



CIEL LIGHT CO.,LTD

PRODUCT SPECIFICATION

Customer:_____

Customer's Model No.:_____

Customer's Drawing No.:_____

Model No.:_____CL-5013BGW1Z-001_____

Drawing No.:_____

Features

Low Power Consumption

High Efficiency

Round Type

T1 (5mm) Diameter

With Flange

Solder Leads Without Stand-off

Compliant With RoHS

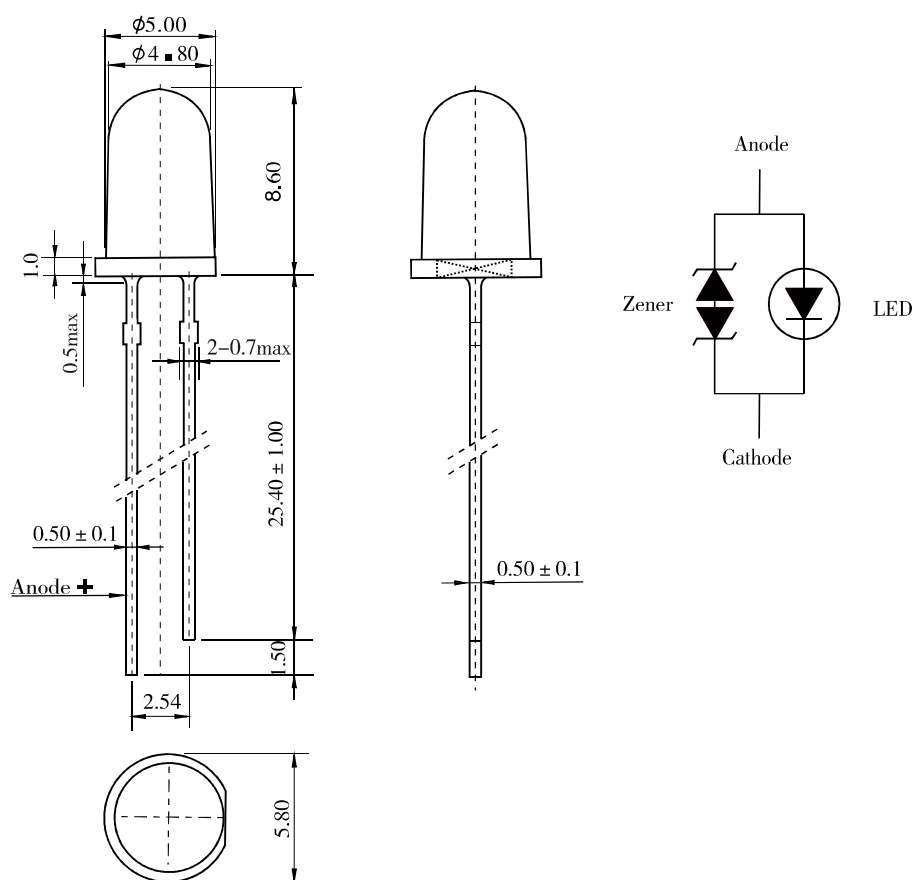
Descriptions

Chip Material: InGaN/GaN

Emitting Color: Bluish Green

Lens Color: White Diffused

Outline Drawing



Tolerance is $\pm 0.25\text{mm}$ unless otherwise noted, Unit=mm
Pin bending $\leq \text{length} \times 1\%$

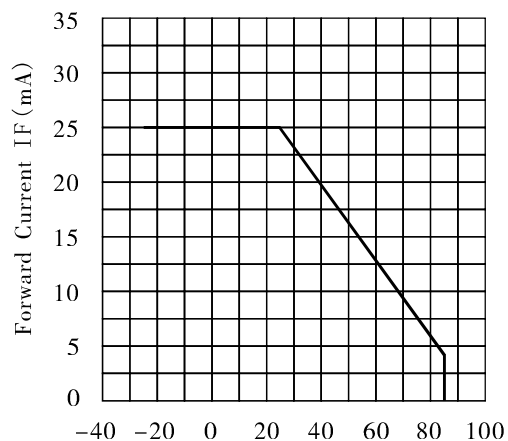
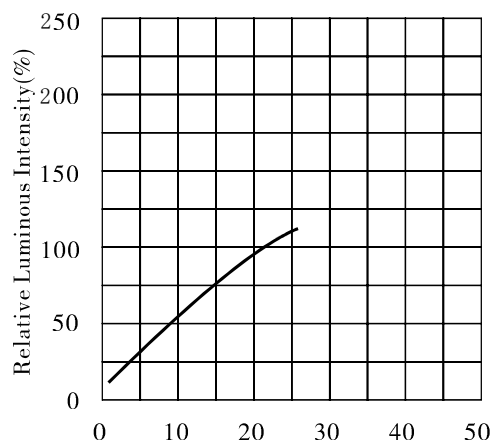
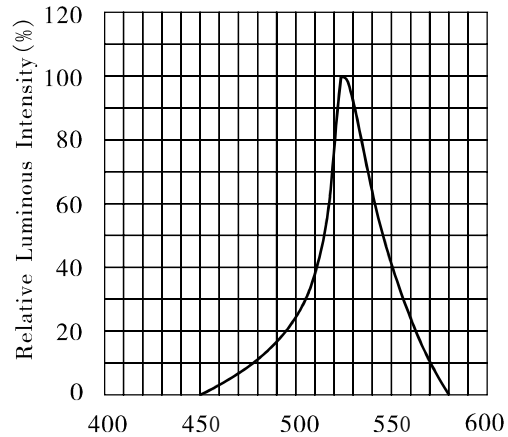
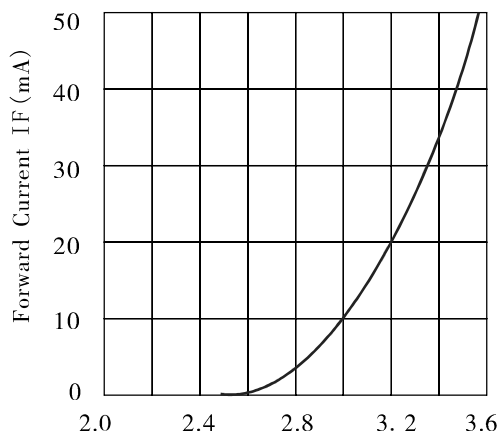
Electrical Optical Characteristics (Ta=25℃)

