

# WCN6-0022B7-C12

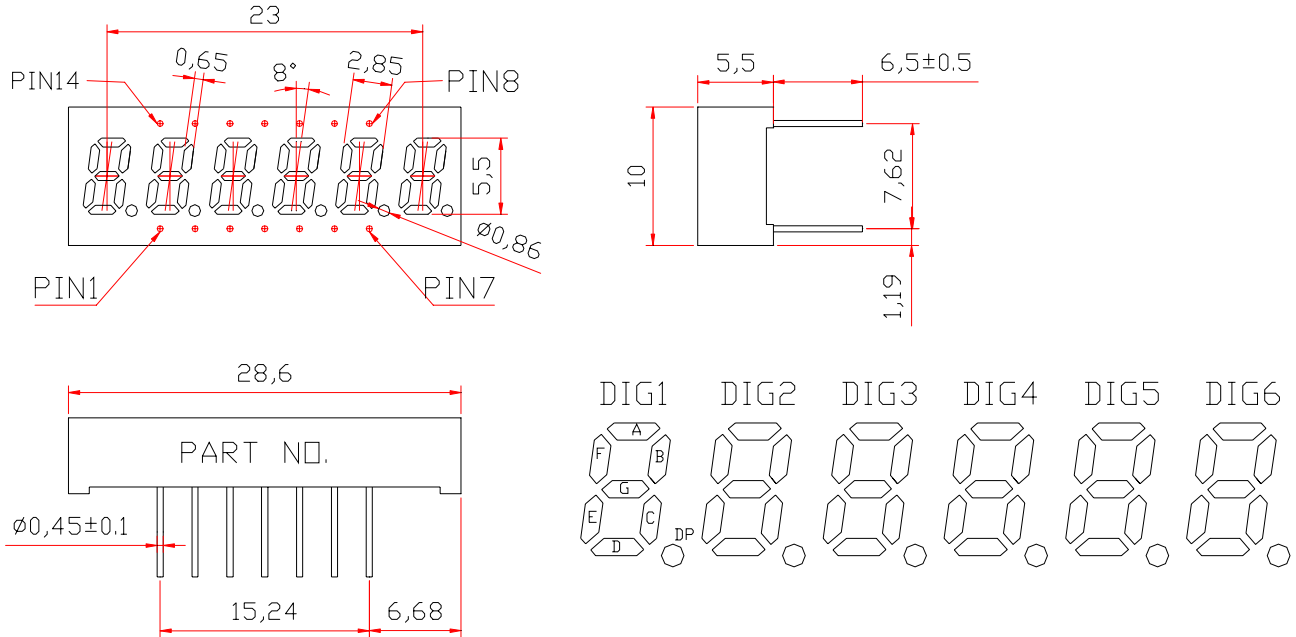
## SPECIFICATION

WCN			CUSTOMER Confirmed
Prepared by	Checked by	Approved by	
Fei 2016-3-29	Athena		
REVISION RECORD			



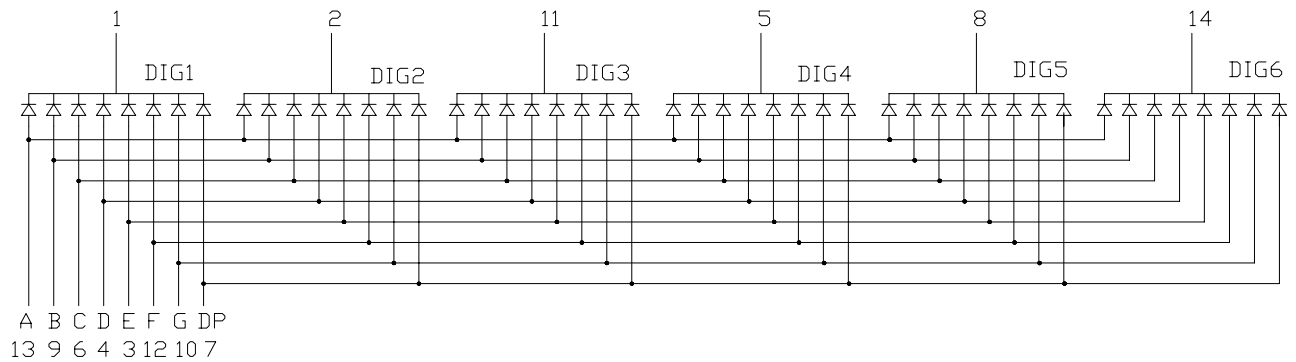
REVISION: A0

### 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 Cathode dig1	8	Common Cathode dig5
2	Common Cathode dig2	9	Anode B
3	Anode E	10	Anode G
4	Anode D	11	Common Cathode dig3
5	Common Cathode dig4	12	Anode F
6	Anode C	13	Anode A
7	Anode DP	14	Common Cathode dig6

