

Wah Wang Data Sheet For 5mm Super Bright White LED – 5A3 Series Angle 15° Class: T

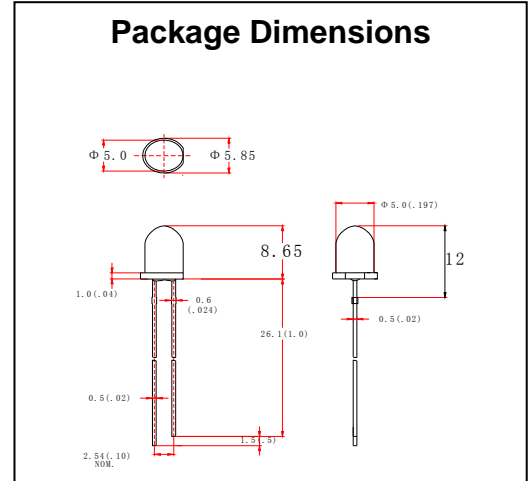
Features

- Standard T-1 Diameter Type Package.
- General Purpose Leads
- Reliable and Rugged

Absolute Maximum Ratings at Ta=25°C

Parameter	MAX.	Unit
Power Dissipation	100	mW
Peak Forward Current ($\leq 1/10$ Duty Cycle, 0.1ms Pulse Wide)	100	mA
Continuous Forward Current	20	mA
Reverse Voltage	5	V
Operating Temperature Range	-40°C to +65°C	
Storage Temperature Range	-40°C to +80°C	
Lead Soldering Temperature [3mm(From solder joint to epoxy body)]	260°C for 3 Seconds	

Package Dimensions



Electrical Optical Characteristics at Ta=25°C

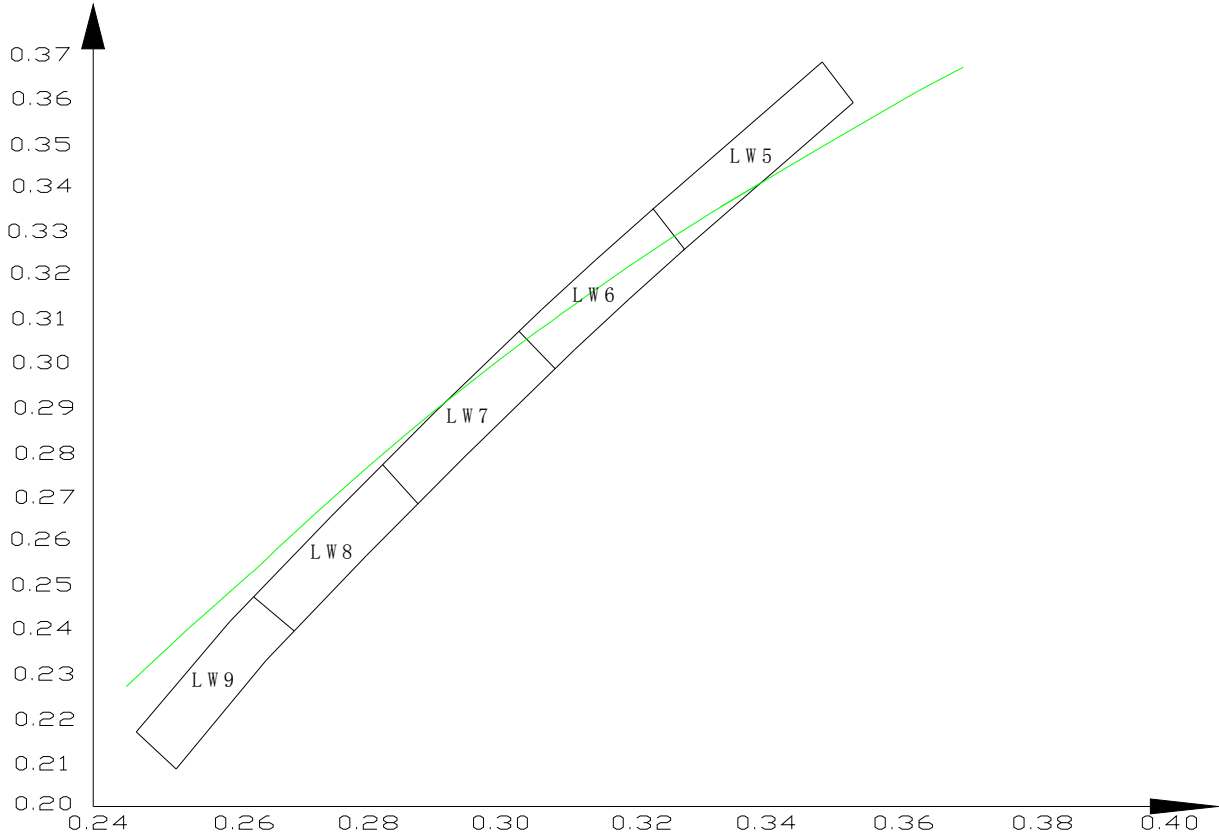
Part Number	Lens color	Source Color	Luminous Intensity lv / mcd at $I_F = 20\text{mA}$ (Note 5)			Forward Voltage / V at $I_F = 20\text{mA}$			Viewing Angle / Deg (Note 6)
			Min.	Typ.	Max.	Min.	Typ.	Max.	
WW05A3SWT4-N	Water Clear	White	20000	30000	---	2.8	---	3.4	15°
Reverse Voltage = 5V					Reverse Current $\leq 5\mu\text{A}$				

