIL-STD-750:2031	$T_A=100^{\circ}\text{C} \pm 5^{\circ}\text{C}$	1000h	22	0/22
	Low Temperature Storage	JIS7021:B12	$T_A=-55^{\circ}\text{C} \pm 5^{\circ}\text{C}$	1000h	22	0/22
	Temp & Humidity Test	JIS7021:B11 MIL-STD-202:103D	$T_A=85^{\circ}\text{C} \pm 5^{\circ}\text{C}$ $\text{RH}=85\% \pm 5\% \text{RH}$	1000h	22	0/22
	Thermal Shock Test	JIS7021:B4 MIL-STD-202:107D MIL-STD-750:1026	$-10^{\circ}\text{C} \pm 5^{\circ}\text{C}$ $\leftarrow \rightarrow 100^{\circ}\text{C} \pm 5^{\circ}\text{C}$ 5min - 5min	50 Cycles	22	0/22
	Temperature Cycling Test	JIS7021:A3 MIL-STD-202:107D MIL-STD-750:1051	$-55^{\circ}\text{C} \sim 25^{\circ}\text{C} \sim 85^{\circ}\text{C} \sim 25^{\circ}\text{C}$ 3min - 5min - 30min - 5min	50 Cycles	22	0/22
Mechanical Test	Resistance to Soldering Heat	JIS7021:A1 MIL-STD-202:210A MIL-STD-750:2031	$260 \pm 5^{\circ}\text{C}$, $10 \pm 1\text{sec}$	1 time	22	0/22
	Lead Integrity	MIL-STD-750D Method 2036.3	Load 2.5N $0^{\circ} \sim 90^{\circ} \sim 0^{\circ}$	3time	22	0/22

2.Criteria for Judging The Damage

Item	Symbol	Test Conditions	Criteria for Judgment	
			Min	Max
Forward Voltage	V_F	$I_F=20\text{mA}$	---	Initial Data $\times 1.1$
Luminous Intensity	I_V	$I_F=20\text{mA}$	---	Initial Data $\times 0.7$
			Initial Data $\times 0.7$	---
Reverse Current	I_R	$V_R=5\text{V}$	---	$100 \mu\text{A}$