

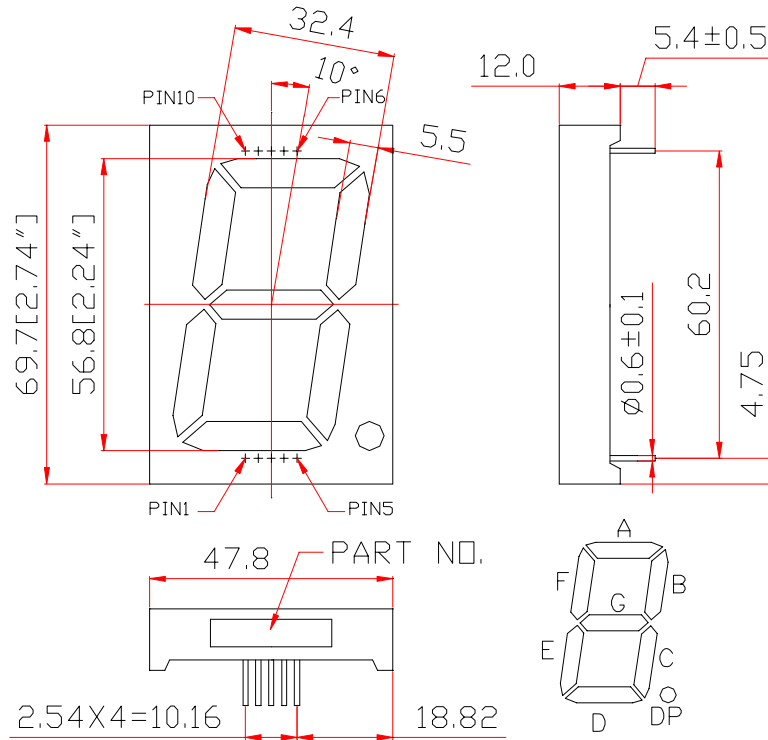
WCN1-00B2SD-C21S**SPECIFICATION**

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



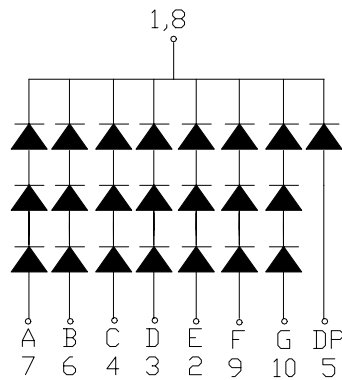
REVISION: A0

■ Outer Dimension:



Notes: Unless otherwise stated, The tolerance is ± 0.25 mm.

■ Circuit Diagram:



■ Pin Connection:

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

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■ Features:

- High Reliability
- Color: Super Red
- Low Power Requirement
- Easy Assembly

■ Description:

- Single Digit LED Display
- Digit Height: 56.80mm(2.24")
- Black Face and Milky Segment

■ Absolute Maximum Rating (Ta=25°C):

Parameter	Symbol	Condition	Color	Rating	Units
Power Dissipation Per Segment	P _d	—	Red	187.5/62.5	mW
Forward Current Per Segment	I _F	—	Red	25	mA
Peak Forward Current Per Segment	I _{FP}	1/10 Duty 10KHz	Red	100	mA
Reverse Voltage Per Segment	V _R	—	Red	15/5	V
Operating Temperature Range	T _{opr}	—	—	-35~+85	°C
Storage Temperature Range	T _{stg}	—	—	-35~+85	°C

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

Item	Symbol	Test conditions	Location	Rating			Units
				Min.	Typ.	Max.	
Forward Voltage	V _F	I _F =20mA	Per Segment	—	6.00	7.50	V
			DP	—	2.00	2.50	
Reverse Current	I _R	V _R =15/5V	Per Segment/DP	—	—	100	μA
Luminous Intensity	I _V	I _F =10mA	Per Segment	8.0	16.0	32.0	mcd
Wave Length	λ _P	I _F =20mA	Per Segment	—	660	—	nm
	λ _D			—	640		
Spectral Line Half Width	Δλ	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
M	M	I _F =10mA	8.0	12.65	mcd
N	N	I _F =10mA	12.65	20.0	mcd
O	O	I _F =10mA	20.0	32.0	mcd

■ 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:

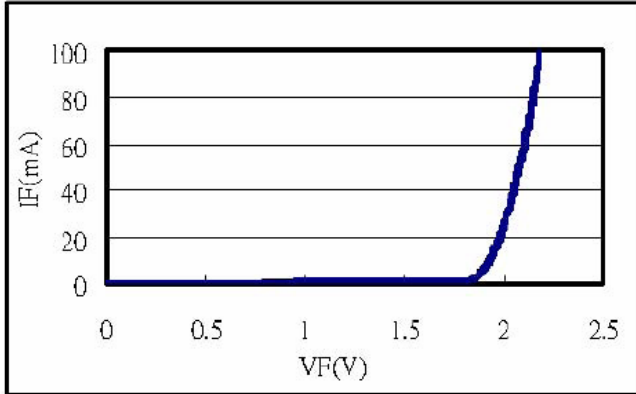


Fig2. Forward Current vs. Relative Intensity:

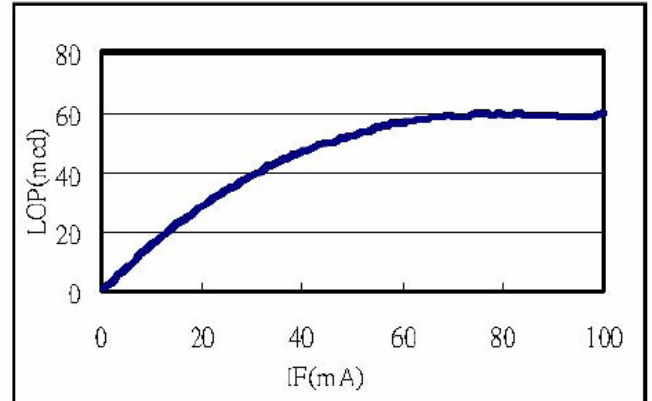


Fig3. Forward Current vs. Relative Wavelength:

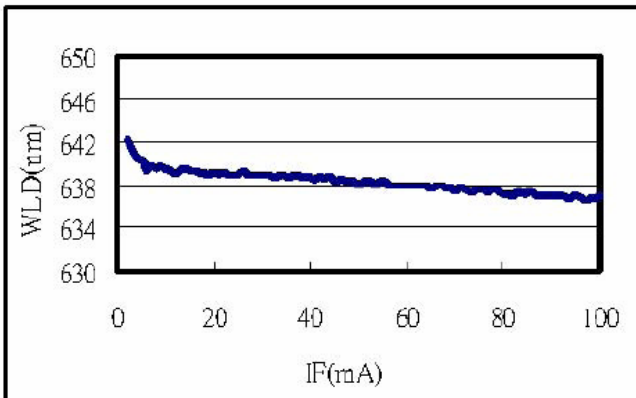


Fig4. Temperature vs. Relative Intensity:

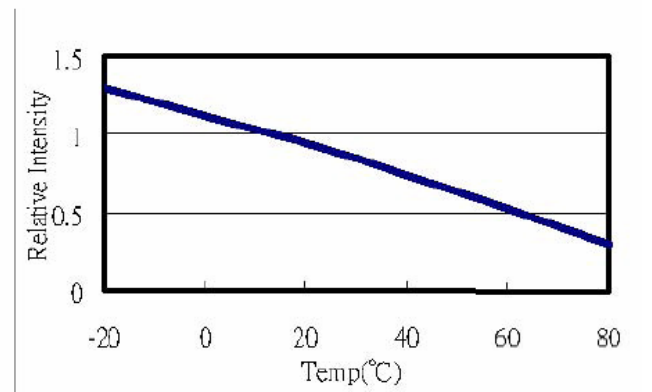


Fig5. Temperature vs. Relative Wavelength:

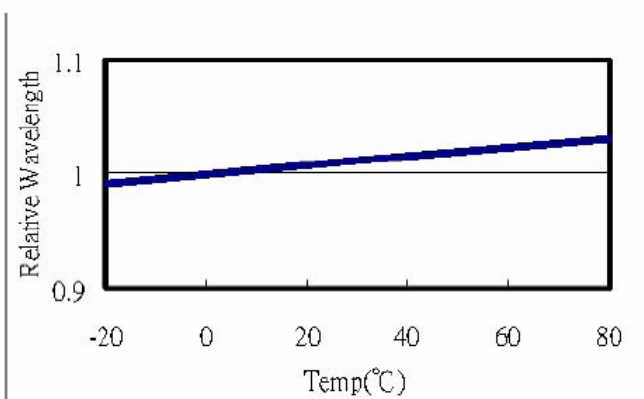
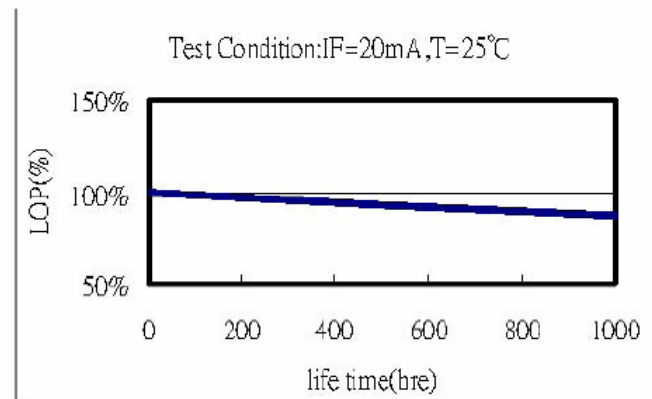


Fig6. Life Test at 20mA R.T. 1000hrs:





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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 _a = UNDER ROOM TEMPERATURE I _F = I _F 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±5°C RH=90~95%RH TEST TIME=240± 2Hrs
	HIGH TEMPERATURE STORAGE	EVALUATES DEVICE DURABILITY FOR LONG TERM STORAGE IN HIGH TEMPERATURE T _a = 85±5°C(COB: T _a =65±5°C) TEST TIME=1000Hrs(-24Hrs, +72Hrs)
	LOW TEMPERATURE STORAGE	EVALUATES DEVICE DURABILITY FOR LONG TERM STORAGE IN LOW TEMPERATURE T _a = -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 _{hot} =65°C, T _{cold} =-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 _{hot} =65°C, T _{cold} =-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.

Packing method A:

21 pcs / Red Expandable Polyethylene.

210 pcs / Box(360*265*255mm).

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