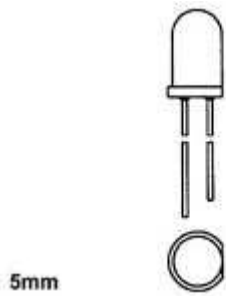


# WHITE LED 5mm WATER-CLEAR - 20000mcd 20°

Order Code: L-5WCN/5



## Specifications

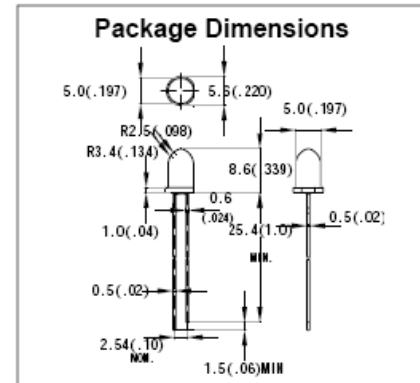
- case: 5mm
- emitting colour + material: super white GaN/SiC
- wave length: 465nm
- case colour: water clear
- luminous intensity: 20000mCd (If=20mA)
- viewing angle: 20°
- forward voltage: 3.2V

**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
Derating Linear From 50°C	0.4	mA/°C
Reverse Voltage	5	V
Operating Temperature Range	-40°C to +80°C	
Storage Temperature Range	-40°C to +80°C	
Lead Soldering Temperature [ 4mm(.157") From Body]	260°C for 3 Seconds	



**Electrical Optical Characteristics at Ta=25°C**

Part Number	Lens color	Source Color	Luminous Intensity Iv / mcd at If = 20mA (Note 5)			Forward Voltage / V at If = 20mA			Viewing Angle / Deg (Note 6)
			Min.	Typ.	Max.	Min.	Typ.	Max.	
WW05C3SWQ4-N1	Water Clear	White	15000	20000	---	---	3.2	4.0	20°
Reverse Voltage = 5V					Reverse Current = 50µA				

**Color Ranks (Note 8)**

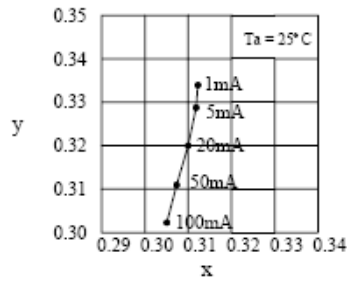
a1					a0				
x	0.226	0.255	0.278	0.256	x	0.245	0.293	0.307	0.27
y	0.192	0.248	0.230	0.191	y	0.229	0.317	0.276	0.216
b0					c0				
x	0.274	0.33	0.33	0.292	x	0.305	0.385	0.38	0.313
y	0.286	0.36	0.307	0.255	y	0.33	0.395	0.368	0.285

Color Coordinates Measurement allowance is  $\pm 0.01$

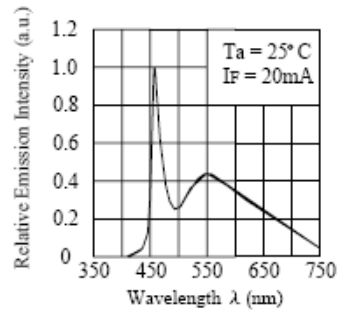
**Notes:**

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  $\pm 5\%$
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  $\pm 0.5$  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  $\pm 0.01$
9. Specifications are subject to change without notice.

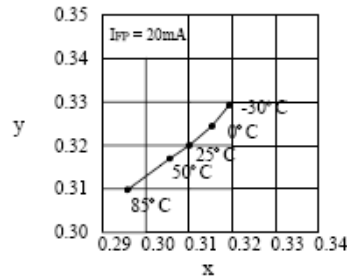
Forward Current vs. Chromaticity Coordinate ( $\lambda D$ )



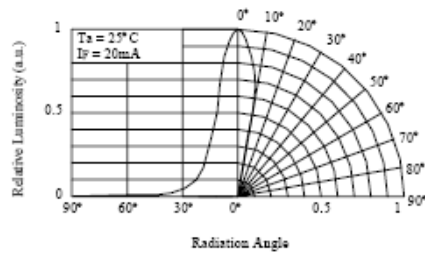
Spectrum



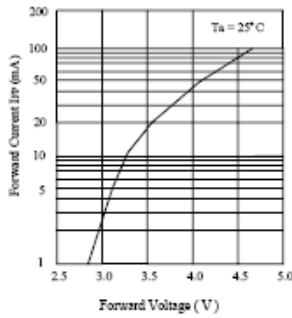
Ambient Temperature vs. Chromaticity Coordinate ( $\lambda D$ )



