

# TAIWAN OASIS LED DATA SHEET

Part No.TOL-502SWQC-ES017



- ◆ Pb free product
- ◆ Snow White Emitting LED.
- ◆ High Efficiency LED,  $\phi 5\text{mm}$ , Water Clear Package.
- ◆ The device are made with InGaN/GaN Light Emitting Diode .
- ◆ RoHS compliant

Under Development	<input checked="" type="checkbox"/>
Mass Production	<input type="checkbox"/>

## Absolute Maximum Ratings

Tamb=25° C, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
DC Forward current		If	20	mA
Peak Forward current	1/10 duty cycle@1kHz	Ifp	100	mA
Power dissipation	Tamb≤60°C	Pv	108	mW
Junction temperature		Tj	85	° C
Operating temperature range		Tamb	-40~85	° C
Storage temperature range		Tstg	-40~100	° C

## Optical and Electrical Characteristics

Tamb=25° C, unless otherwise specified

Parameter	Test condition	symbol	Min.	Typ.	Max.	Unit
Forward Voltage	If=20mA	Vf	2.8	3.2	3.6	v
Reverse Current	Vr=5v	Ir			10	μA
Luminous Intensity	If=20mA	Iv		11800		mcd
Full viewing angle	If=20mA	2θ1/2		15		deg.
Chromaticity Coordinates	If=20mA	x		0.30		--
	If=20mA	y		0.31		--

\*Forward voltage measurement allowance is  $\pm 0.1\text{V}$ .

\*Luminous intensity measurement allowance is  $\pm 15\%$

\*Full viewing angle measurement allowance is  $\pm 5^\circ$  .

\*Color coordinates measurement allowance is  $\pm 0.01$ .

## Recommended soldering conditions

Solder the LED no closer than 3mm from the base of the epoxy bulb. Soldering beyond the base of the tie bar is recommended.

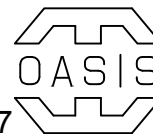
Manual Soldering with a Soldering Iron: Use of a soldering iron of less than 35 watts is recommended. The iron temperature must be kept below 315° C and soldering time no more than 3 seconds.

Wave soldering: Preheat: 110° C max. Preheat time: 60s max. Solder bath temperature: 260° C max.

Dipping time: 3 seconds max.

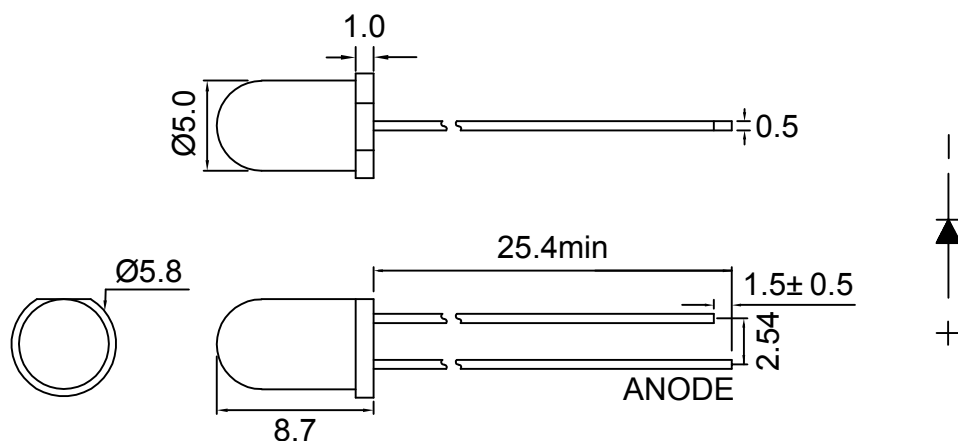
We reserve the right to change to improve technical design and may do so without further notice.

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## Package dimensions & Internal Circuit Diagram



Unit	mm
Scale	—
Rev.	Draft
Tolerance	± 0.25

## Bin Code list

### Luminous Intensity Bin Limits

Unit: mcd@20mA

Bin code	Min.	Max.
B50	9400	11800
B51	11800	14800

### Forward Voltage Bin Limits

Unit: V@20mA

Bin code	Min.	Max.
V4	2.6	3.0
V5	3.0	3.4
V6	3.4	3.8

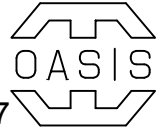
\*Tolerance for each intensity bin limit is ± 15%

\*Tolerance for each forward voltage bin limit is ± 0.1V.

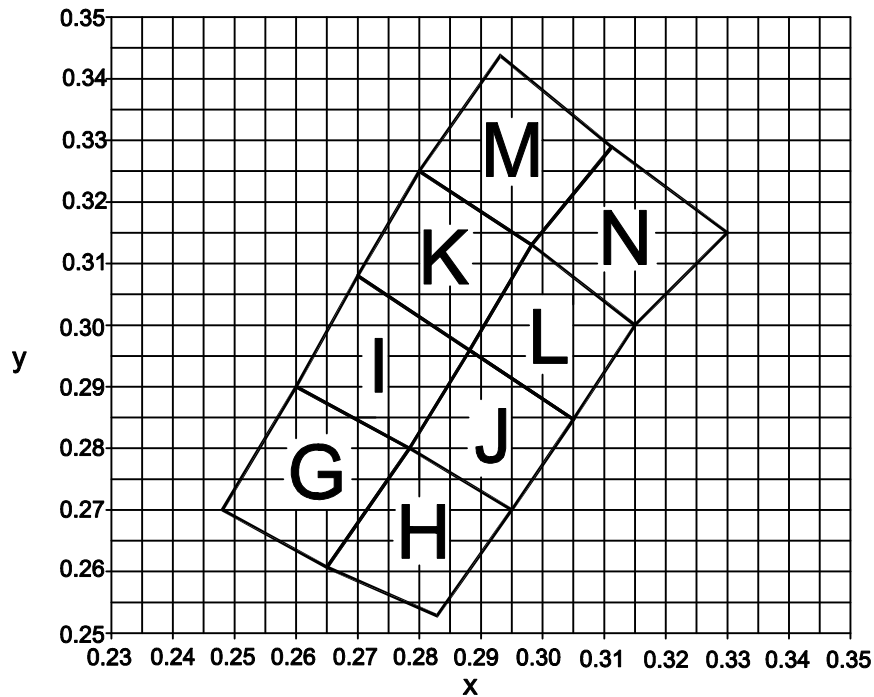
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## Chromaticity Diagram



	1(X,Y)	2(X,Y)	3(X,Y)	4(X,Y)
G	(0.248,0.270)	(0.260,0.290)	(0.278,0.280)	(0.265,0.261)
H	(0.265,0.261)	(0.278,0.280)	(0.295,0.270)	(0.283,0.253)
I	(0.260,0.290)	(0.270,0.308)	(0.288,0.296)	(0.278,0.280)
J	(0.278,0.280)	(0.288,0.296)	(0.305,0.285)	(0.295,0.270)
K	(0.270,0.308)	(0.280,0.325)	(0.298,0.313)	(0.288,0.296)
L	(0.288,0.296)	(0.298,0.313)	(0.315,0.300)	(0.305,0.285)
M	(0.280,0.325)	(0.293,0.343)	(0.311,0.329)	(0.298,0.313)
N	(0.298,0.313)	(0.311,0.329)	(0.330,0.315)	(0.315,0.300)

\*Tolerance for each color coordinates bin limit is  $\pm 0.01$ .

Drawner	Spencer
Checked	
Approved	

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