



**CIEL LIGHT CO., LTD.**

**PRODUCT SPECIFICATION**

Model No.: CLSD-56A2AUB-21

Drawing No.: \_\_\_\_\_

Customer: \_\_\_\_\_

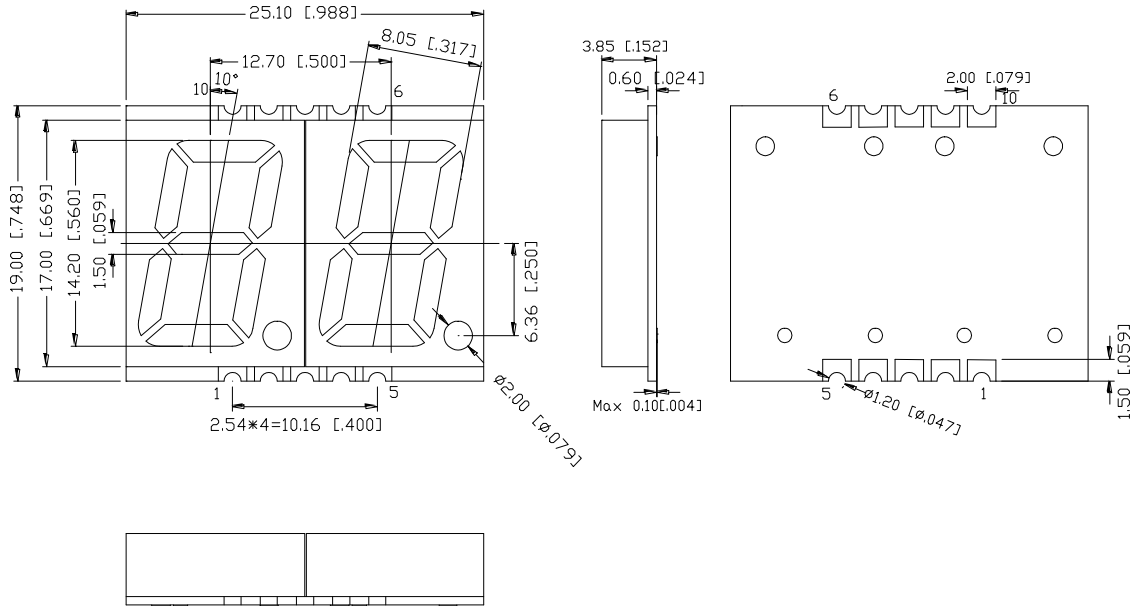
Customer's Model No.: \_\_\_\_\_

Customer's Drawing No.: \_\_\_\_\_

Descriptions

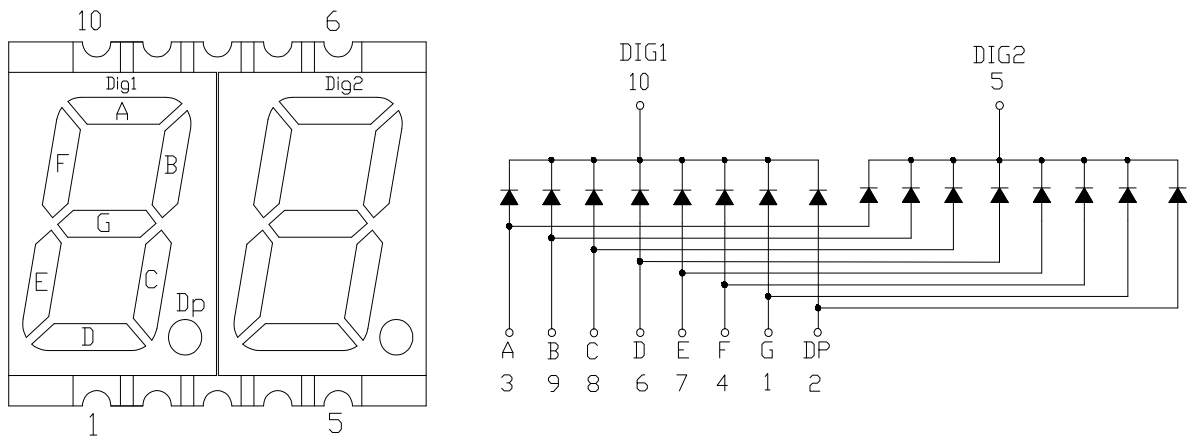
1. Emitting Color: Blue
2. Lens Color: White Diffused
3. Surface Black Color : Gray
4. Dice Material: InGaN/GaN

Outline Drawing



Tolerance is  $\pm 0.25\text{mm}$  unless otherwise noted, Unit=mm

Internal Circuit Diagram(C.C.)



