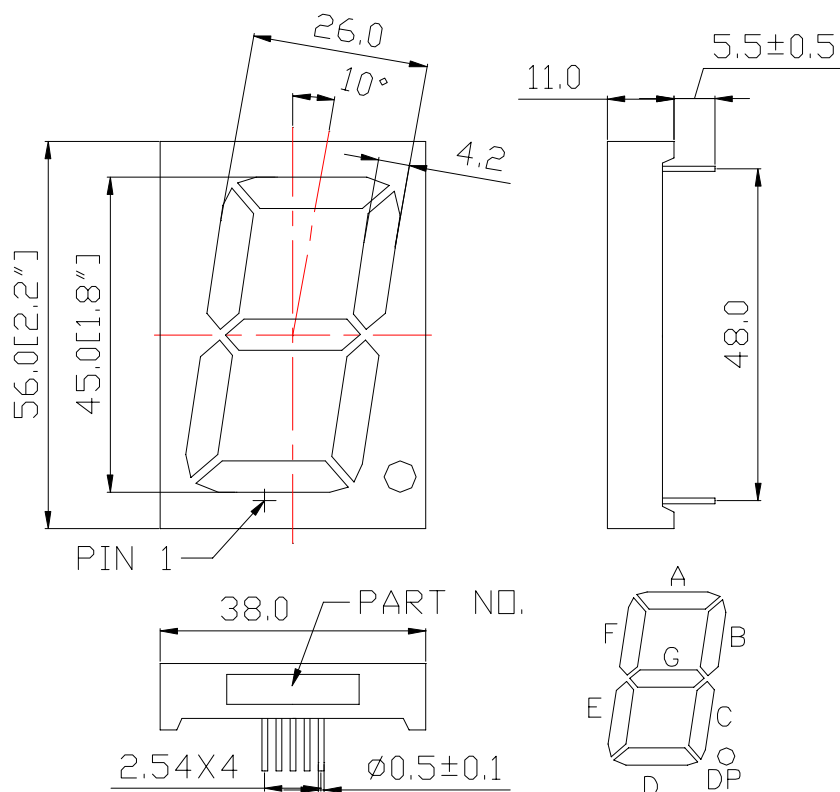


WCN1-00A8B7-A11S**SPECIFICATION**

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

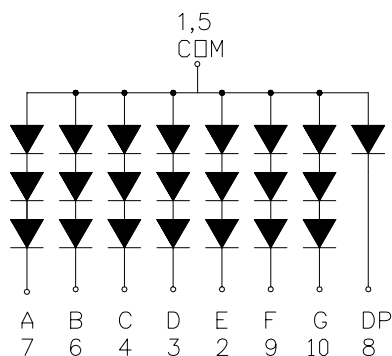
**REVISION: A0**

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 DP
4	Cathode C	9	Cathode F
5	Common Anode	10	Cathode G

WCN Opto Group Co., Limited

■ Features:

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

■ Description:

- Single Digit LED Display
- Digit Height: 45mm (1.8")
- Black Face and Milky Segment

■ Absolute Maximum Rating (Ta=25℃):

Parameter	Symbol	Condition	Color	Rating	Units
Power Dissipation Per Segment/DP	P _d	—	Blue	270/90	mW
Forward Current Per Segment	I _F	—	Blue	25	mA
Peak Forward Current Per Segment	I _{FP}	1/10 Duty 1KHz	Blue	100	mA
Reverse Voltage Per Segment/DP	V _R	—	Blue	15/5	V
Operating Temperature Range	Topr	—	—	-35~+85	℃
Storage Temperature Range	Tstg	—	—	-35~+85	℃

■ Electrical/Optical Characteristics Rating(Ta=25℃)

Item	Symbol	Test conditions	Location	Rating			Units
				Min.	Typ.	Max.	
Forward Voltage	V _F	I _F =20mA	Per Segment	7.80	9.60	10.80	V
			DP	2.60	3.20	3.60	
Reverse Current	I _R	V _R =15/5V	Per Segment/DP	—	—	100	μA
Luminous Intensity	I _V	I _F =10mA	Per Segment	18001	28500	43000	ucd
Wave Length	λ _P	I _F =20mA	Per Segment	—	460	—	nm
	λ _D			465	470	475	
Spectral Line Half Width	△λ	I _F =20mA	Per Segment	—	20	—	nm
Luminous Intensity Matching Ratio(Segment to Segment)	I _{v-m}	I _F =10mA	—	—	—	1.2:1	

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

Rank	Symbol	Condition	Min	Max	Unit
T	T	I _F =10mA	18001	21500	μcd
U	U	I _F =10mA	21501	26000	μcd
V	V	I _F =10mA	26001	31000	μcd
W	W	I _F =10mA	31001	37000	μcd
X	X	I _F =10mA	37001	43000	μcd

■ Soldering Conditions: Soldering Temp. ≤ +260℃, Soldering Time. ≤ 3sec.