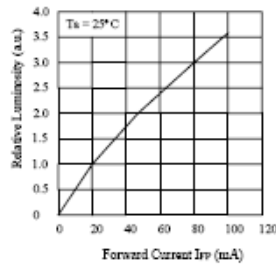
Directivity (Angle : 20°)



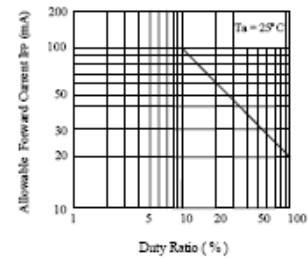
Forward Voltage vs. Forward Current



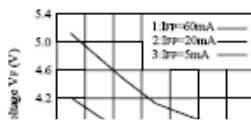
Forward Current vs. Relative Luminosity



Duty Ratio vs. Allowable Forward Current



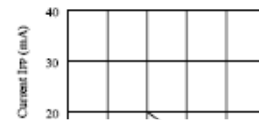
Ambient Temperature vs. Forward Voltage



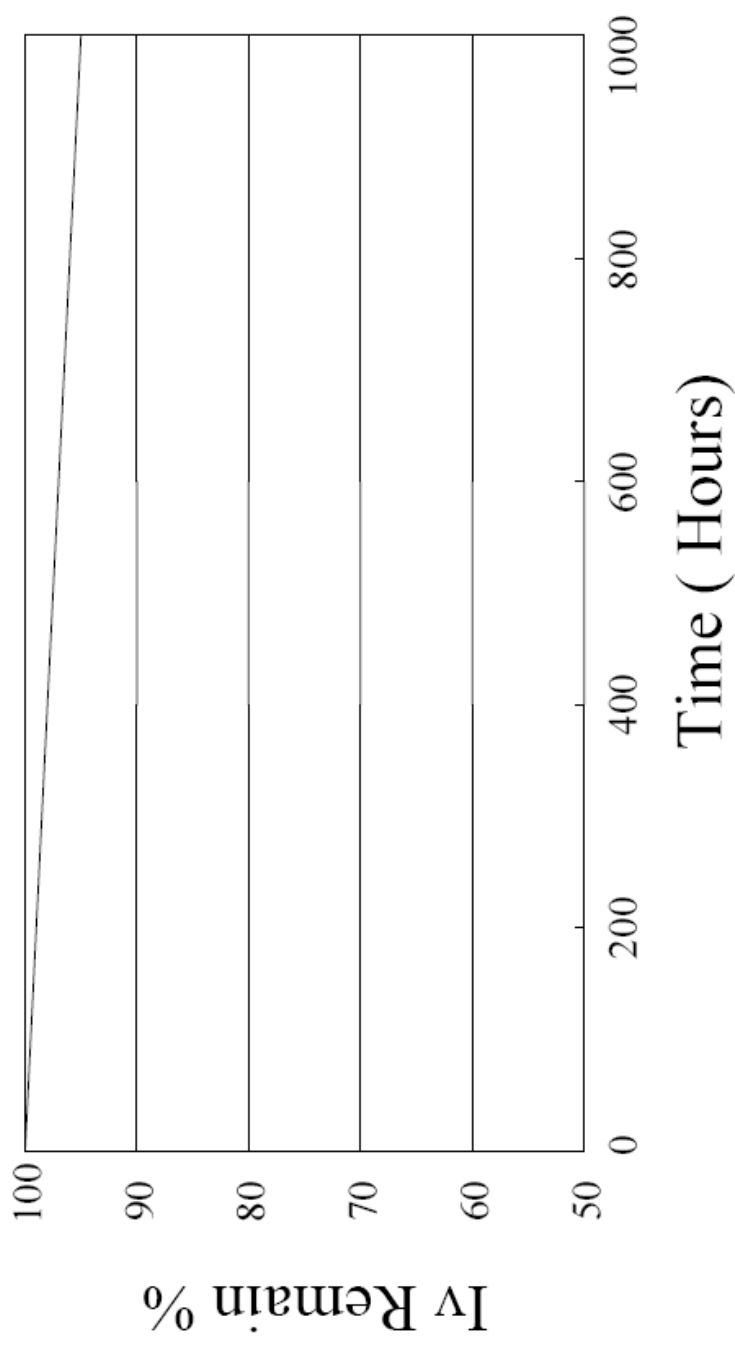
Ambient Temperature vs. Relative Luminosity



