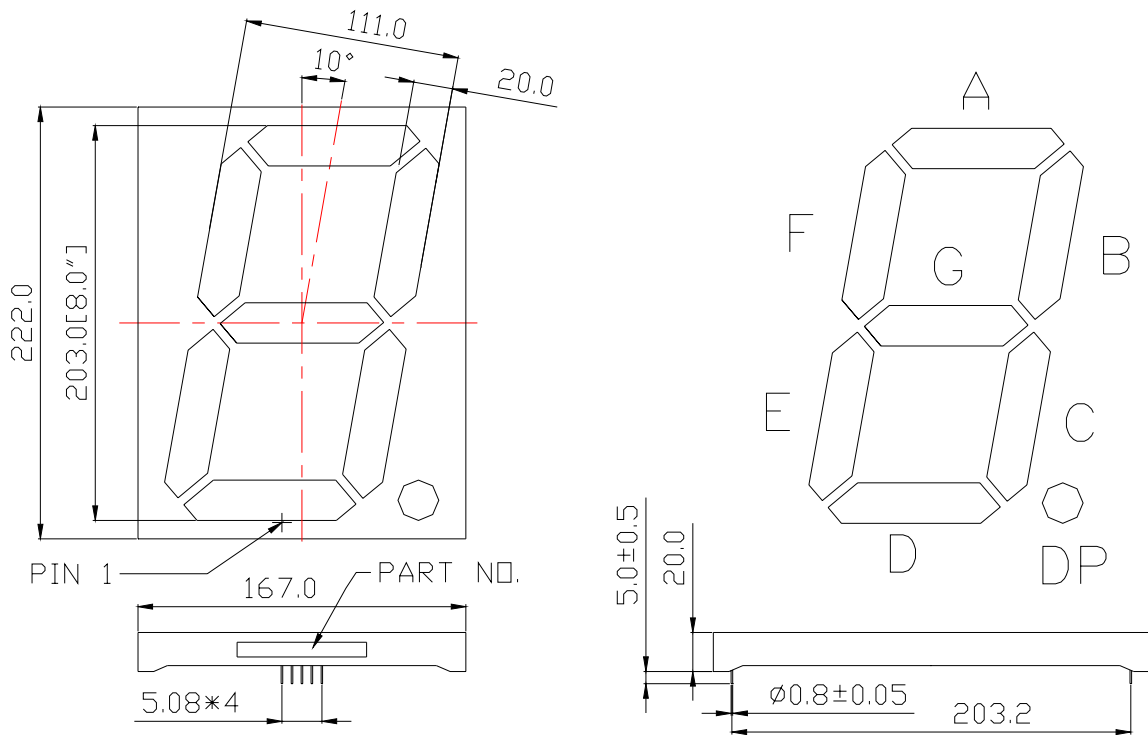


**WCN1-00H0B7-A21****SPECIFICATION**

WCN			CUSTOMER Confirmed
Prepared by	Checked by	Approved by	
Fei	Athena		
REVISION RECORD			