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■ **Features:**

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

■ **Description:**

- Six Digit Display
- Digit Height:5.5mm(0.22" )
- Black Face and Milky Segment

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

Parameter	Symbol	Condition	Color	Rating	Units
Power Dissipation Per Segment	P <sub>d</sub>	—	Blue	90	mW
Forward Current Per Segment	I <sub>F</sub>	—	Blue	25	mA
Peak Forward Current Per Segment	I <sub>FP</sub>	1/10 Duty 10KHz	Blue	100	mA
Reverse Voltage Per Segment	V <sub>R</sub>	—	Blue	5	V
Operating Temperature Range	T <sub>opr</sub>	—	—	-35~+85	°C
Storage Temperature Range	T <sub>stg</sub>	—	—	-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> =20mA	Per Segment	—	3.20	3.60	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V	Per Segment	—	—	100	μA
Luminous Intensity	I <sub>V</sub>	I <sub>F</sub> =10mA	Per Segment	6101	9500	15250	μcd
Peak Emission Wave Length	λ <sub>P</sub>	I <sub>F</sub> =20mA	Per Segment	—	—	—	nm
	λ <sub>D</sub>			465	470	475	
Spectral Line Half Width	△λ	I <sub>F</sub> =20mA	Per Segment	—	30	—	nm
Luminous Intensity Matching Ratio (Segment to Segment)	I <sub>v-m</sub>	I <sub>F</sub> =10mA	—	—	—	1.2:1	

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

Rank	Symbol	Condition	Min	Max	Unit
N	N	I <sub>F</sub> =10mA	6101	7200	μcd
O	O	I <sub>F</sub> =10mA	7201	8500	μcd
P	P	I <sub>F</sub> =10mA	8501	10500	Mcd
Q	Q	I <sub>F</sub> =10mA	10501	12800	μcd
R	R	I <sub>F</sub> =10mA	12801	15250	μcd

■ **Soldering Conditions: Soldering Temp. ≤ +260°C, Soldering Time. ≤ 3sec.**  
 (at 2mm Distance from The Case of Reflector Edge)

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

Fig1. Forward Current vs. Forward Voltage:

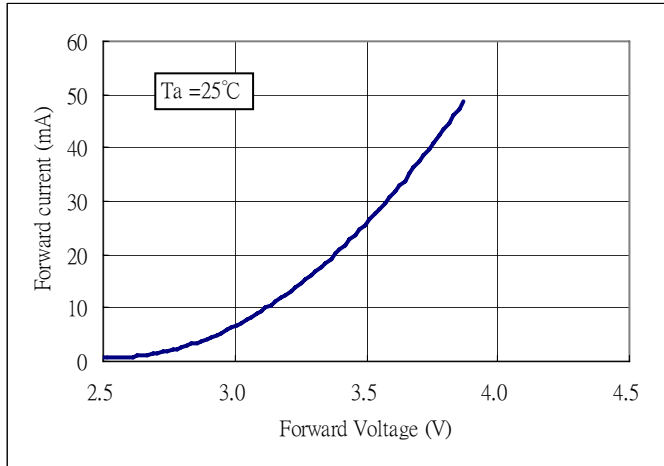


Fig2. Forward Current vs. Relative Intensity:

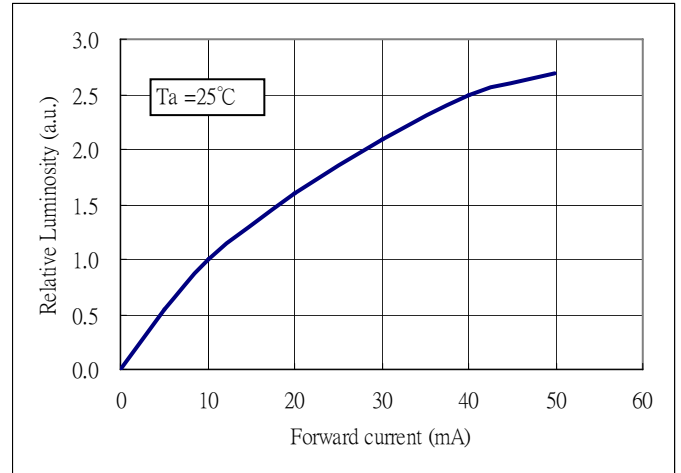


Fig3. Forward Current vs. Relative wavelength:

