

DATA SHEET

Specification Number :

SOURCEY Product Number : YY-EA3501-RGB

Product Description : 3W HIGH POWER LED (3W 大功率 LED)

Customer :

Customer's Specification:

Red

Δd (nm)	ϕv (lm)	VF (V)

Green

Δd (nm)	ϕv (lm)	VF (V)

Blue

Δd (nm)	ϕv (lm)	VF (V)

勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-34970699
勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

Approved by :

Checked by :

Prepared by :

产品型号:	
版 本:	01

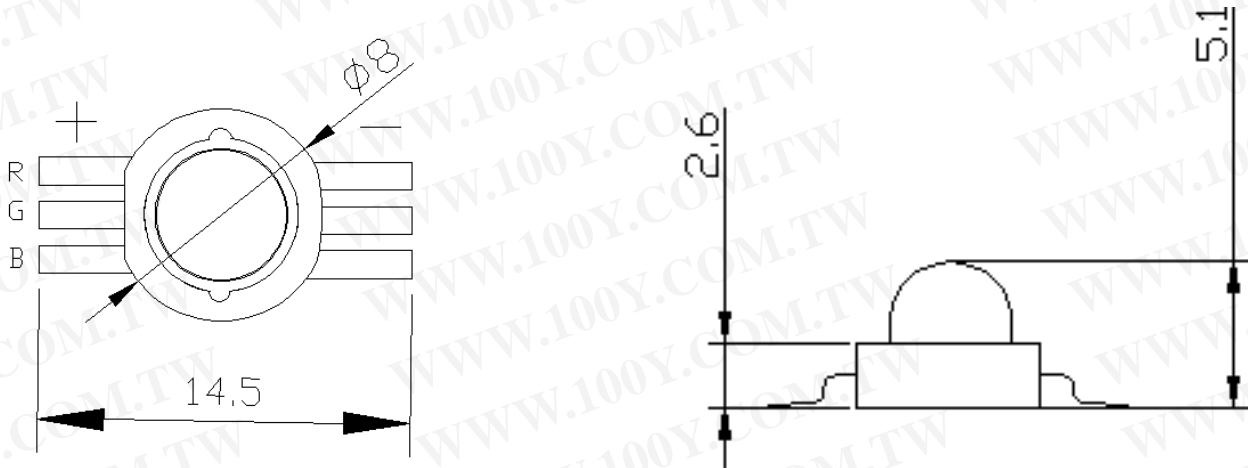
● Feature

- 1W High Power LED
- Package : SMT Package
- Half Angle ($2\theta_{1/2}$): 140°
- Colloid Color Water Clear
Mist

◆ Applications

- ◆ Commercial Lighting
- ◆ Advertisement
- ◆ Architectural Lighting
- ◆ Street Lamps

■ Package Dimensions



Notes:

1. All dimensions are in millimeters.
2. Tolerance is ± 0.25 unless otherwise noted.

MODEL No	Dice Material	Emitting Color	Package Type
	InGaN/AlGaInP	Red/Green/Blue	molding Lens

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■ Electrical/Optical Characteristics (At $T_A=25^\circ\text{C}$)

Parameter	Symbol	Conditions	Red	Green	Blue	Units
Luminous Flux	Φ	$I_F=350\text{mA}$	35	70	20	lm
Dominant Wavelength	λ_d	$I_F=350\text{mA}$	620	520	460	nm
Forward Voltage	V_F	$I_F=350\text{mA}$	2.2	3.4	3.4	V
Color Rendering index	Ra	$I_F=350\text{mA}$	---	---	---	---
Thermal Resistance Junction To Board	$R_{\theta_{J-B}}$	$I_F=350\text{mA}$	10	10	10	$^\circ\text{C/W}$
50% Power Angle	$2\theta_{1/2}$	$I_F=350\text{mA}$	140	140	140	deg
Reverse Current	I_R	$V_R=5\text{V}$	5	5	5	μA