Notes:

1. All dimensions are in millimeter.
2. Tolerance of measurement is $\pm 0.25\text{mm}$ (.01") unless others otherwise noted.
3. Protruded resin under flanges is 1.0mm(0.4") max.
4. Lead spacing is measured where the leads emerge from the package.
5. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve. Tolerance of measurement of luminous intensity is $\pm 15\%$
6. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity. It use many parameters that correspond to the CIE 1931 2° Tolerance of measurement of angle is ± 5 degree
7. Caution in ESD: Static Electricity and surge damages the LED. It is recommended to use a wrist band or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.
8. X, Y, and Z are CIE1931 2° values of Red, Green and Blue content of the measurement. Color Coordinates Measurement allowance is ± 0.01
9. Specifications are subject to change without notice.



Chromaticity Coordinates Specifications for Bin Grading: COLOR RANKS (IF=20mA;Ta=25°C)



Notes:

Color Ranks		White			
LW5	X	0.3065	0.3124	0.3391	0.3332
	Y	0.3270	0.3186	0.3676	0.3760
LW6	X	0.2865	0.2924	0.3191	0.3132
	Y	0.2903	0.2819	0.3309	0.3393
LW7	X	0.2731	0.2790	0.3057	0.2998
	Y	0.2658	0.2574	0.3064	0.3148
LW8	X	0.2597	0.2656	0.2924	0.2865
	Y	0.2413	0.2329	0.2819	0.2903
LW9	X	0.2464	0.2523	0.2790	0.2731
	Y	0.2168	0.2084	0.2574	0.2658

Color	Group	Customer Ranks	Factory code	TC(K)
White	5	LW5	LDc-f	5500-6500
	6	LW6	LD9-c	6500-8500
	7	LW7	LD7-a	8000-12000
	8	LW8	LD5-8	10000-20000
	9	LW9	LD3-6	15000-30000

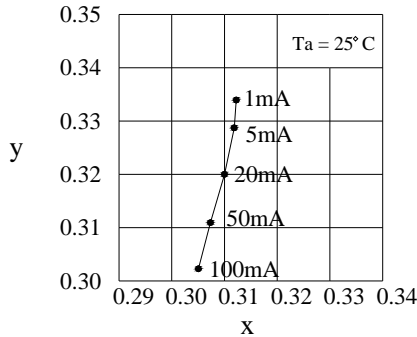
*Customer can choose any group

*Tolerance of Color Temperature is upper 9000K ±800K / 9000K-5000K ±500K / below 5000K ±200K