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

■ Typical Electro-Optical Characteristics Curve:

Fig1. Forward Current vs. Forward Voltage:

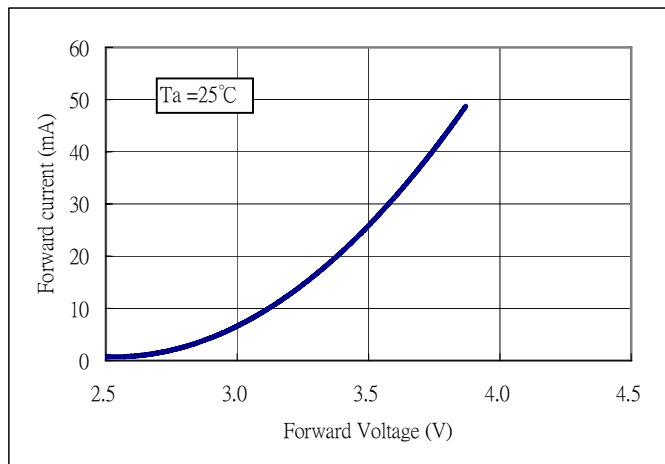


Fig2. Forward Current vs. Relative Intensity:

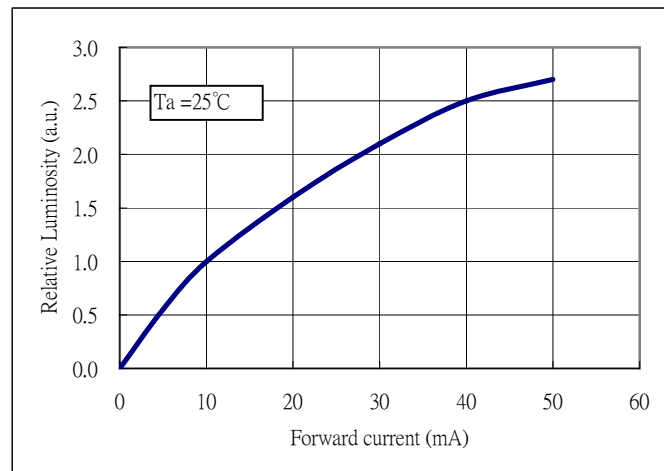


Fig3. Forward Current vs. Relative wavelength:

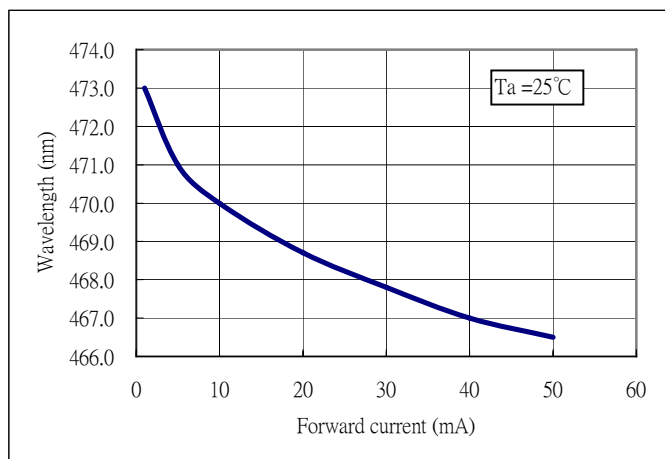
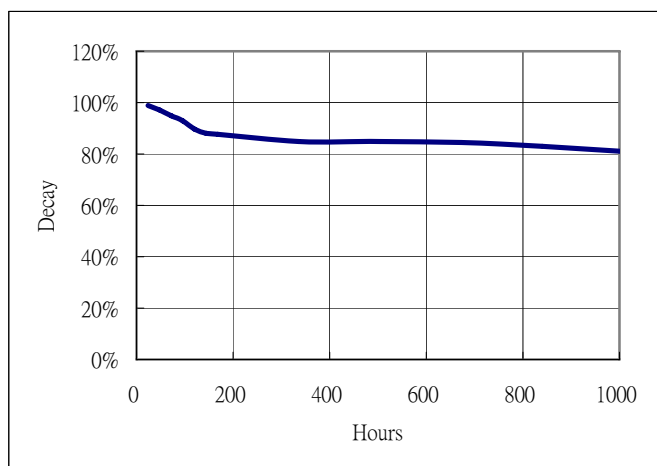


Fig4. Life Test at 20mA R.T. 1000hrs:



■ LED Displays Reliability Test:

CLASSIFICATION	TEST ITEM	DESCRIPTION AND TEST CONDITION
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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°C ~ 25°C ~ -35°C ~ 25°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°C ~ -35 $\pm$ 5°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 Date:**

32pcs / Red Expandable Polyethylene.

350pcs / Box(360*260*255mm).

700pcs / Carton(550*380*280mm).