■ Absolute Maximum Rating(At $T_A=25^\circ\text{C}$)

Parameter	Symbol	Ratings	Units
Power Dissipation	P_D	1.1	W
Continuous Forward Current	I_F	350	mA
Peak Forward Current ^[2]	$I_F(\text{Peak})$	1000	mA
LED Junction Temperature	T_J	125	$^\circ\text{C}$
Reverse Voltage	V_R	5	V
Operating Temperature Range	T_{OPR}	-30 $^\circ\text{C}$ To +60 $^\circ\text{C}$	
Storage Temperature Range	T_{STG}	-30 $^\circ\text{C}$ To +60 $^\circ\text{C}$	
Manual Soldering Temperature	T_{SOL}	350 $^\circ\text{C} \pm 20^\circ\text{C}$ For 3 Seconds	
Soldering on a heat plat	T_{SOL}	190 $^\circ\text{C} \pm 10^\circ\text{C}$ For 20Seconds	
ESD Sensitivity	ESD	2600V HBM	

Important Notes:

- 1) All ranks will be included per delivery, rank ratio will be determined by LED.crescen
- 2) Tolerance of measurement of luminous flux is $\pm 10\%$.
- 3) Tolerance of measurement of V_f is $\pm 0.1\text{ V}$.
- 4) The product will be packaged in Anti-Static plastic box.
- 5) Please refer to High Power LED RELIABILITY TEST STANDARD for reliability test conditions.
- 6) Use alcohol-based cleaning solvents such as isopropyl alcohol to clean the LED if necessary.

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Reliability 可靠性

Test Items And Condition

NO.	Items	Test Condition	Test Hours/Cycles	Sample Size	Ac/Re
1	DC Operating Life	Ta=25°C IF=350mA	1000H	50	0/1
2	Thermal Shock	-40°C/1H +100°C/1H	50 Cycles	50	0/1
3	High Temperature Operation	Ta=80°C±5°C IF=350mA	1000H	50	0/1
4	High Temperature/High Humidity	80°C/80%RH	168H	50	0/1
5	Low Temperature Operation	Ta=-40°C±5°C IF=350mA	168H	50	0/1
6	ESD(HBM)	2000V HBM	1 Time	50	0/1