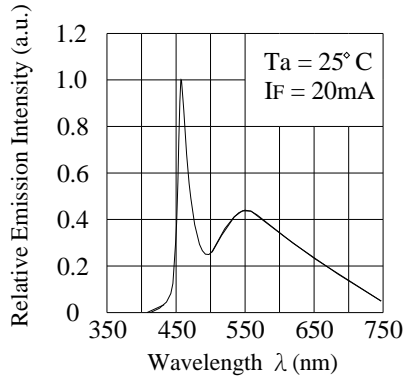
*X and Y are CIE1931; Color Coordinates Measurement allowance is ±0.01

Typical Characteristic for Super Bright White LED

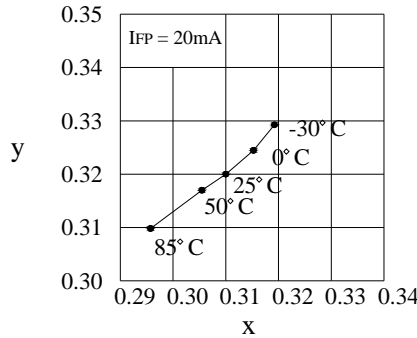
Forward Current vs. Chromaticity Coordinate (λD)



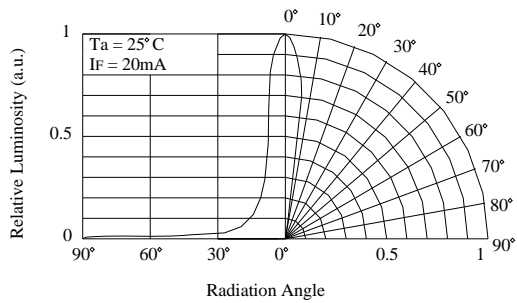
Spectrum



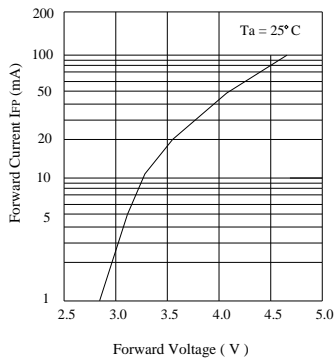
Ambient Temperature vs. Chromaticity Coordinate (λD)



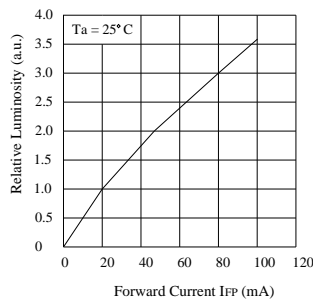
Directivity (Angle : 15°)



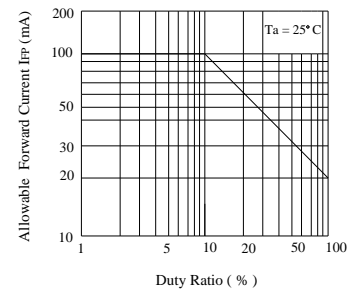
Forward Voltage vs. Forward Current



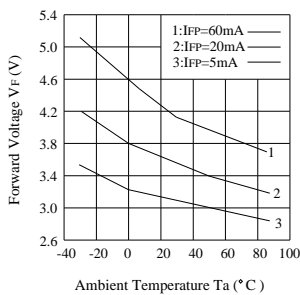
Forward Current vs. Relative Luminosity



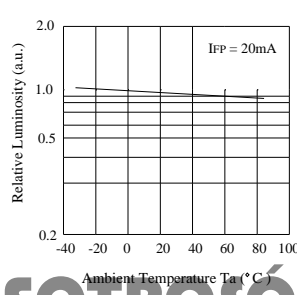
Duty Ratio vs. Allowable Forward Current



Ambient Temperature vs. Forward Voltage



Ambient Temperature vs. Relative Luminosity



Ambient Temperature vs. Allowable Forward Current

