



CIEL LIGHT CO.,LTD.

PRODUCT SPECIFICATION

Model No.: CLD-4021BUW-11DZ

Drawing No.: _____

Customer: _____

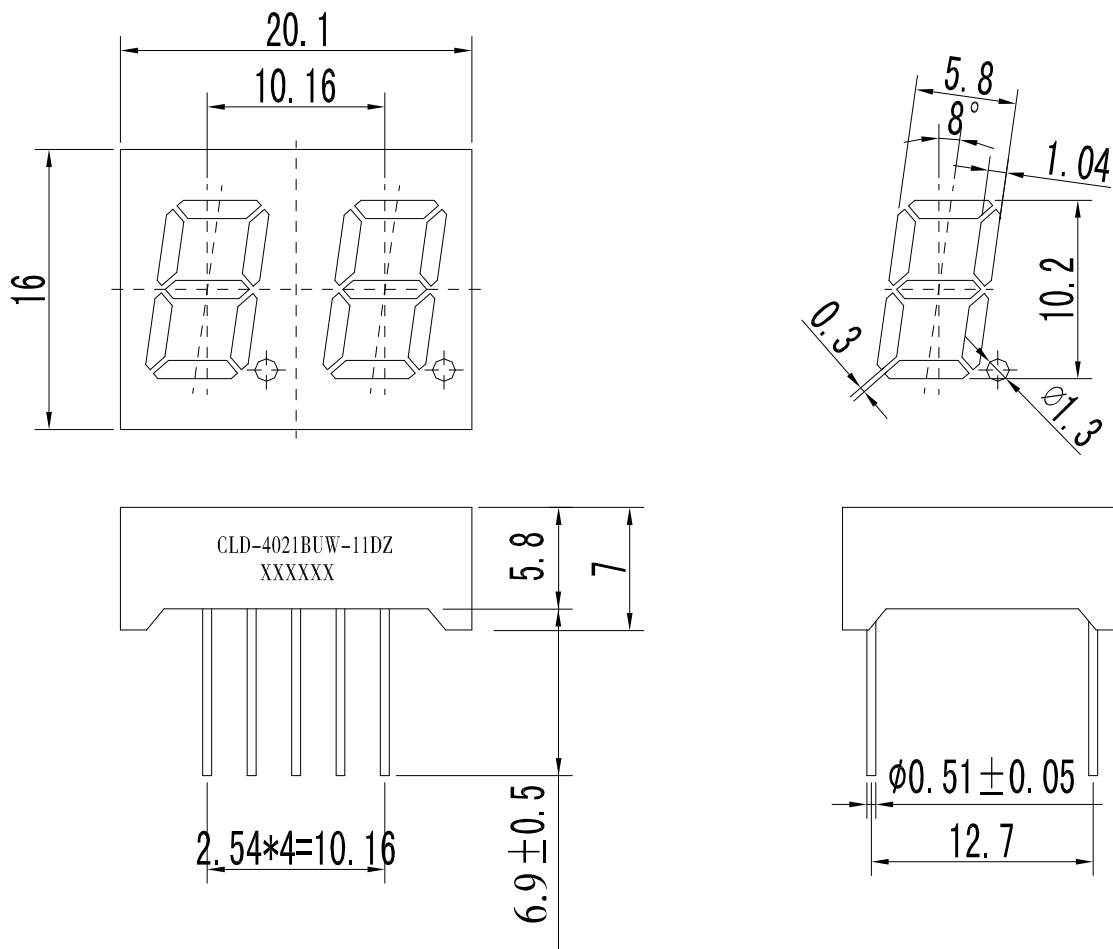
Customer's Model No.: _____

Customer's Drawing No.: _____

Descriptions

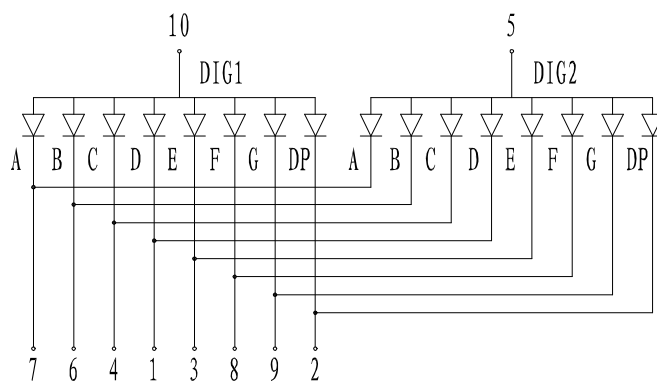
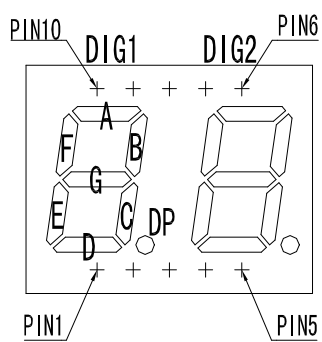
1. Emitting Color: White Mini LED
2. Lens Color: White Diffused
3. Surface Ink Color : Black
4. Dice Material: InGaN/GaN

Outline drawing



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

Internal Circuit Diagram (C.C.)