(2) Criteria For Judging the Damage

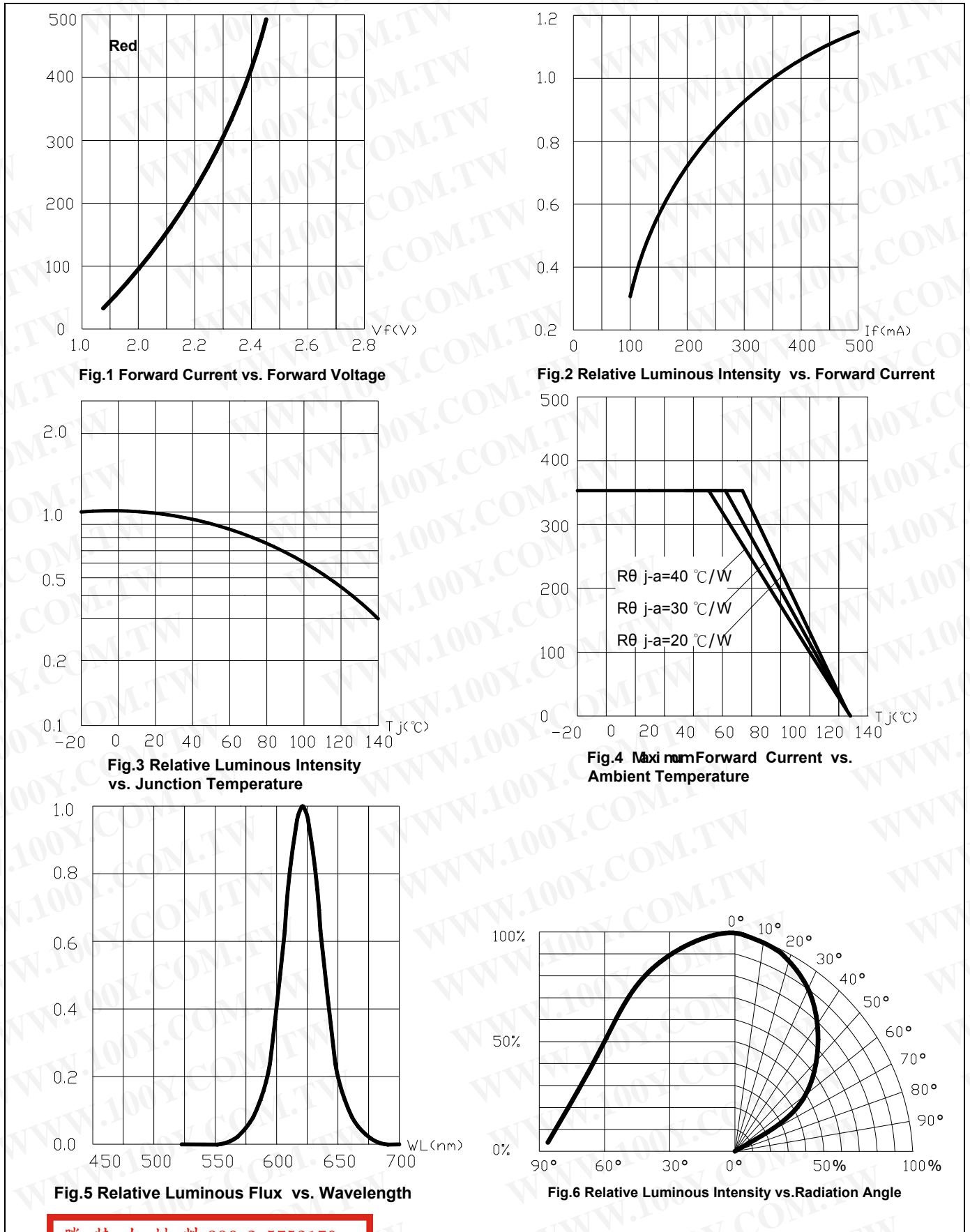
Items	Symbol	Test Condition	Limit	
			Min.	Max.
Luminous Intensity	IV	IF=350mA	L.S.L*0.8	----
Forward Voltage	VF	IF=350mA	----	U.S.L*1.1
Reverse Current	IR	VR=5V	----	U.S.L*2.0

Note:

L.S.L : Lower Standard Level

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Characteristics Curve:
Red



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Green

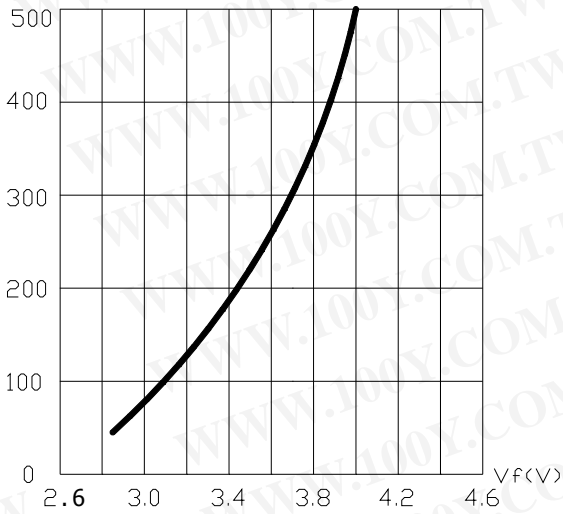


Fig.1 Forward Current vs. Forward Voltage

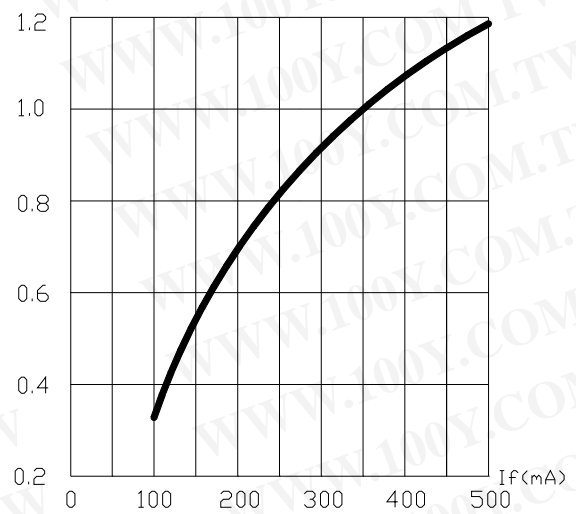


Fig.2 Relative Luminous Intensity vs. Forward Current