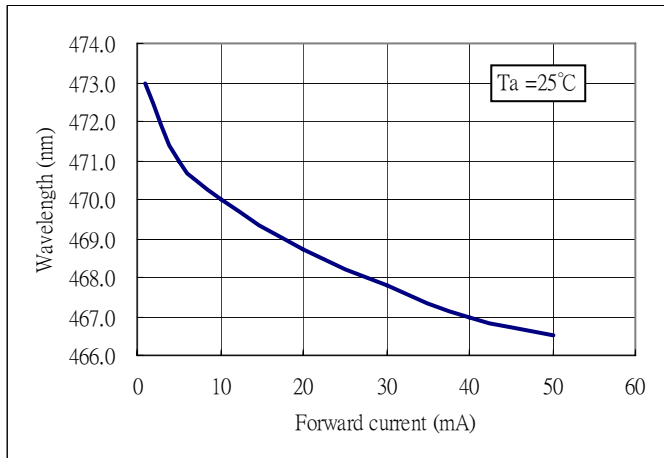
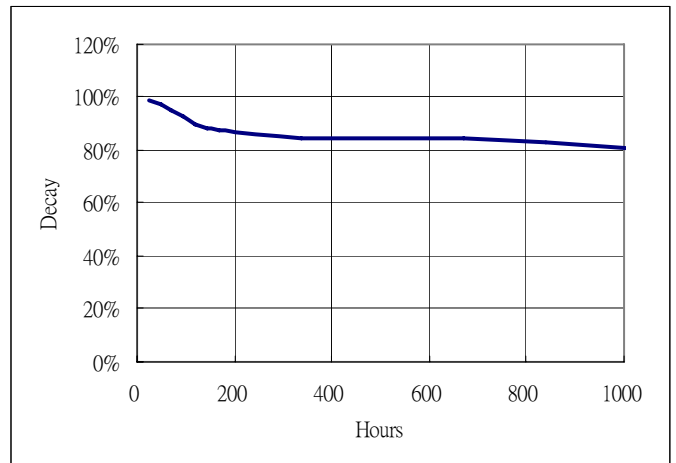


Fig4. Life Test at 20mA R.T. 1000hrs:



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## 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 <sub>a</sub> = UNDER ROOM TEMPERATURE I <sub>F</sub> = I <sub>F</sub> max
	HIGH TEMPERATURE HIGH HUMIDITY STORAGE	EVALUATES MOISTURE RESISTANCE OF THE DEVICE WHEN STORED FOR A LONG TERM AT HIGH TEMPERATURE AND HUMIDITY T <sub>a</sub> = 65±5°C RH=90~95%RH TEST TIME=240± 2Hrs
	HIGH TEMPERATURE STORAGE	EVALUATES DEVICE DURABILITY FOR LONG TERM STORAGE IN HIGH TEMPERATURE T <sub>a</sub> = 85±5°C (COB: T <sub>a</sub> =65±5°C) TEST TIME=1000Hrs(-24Hrs, +72Hrs)
	LOW TEMPERATURE STORAGE	EVALUATES DEVICE DURABILITY FOR LONG TERM STORAGE IN LOW TEMPERATURE T <sub>a</sub> = -35±5°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 <sub>hot</sub> =65°C, T <sub>cold</sub> =-25°C)
	THERMAL SHOCK	EVALUATES DEVICE STRUCTURE AND STRUCTURE AND MECHANICAL RESISTANCE WHEN SUDDENLY EXPOSED AT SERVE CHANGES 85±5°C ~ -35±5°C 10min 10min 10 CYCLES(COB: T <sub>hot</sub> =65°C, T <sub>cold</sub> =-25°C)
	SOLDERABILITY	EVALUATES SOLDERABILITY ON LEADS OF DEVICE T.SOL=230±5°C DWELL TIME=5±1sec.
	SOLDER RESISTANCE	EVALUATES RESISTANCE TO THERMAL STRESS CAUSED BY SOLDERING T.SOL=260±5°C DWELL TIME=10±1sec.

### Packign method A:

165 pcs / Red Expandable Polyethylene.

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

5940 pcs / Carton(550\*380\*280mm).

### Packign method B:

18 pcs / IC Tube.(530\*14.5\*15.5)

1386 pcs / Box(537\*175\*125mm).

5544 pcs / Carton(550\*380\*280mm).