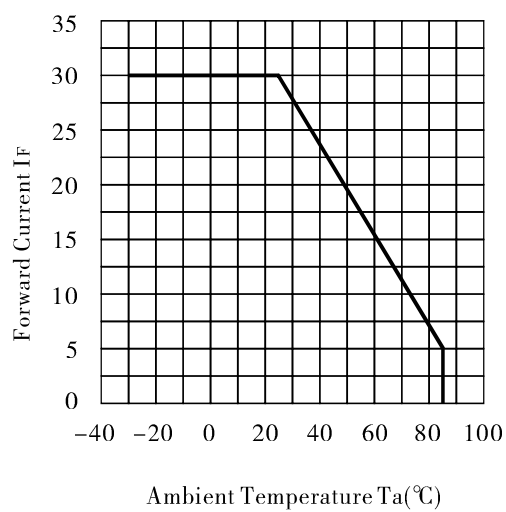
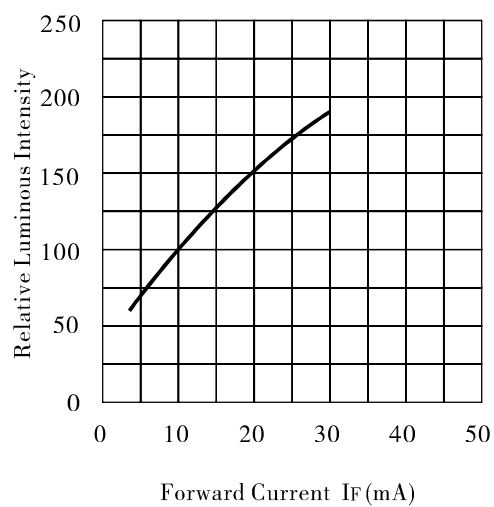
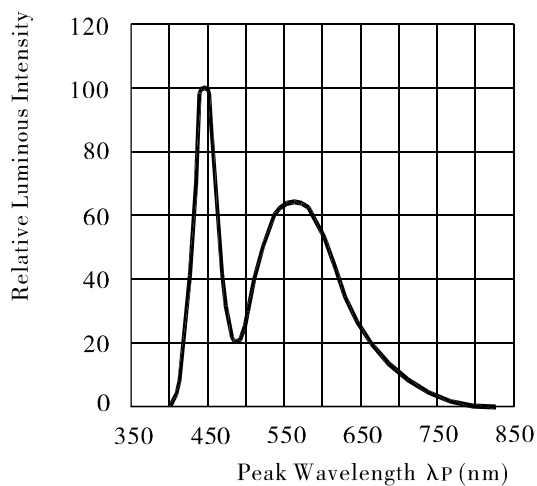
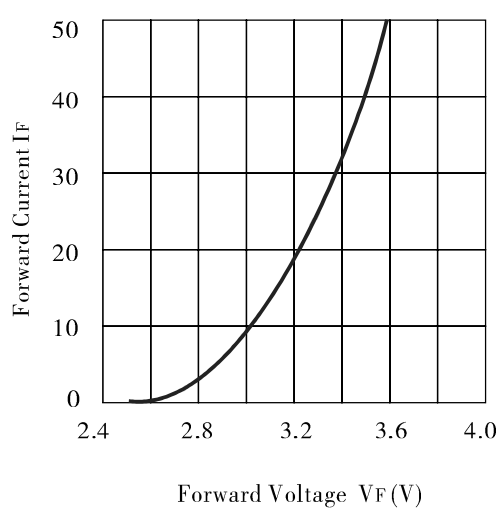
Electrical optical characteristics (Ta=25℃)

Parameter	Symbol	Ultra White			Unit	Test Condition
		Min	Typ	Max		
Forward Voltage	V _F	---	3.2	3.6	V	IF=20mA
Luminous Intensity	I _V	13.7	26.6	---	mcd	IF=10mA
Chromaticity Coordinates	X	---	0.28	---	nm	IF=20mA
	Y	---	0.27	---	nm	IF=20mA
Spectral Line half-width	Δλ	---	20	---	nm	IF=20mA
Reverse Leakage Current	I _R	---	---	50	μA	VR=5V

Absolute Maximum Parameters(Ta=25℃)

Parameter	Symbol	Condition	Rating	Unit
Power Dissipation	P _D	---	80	mW
Reverse Voltage	V _R	---	5	V
Forward Average Current	I _F	---	30	mA
Temperature Coefficient	I/C	---	0.33	mA/℃
Pulse Current	IFP	Duty=1/10,1kHz	100	mA
Operating Temperature Range	T _{opr}	---	-25 ~ +85	℃
Storage Temperature Range	T _{stg}	---	-30 ~ +100	℃
Soldering Condition	T _{sd}	---	260℃/5sec	℃

Typical Electro-Optical characteristic curves ($T_a=25^{\circ}\text{C}$)



Reliability test conditions

Test Item	Test Condition	Result	Judgment criteria
Consecutive operating life test	IF=20mA, T=25℃, t=168h	0/12	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 I_v (mcd)=Lower Limit $\times 0.7$
High temperature storage life test	T=100℃, t=168h	0/12	
Low temperature storage life test	T=-25℃, t=168h	0/12	
high Temperature humidity storage life test	T=85 ± 2℃, RH=85% ± 3, t=168h	0/12	
Temperature cycle test	-25℃~25℃~100℃, 30min 5min 30min 10cycles	0/12	
Thermal shock test	100℃ 0℃ 5min 5min 20 cycles	0/12	
Soldering heat test	T=260 ± 5℃, t=10s ± 1s	0/12	Steeped Part ≥ 95%
Solderability test	T=230 ± 5℃, t=5s ± 0.5s	0/12	
Fall test	h=100cm, Free fall, 3times	0/12	Intact
Terminal strength test	W=9.8N, t=30 ± 5s	0/12	
Lead Bending test	W=4.9N, 2times	0/12	