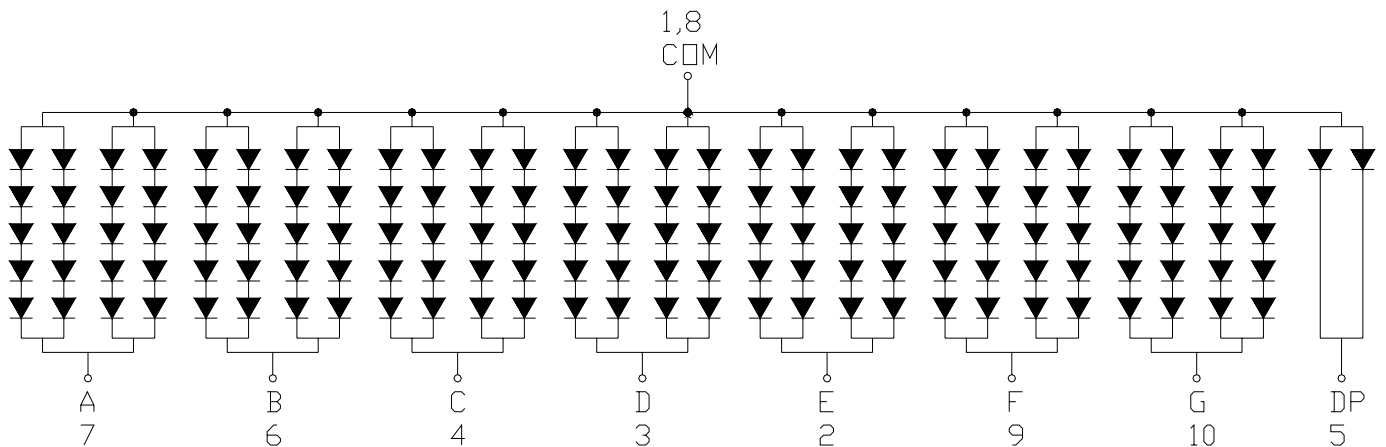
**REVISION: A0**

■ **Outer Dimension:**



Notes: Unless otherwise stated, The tolerance is  $\pm 0.25\text{mm}$ .

■ **Circuit Diagram:**



■ **Pin Connection:**

PIN NO.	CONNECTION	PIN NO.	CONNECTION
1	Common Anode	6	Cathode B
2	Cathode E	7	Cathode A
3	Cathode D	8	Common Anode
4	Cathode C	9	Cathode F
5	Cathode DP	10	Cathode G

■ **Features:**

- High Reliability
- Color: Blue
- Low Power Requirement
- Easy Assembly

■ **Description:**

- Single Digit LED Display
- Digit Height:203mm(8.0")
- Black Face and Milky Segment

■ **Absolute Maximum Rating (Ta=25°C) :**

Parameter	Symbol	Condition	Color	Rating	Units
Power Dissipation Per Segment/DP	P <sub>d</sub>	—	Blue	1100/110	mW
Forward Current Per Segment/DP	I <sub>F</sub>	—	Blue	80/40	mA
Peak Forward Current Per Segment	I <sub>FP</sub>	1/10 Duty 10KHz	Blue	100	mA
Reverse Voltage Per Segment/DP	V <sub>R</sub>	—	Blue	25/5	V
Operating Temperature Range	Topr	—	—	-35~+85	°C
Storage Temperature Range	Tstg	—	—	-35~+85	°C

■ **Electrical/Optical Characteristics Rating (Ta=25°C)**

Item	Symbol	Test conditions	Location	Rating			Units
				Min.	Typ.	Max.	
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =80mA	Per Segment	—	16.0	18.0	V
		I <sub>F</sub> =40mA	DP	—	3.2	3.6	
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =25V	Per Segment	—	—	100	μA
		V <sub>R</sub> =5V	DP				
Luminous Intensity	I <sub>V</sub>	I <sub>F</sub> =40mA	Per Segment	37001	54000	77000	ucd
Wave Length	λ <sub>P</sub>	I <sub>F</sub> =80mA	Per Segment	—	460	—	nm
	λ <sub>D</sub>			465	470	475	
Spectral Line Half Width	△λ	I <sub>F</sub> =80mA	Per Segment	—	20	—	nm
Luminous Intensity Matching Ratio (Segment to Segment)	I <sub>v-m</sub>	I <sub>F</sub> =40mA	—	—	—	1.2:1	

■ **Luminous Intensity Sorting: (Luminous Intensity Tolerance is +/-10%)**

Rank	Symbol	Condition	Min	Max	Unit
X	X	I <sub>F</sub> =10mA	37001	43000	μcd
Y	Y	I <sub>F</sub> =10mA	43001	50000	μcd
Z	Z	I <sub>F</sub> =10mA	50001	58000	μcd
Z1	Z1	I <sub>F</sub> =10mA	58001	67000	μcd
Z2	Z2	I <sub>F</sub> =10mA	67001	77000	μcd

