



SWH020A-06

LIGHT EMITTING DIODE

GENERAL USE LED

■ FEATURES

- * Compatible with automatic placement equipment
- * Compatible with infrared and vapor phase reflow solder process
- * Mono-color-type
- * Pb-free

■ APPLICATIONS

- * LCD back light
- * Mobile phones: LCD
- * Status indicators: Consumer & industrial electronics
- * General use

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
DC Forward Current	I _F	20	mA
Forward Pulse Current (Note1)	I _{FP}	30	mA
Reverse Voltage	V _R	5	V
Power Dissipation	P _D	70	mW
Operation Temperature	T _{OPR}	-30 ~ +60	°C
Storage Temperature	T _{STG}	-40 ~ +65	°C

Note: 1. Pulse width 0.1msec max. Duty cycle1/10

2. Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Forward Voltage	V _F	I _F =20mA	2.8		3.8	V
Reverse Current	I _R	V _R =5V	0		10	uA
Luminous Intensity	I _V	I _F =20mA		1000		mcd
Viewing Angle	2θ1/2	I _F =20mA		110		Deg

Note: 1. Tolerance of luminous intensity is 10%

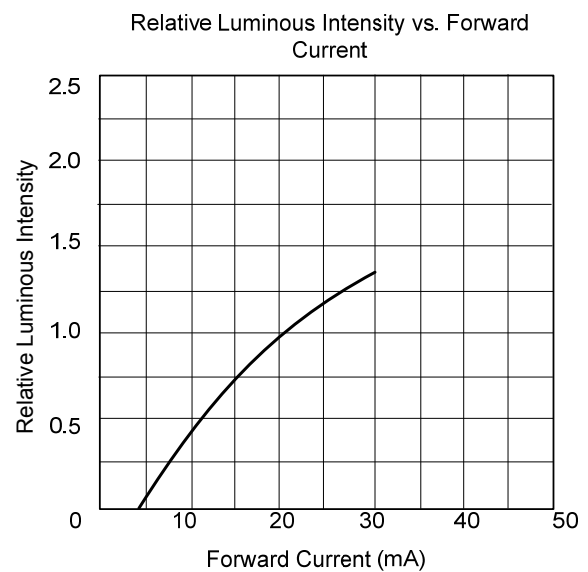
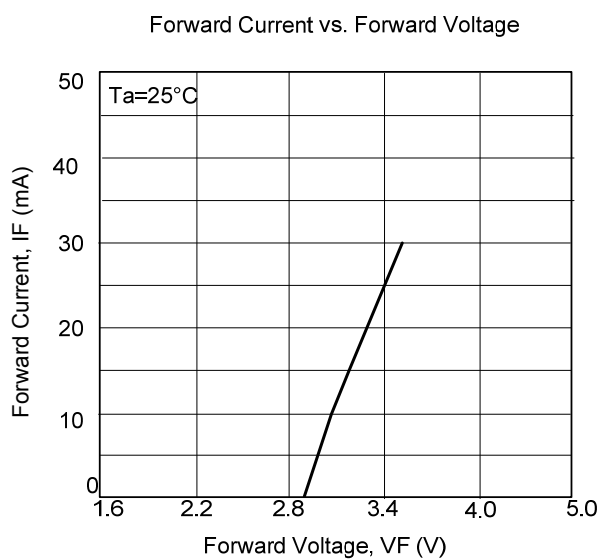
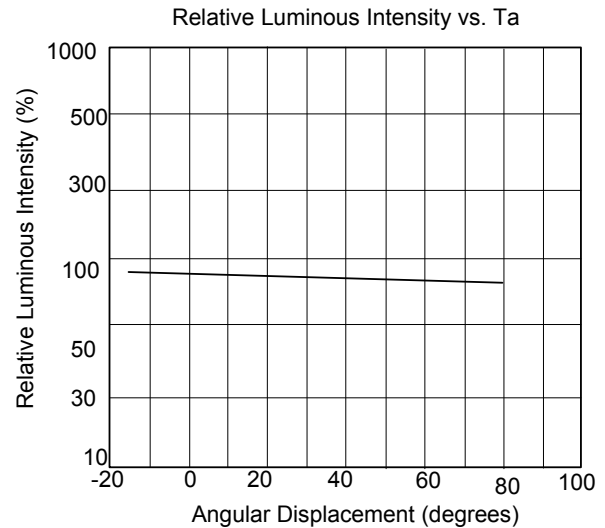
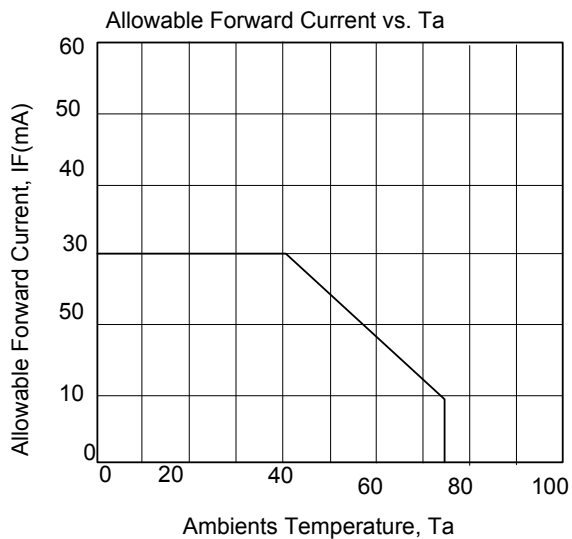
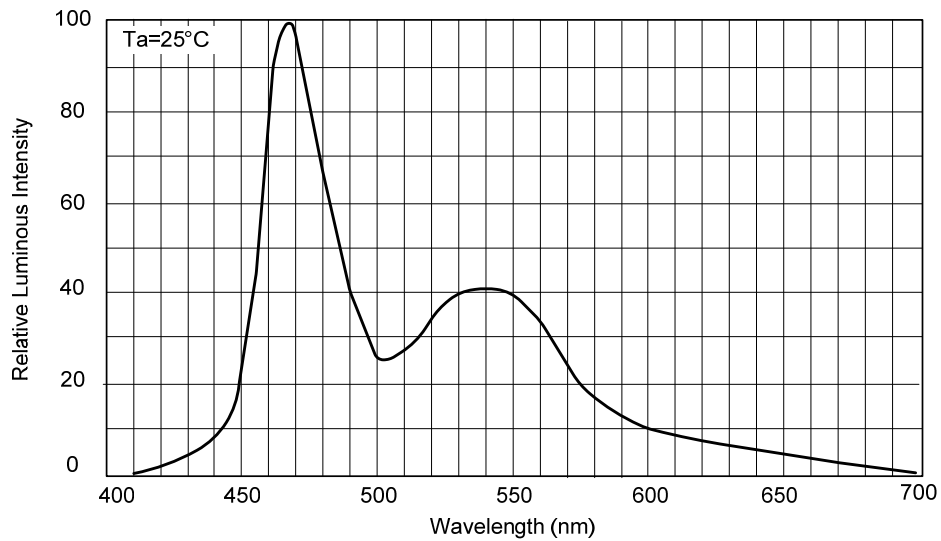
2. Tolerance of forward voltage is ±0.05V

■ RELIABILITY ITEMS AND CONDITIONS

NO.	ITEMS	TEST CONDITIONS	NOTE	RESULT
1	Resistance to Soldering Heat	+0 °C 260 °C 5 °C	5Sec.	Pass
2	Thermal Shock	-20°C ~ 100°C 10Min. 5Sec. 10Min.	50Cycles	Pass
3	Temperature Cycle	-40°C 25°C 100°C 30Min. 5Min. 30Min.	100Cycles	Pass
4	Hi-Temp. Storage	100°C	1000Hrs	Pass
5	Low-Temp. Storage	-40°C	1000Hrs	Pass
6	Hi-Temperature/ Hi-Humidity Test	60°C/90%RH	1000Hrs	Pass
7	Operating Life	I _F =20mA	1000Hrs	Pass
8	Life Time 1	20mA@ROOM TEMP	1000Hrs	Pass
9	Life Time 2	20mA@-40°C	1000Hrs	Pass
10	ON/OFF Test	IF=20mA Pulse width 0.1msec max. Duty cycle1/10	100,000 Cycles	Pass

TYPICAL CHARACTERISTICS

Wavelength Characteristics



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