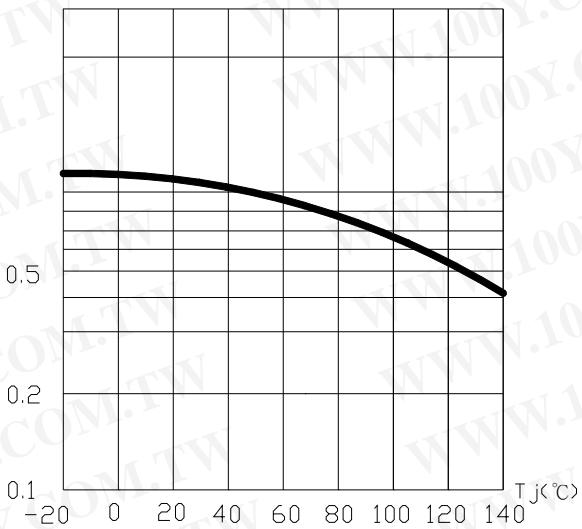


Fig.3 Relative Luminous Intensity vs. Junction Temperature

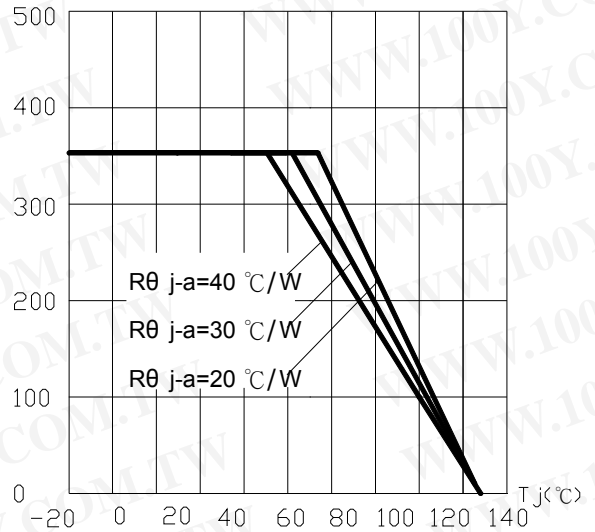


Fig.4 Maximum Forward Current vs. Ambient Temperature

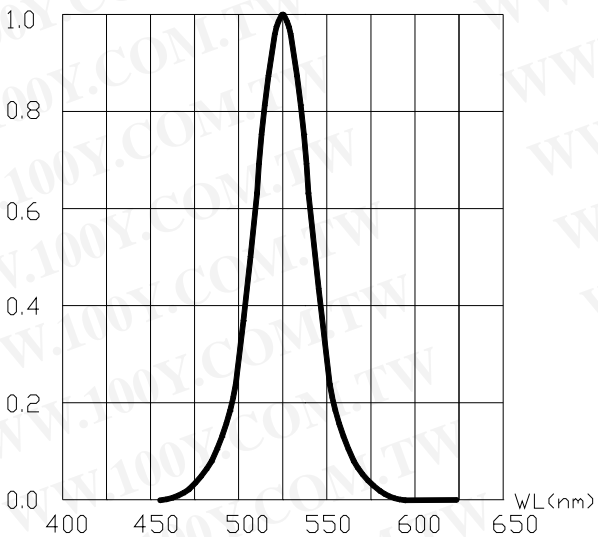


Fig.5 Relative Luminous Flux vs. Wavelength

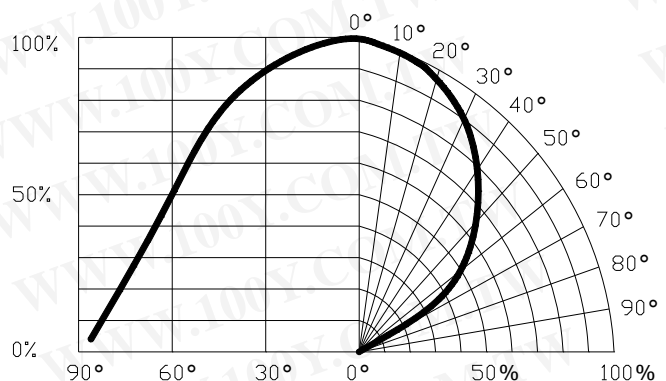
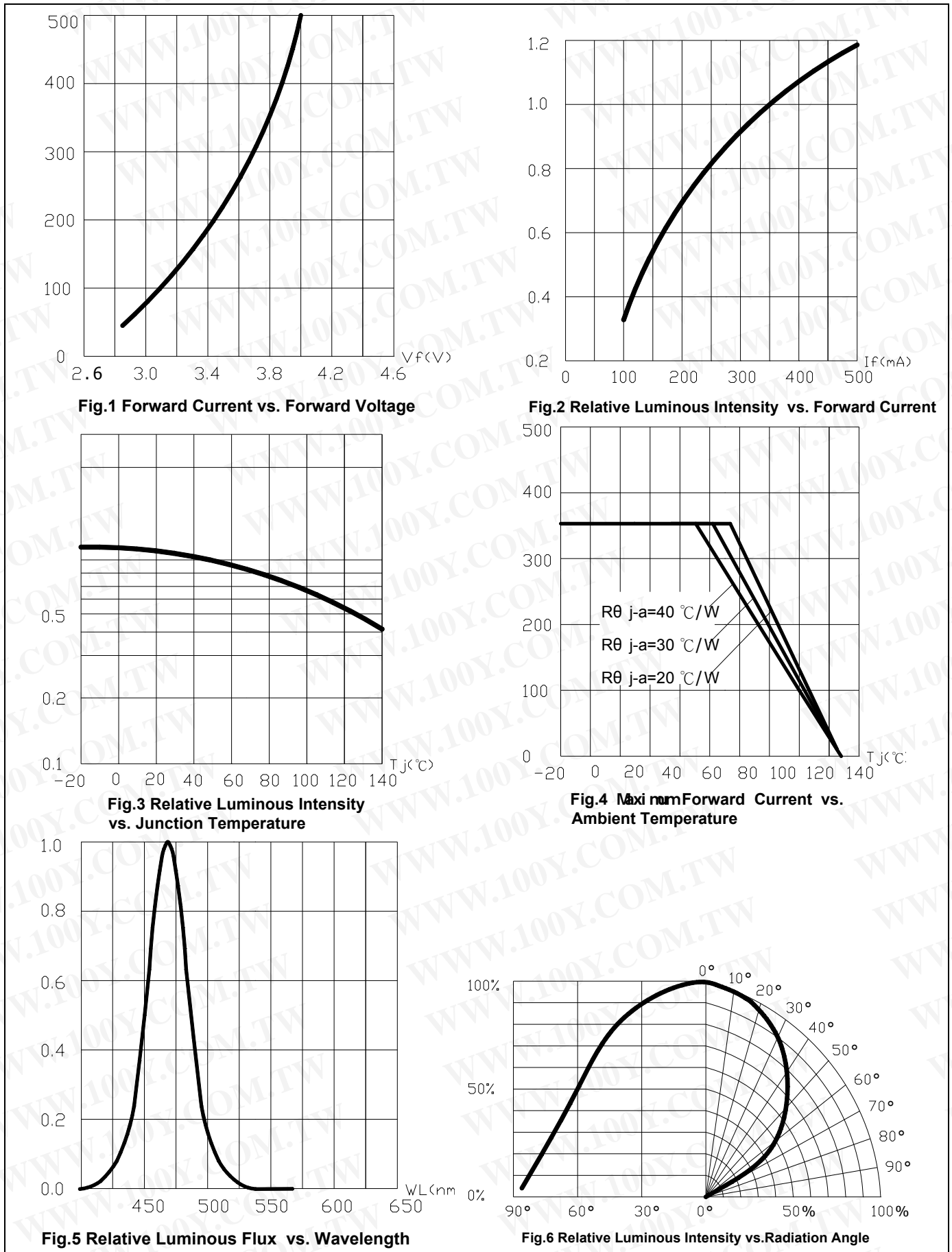