■ **Soldering Conditions: Soldering Temp. ≤ +260°C, Soldering Time. ≤ 3sec.**

(at 2mm Distance from The Case of Reflector Edge)

■ **Typical Electro-Optical Characteristics Curve:**

Fig1. Forward Current vs. Forward Voltage:

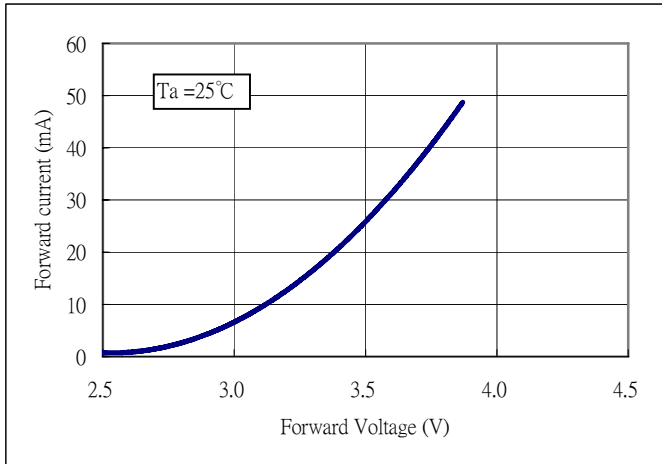


Fig2. Forward Current vs. Relative Intensity:

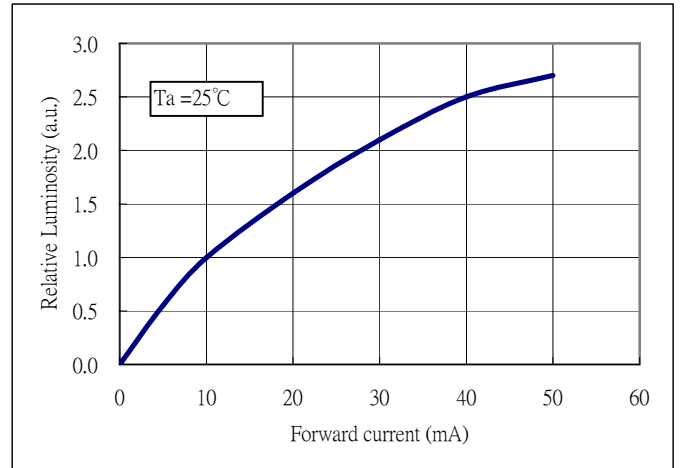


Fig3. Forward Current vs. Relative wavelength:

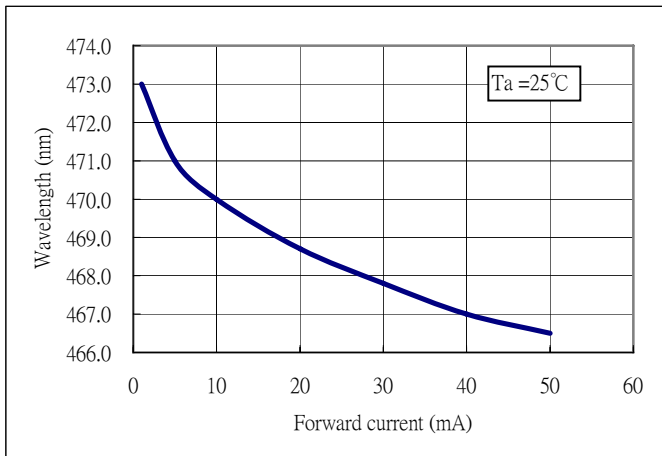
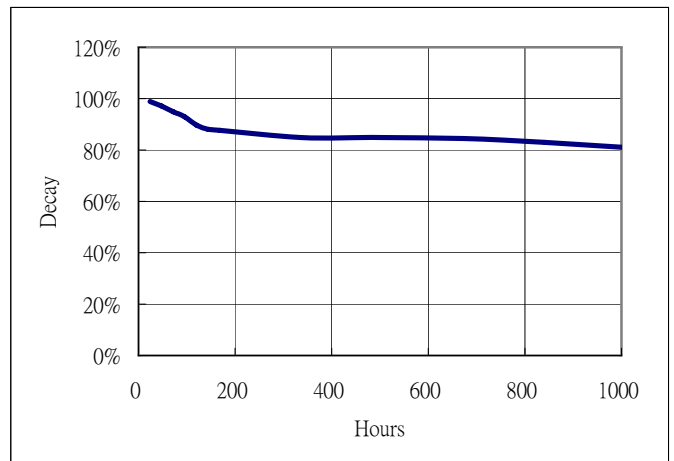