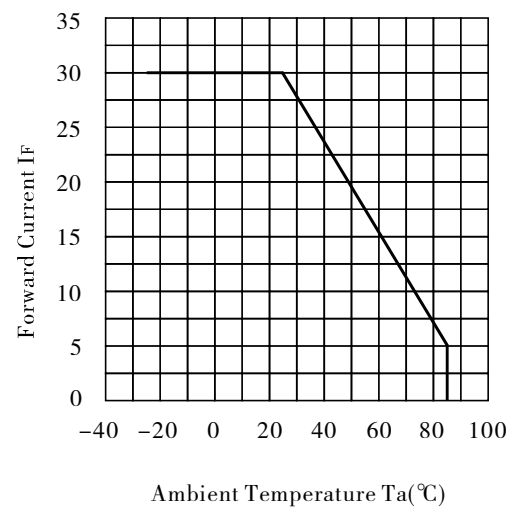
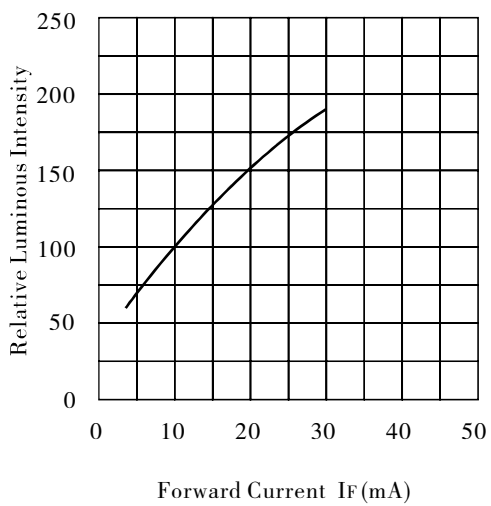
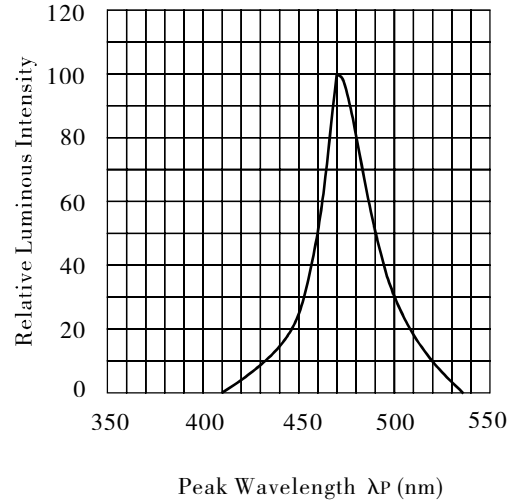
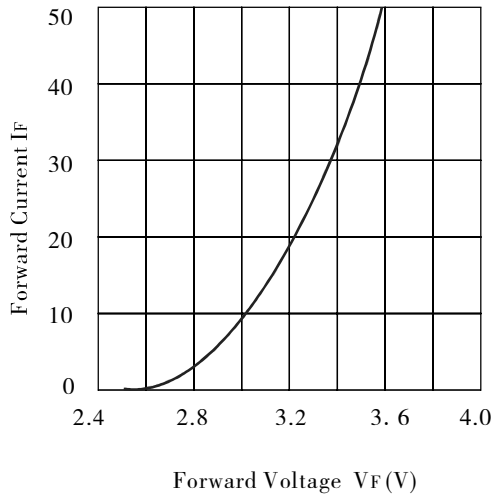
Electrical optical characteristics ( Ta=25°C )

Parameter	Symbol	Super Blue			Unit	Test Condition
		Min	Typ	Max		
Forward Voltage	V <sub>F</sub>	---	3.2	3.6	V	IF=20mA
Luminous Intensity	I <sub>V</sub>	19.0	37.2	---	mcd	IF=10mA
Peak Wavelength	λ <sub>P</sub>	---	468	---	nm	IF=20mA
Dominant Wavelength	λ <sub>d</sub>	---	470	---	nm	IF=20mA
Spectral Line half-width	Δλ	---	30	---	nm	IF=20mA
Reverse Leakage Current	I <sub>R</sub>	---	---	50	μA	VR=5V