Fig.6 Relative Luminous Intensity vs. Radiation Angle

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Blue



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CAUTIONS :

The LEDs are devices which are materialized by combining Blue LEDs and special phosphors. Consequently the color of the LEDs is changed a little by an operating current. Care should be taken after due consideration when using LED's.

(1) Moisture Proof Package:

When moisture is absorbed into the SMT package it may vaporize and expand during soldering .There is a possibility that this can cause exfoliation of the contacts and damage to the optical characteristics of the LEDs. For this reason, the moisture proof package is used to keep Moisture to a minimum in the package.

(2) Storage Conditions

Before opening the package:

The LEDs should be kept at 30°C or less and 60%RH or less. The LEDs should be used within a year. When storing the LEDs, moisture proof packaging with absorbent material (silica gel) is recommended.

After opening the package:

The LEDs should be kept at 30°C or less and 50%RH or less. The LEDs should be soldered within 168 hours (7days) after opening the package. If unused LEDs remain, they should be stored in moisture proof packages, such as sealed containers with packages of moisture absorbent material (silica gel).It is also recommended to return the LEDs to the original moisture proof bag and to reseal the moisture proof bag again.

If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time.

Baking treatment should be performed using the following conditions.

Baking treatment : more than 48 hours at 80±5°C / 4h~12h (Humidity in accordance with the different environments)

(3) Heat Generation

Thermal design of the end product is of paramount importance. Please consider the heat generation of the LED when making the system design. The coefficient of temperature increase per input electric power is affected by the thermal resistance of the circuit board and density of LED placement on the board as well as other components.

The operating current should be decided after considering the ambient maximum temperature of LEDs.

(4) Cleaning

It is recommended that ethanol alcohol be used as a solvent for cleaning the LED 's. when using other solvents, it should be confirmed beforehand whether the solvents will dissolve the package and the resin or not. Freon solvents should not be used to clean the LEDs because of worldwide regulations.

(5) Static Electricity

Static electricity or surge voltage damages the LEDs. .

It is recommended that a wrist band or an anti-electrostatic glove be used when handling the LEDs. All devices, equipments and machineries must be properly grounded. It is recommended that measures be taken against surge voltage to the equipment that mounts the LED's .When inspecting the final products in which LEDs were assembled. It is recommended to check. Whether the assembled LEDs are damaged by static electricity or not. It is easy to find Static-damaged LED's by a light –on test or a VF test at a lower current (below 20 mA is recommended). Damaged LEDs will show some unusual characteristics such as the leak current. Remarkably increases, the forward voltage becomes lower , or the LEDs do not light at the low Current.