Fig4. Life Test at 20mA R.T. 1000hrs:



## ■ LED Displays Reliability Test:

CLASSIFICATION	TEST ITEM	DESCRIPTION AND TEST CONDITION
ENDURANCE TEST	OPERATION LIFE	EVALUATES RESISTANCE OF THE DEVICE WHEN OPERATED AT ELECTRICAL STRESS $T_a$ = UNDER ROOM TEMPERATURE $I_F = I_{F \text{ max}}$
	HIGH TEMPERATURE HIGH HUMIDITY STORAGE	EVALUATES MOISTURE RESISTANCE OF THE DEVICE WHEN STORED FOR A LONG TERM AT HIGH TEMPERATURE AND HUMIDITY $T_a = 65 \pm 5^\circ\text{C}$ RH=90~95%RH TEST TIME=240 $\pm$ 2Hrs
	HIGH TEMPERATURE STORAGE	EVALUATES DEVICE DURABILITY FOR LONG TERM STORAGE IN HIGH TEMPERATURE $T_a = 85 \pm 5^\circ\text{C}$ (COB: $T_a = 65 \pm 5^\circ\text{C}$ ) TEST TIME=1000Hrs(-24Hrs, +72Hrs)
	LOW TEMPERATURE STORAGE	EVALUATES DEVICE DURABILITY FOR LONG TERM STORAGE IN LOW TEMPERATURE $T_a = -35 \pm 5^\circ\text{C}$ TEST TIME=1000Hrs(-24Hrs, +72Hrs)
ENVIRONMENTAL TEST	TEMPERATURE CYCLING	EVALUATES RESISTANCE OF DEVICE AT THERMAL STRESSES OR EXPANSION AND CONTRACTION $85^\circ\text{C} \sim 25^\circ\text{C} \sim -35^\circ\text{C} \sim 25^\circ\text{C}$ 30min 5min 30min 5min 10 CYCLES(COB: $T_{\text{hot}}=65^\circ\text{C}$ , $T_{\text{cold}}=-25^\circ\text{C}$ )
	THERMAL SHOCK	EVALUATES DEVICE STRUCTURE AND STRUCTURE AND MECHANICAL RESISTANCE WHEN SUDDENLY EXPOSED AT SERVE CHANGES $85 \pm 5^\circ\text{C} \sim -35 \pm 5^\circ\text{C}$ 10min 10min 10 CYCLES(COB: $T_{\text{hot}}=65^\circ\text{C}$ , $T_{\text{cold}}=-25^\circ\text{C}$ )
	SOLDERABILITY	EVALUATES SOLDERABILITY ON LEADS OF DEVICE $T_{\text{SOL}}=230 \pm 5^\circ\text{C}$ DWELL TIME=5 $\pm$ 1sec.
	SOLDER RESISTANCE	EVALUATES RESISTANCE TO THERMAL STRESS CAUSED BY SOLDERING $T_{\text{SOL}}=260 \pm 5^\circ\text{C}$ DWELL TIME=10 $\pm$ 1sec.

## ■ Package method 1:

**3 pcs / Red Expandable Polyethylene.**

**21 pcs / Box(360\*175\*130mm).**

**42 pcs / Catton(550\*380\*280mm).**