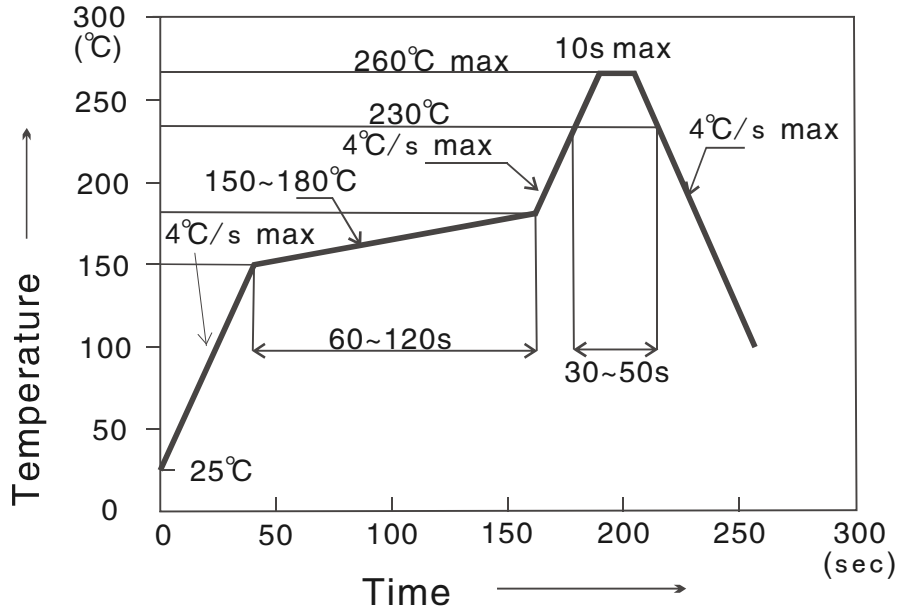
Absolute Maximum Parameters(Ta=25°C)

Parameter	Symbol	Condition	Rating	Unit
Power Dissipation	P <sub>D</sub>	---	120	mW
Reverse Voltage	V <sub>R</sub>	---	5	V
Forward Average Current	I <sub>F</sub>	---	30	mA
Temperature Coefficient	I/C	---	0.4	mA/°C
Pulse Current	IFP	Duty=1/10,1kHz	100	mA
Operating Temperature Range	T <sub>opr</sub>	---	-25 ~ +85	°C
Storage Temperature Range	T <sub>stg</sub>	---	-30 ~ +100	°C
Soldering Condition	T <sub>sd</sub>	---	260°C/5sec	°C

Typical Electro/Optical Characteristic Curves(Ta=25°C)



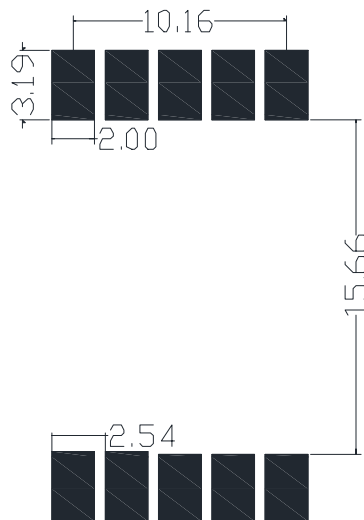
IR Reflow Temperature/Time



NOTES:

- 1、 We recommend the reflow temperature 245°C(+/-5°C).the maximum soldering temperature should be limited to 260V.
- 2、 Don' t cause stress to the epoxy resin while it is exposed to high temperature.
- 3、 Number of reflow process shall be 2 times or less

Soldering Pad Size



Reliability Test Conditions

Test Item	Test Condition	Result	Judgment Criteria
Consecutive operating life test	IF=20mA, T=25°C, t=168h	0/10	Forward Voltage VF(V)= Upper Limit × 1.2 Reverse Leakage Current IR(μ A)=Upper Limit × 2.0 Luminous Intensity IV (mcd)=Lower Limit × 0.7
High temperature storage life test	T=100°C, t=168h	0/10	
Low temperature storage life test	T=25°C, t=168h	0/10	
High temperature humidity storage life test	T=85 ± 2°C, RH=85% ± 3, t=168h	0/10	
Temperature cycle test	-25°C~25°C~100°C 30min 5min 30min 10cycles	0/10	
Thermal shock test	100°C 0°C 5min 5min 20cycles	0/10	
Soldering heat test	T=260 ± 5°C, t=10s ± 1s	0/10	
Solderability test	T=235 ± 5°C, t=5s ± 0.5s	0/10	Steeped Part ≥ 95%
Fall test	h=100cm, 50times	0/10	Surface Appearance Photoelectric Properties Intact