Ambient Temperature vs. Allowable Forward Current

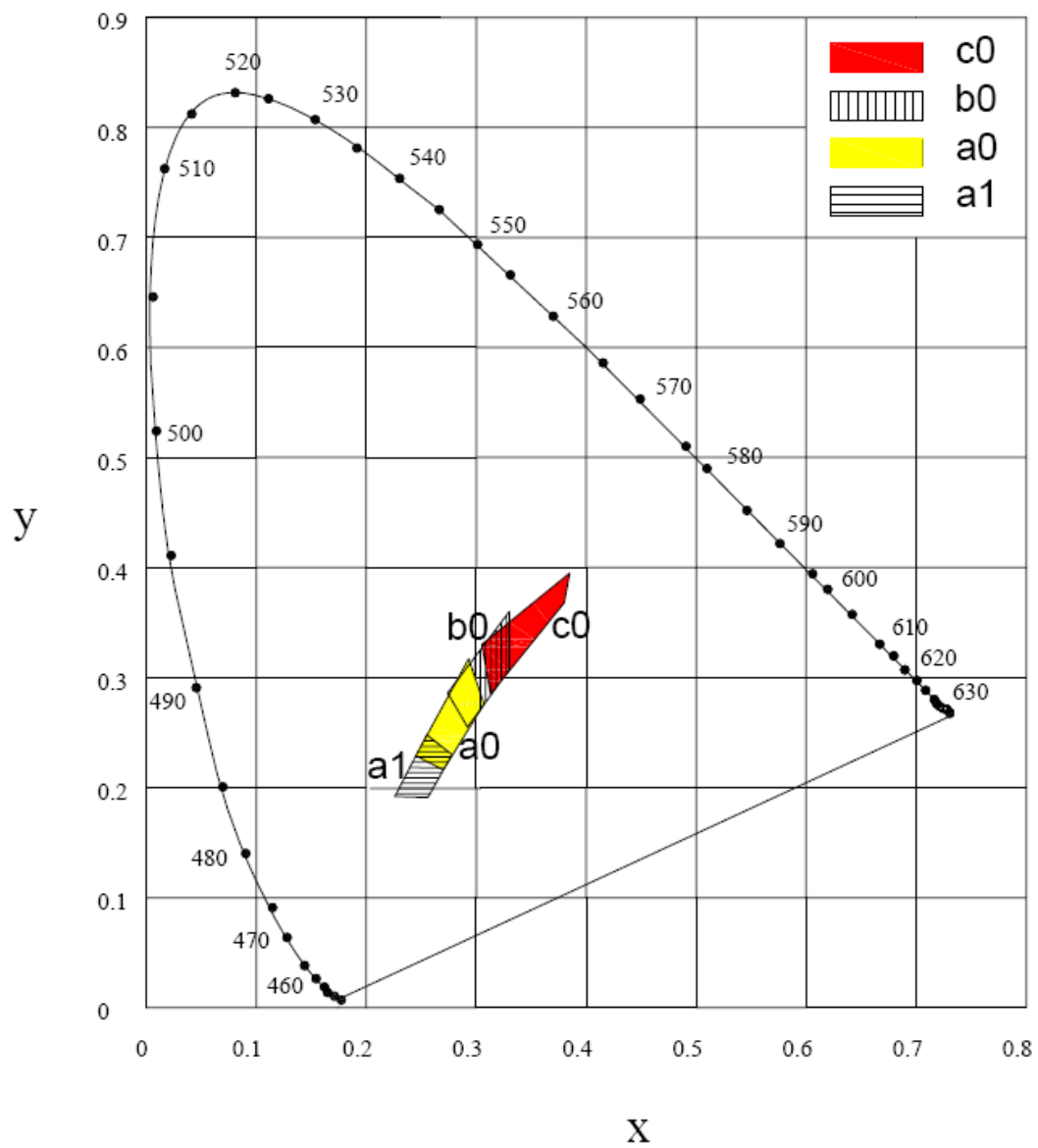


# Super Bright White LED "Q" Class Series Light Intensity (Iv) vs Time(T)



Operating Current : 20mA  
Operating Temperature: 25° C

# CIE Chromaticity Diagram



\* Color Coordinates Measurement allowance is  $\pm 0.01$