Parameter	Symbol	Bluish Green			Unit	Test Condition
		Min	Typ	Max		
Forward Voltage	V_F	---	3.2	3.6	V	IF=20mA
Luminous Intensity	I_V	2000	---	3000	mcd	IF=20mA
Peak Wavelength	λ_P	---	500	---	nm	IF=20mA
Dominant Wavelength	λ_d	500	---	505	nm	IF=20mA
Spectral Line half-width	$\Delta \lambda$	---	30	---	nm	IF=20mA
Reverse Leakage Current	I_R	---	---	50	μA	VR=5V
Viewing Angle	$2\theta_{1/2}$	---	30	---	Deg	IF=20mA
Angle measurement error value $\pm 8^\circ$						

Absolute Maximum Parameters (Ta=25℃)

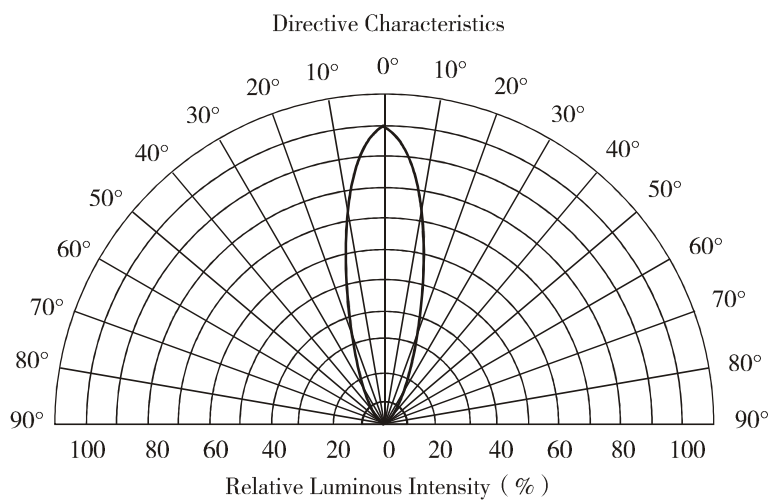
Parameter	Symbol	Condition	Rating	Unit
Power Dissipation	P_D	---	90	mW
Reverse Voltage	V_R	---	5	V
Forward Average Current	I_F	---	25	mA
Temperature Coefficient	I/C	---	0.33	mA/℃
Pulse Current	IFP	Duty=1/10,1kHz	100	mA
Operating Temperature Range	T_{opr}	---	-40 ~ +85	℃
Storage Temperature Range	T_{stg}	---	-40 ~ +85	℃
Soldering Condition	T_{sd}	---	260℃/5sec	℃

Typical Electro/Optical Characteristic Curves ($T_a=25^{\circ}\text{C}$)



Forward Current I_F (mA)

Ambient Temperature T_a ($^{\circ}\text{C}$)



Lighting Intensity BIN Table

Luminous Intensity		Unit:mcd @20mA
BIN Code	Min	Max
A	2000	3000

Dominant Wavelength BIN Table

Dominant Wavelength		Unit:nm @20mA
BIN Code	Min	Max
1	500	501
2	501	502
3	502	503
4	503	504
5	504	505

Reliability Test Conditions

Test Item	Test Condition	Result	Judgment Criteria
Consecutive operating life test	IF=20mA, T=25℃, t=168h	0/100	Forward Voltage $V_F(V) = \text{Upper Limit} \times 1.2$ Reverse Leakage Current $I_R(\mu A) = \text{Upper Limit} \times 2.0$ Luminous Intensity IV $(\text{mcd}) = \text{Lower Limit} \times 0.7$
High temperature storage life test	T=100℃, t=168h	0/100	
Low temperature storage life test	T=25℃, t=168h	0/100	
High temperature humidity storage life test	T=85 ± 2℃, RH=85% ± 3, t=168h	0/100	
Temperature cycle test	-25℃~25℃~100℃ 30min 5min 30min 10cycles	0/100	
Thermal shock test	100℃ 0℃ 5min 5min 20cycles	0/100	
Soldering heat test	T=260 ± 5℃, t=10s ± 1s	0/100	
Solderability test	T=235 ± 5℃, t=5s ± 0.5s	0/100	Steeped Part ≥ 95%
Fall test	h=100cm, 50times	0/100	Surface Appearance Photoelectric Properties Intact
Terminal strength test	W=9.8N, t=30 ± 5s	0/100	
Lead bending test	W=4.9N, 2times	0/100	