

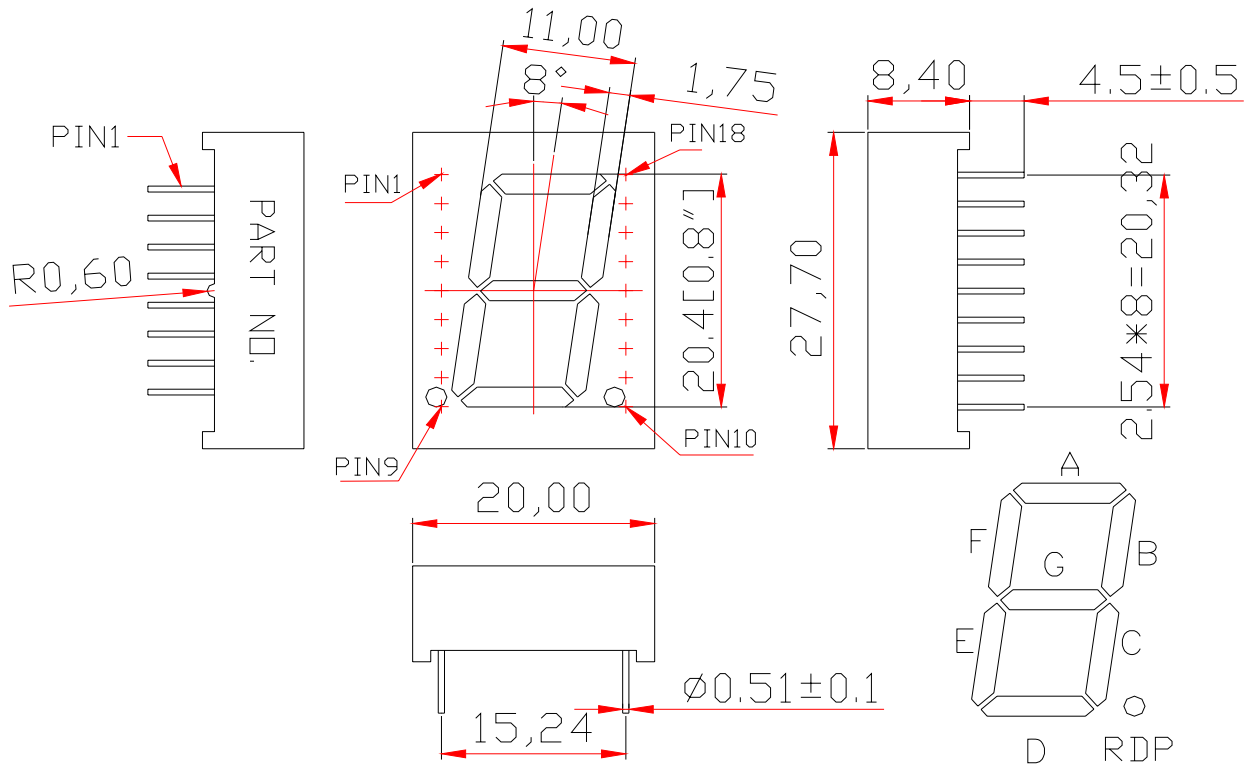
WCN1-0080RG-AE1

SPECIFICATION

WCN			CUSTOMER Confirmed
Prepared by	Checked by	Approved by	
Fei 2016-06-17	Athena		
REVISION RECORD			

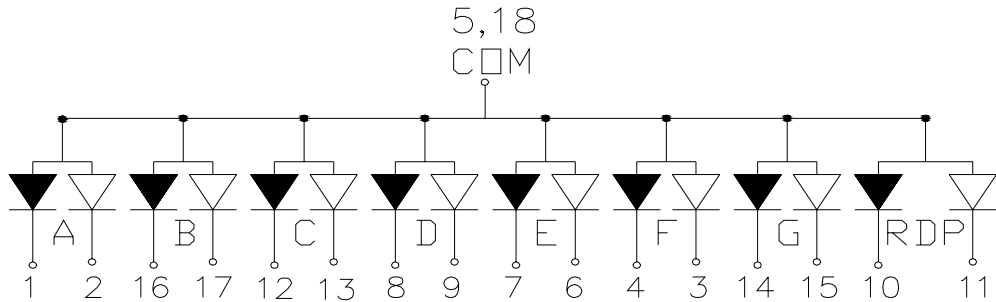
**REVISION: A0**

■ Outer Dimension:



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

■ Circuit Diagram:



■ Pin Connection:

PIN NO.	CONNECTION	PIN NO.	CONNECTION	PIN NO.	CONNECTION
1	Cathode A Green	7	Cathode E Green	13	Cathode C Red
2	Cathode A Red	8	Cathode D Green	14	Cathode G Green
3	Cathode F Red	9	Cathode D Red	15	Cathode G Red
4	Cathode F Green	10	Cathode RDP Green	16	Cathode B Green
5	Common Anode	11	Cathode RDP Red	17	Cathode B Red
6	Cathode E Red	12	Cathode C Green	18	Common Anode

■ **Features:**

- High Reliability
- Color: Red and Yellow Green
- Low Power Requirement
- Easy Assembly

■ **Description:**

- Single Digit LED Display
- Digit Height: 20.0mm(0.8")
- Black Face and Milky Segment

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

Parameter	Symbol	Condition	Color	Rating	Units
Power Dissipation Per Segment	P_d	—	Red / Yellow Green	65/65	mW
Forward Current Per Segment	I_F	—	Red / Yellow Green	25/25	mA
Peak Forward Current Per Segment	I_{FP}	1/10 Duty 10KHz	Red / Yellow Green	100	mA
Reverse Voltage Per Segment	V_R	—	Red / Yellow Green	5/5	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	Color	Rating			Units
					Min.	Typ.	Max.	
Forward Voltage	V_F	$I_F=20mA$	Per Dice	Red	—	2.00	2.60	V
				Yellow Green	—	2.25	2.60	
Reverse Current	I_R	$V_R=5V$	Per Dice	Red / Yellow Green	—	—	100	μA
Luminous Intensity	I_V	$I_F=10mA$	Per Dice	Red	7201	11500	18000	μcd
				Yellow Green	4001	6500	10500	
Peak Emission Wave Length	λ_P	$I_F=20mA$	Per Dice	Red	—	638	—	nm
					633			
	Yellow Green			—	568	—		
				571				
Spectral Line Half Width	$\Delta \lambda$	$I_F=20mA$	Per Dice	Red / Yellow Green	—	20	—	nm
Luminous Intensity Matching Ratio (Segment to Segment)	I_{v-m}	$I_F=10mA$	—	—	—	—	1.2:1	

■ **Soldering Conditions:** Soldering Temp. $\leq +260^\circ C$, Soldering Time. $\leq 3sec$.
 (at 2mm Distance from The Case of Reflector Edge)

■ Typical Elector-Optical Characteristics Curve of Red:

Fig 1. Forward Current vs. Forward Voltage

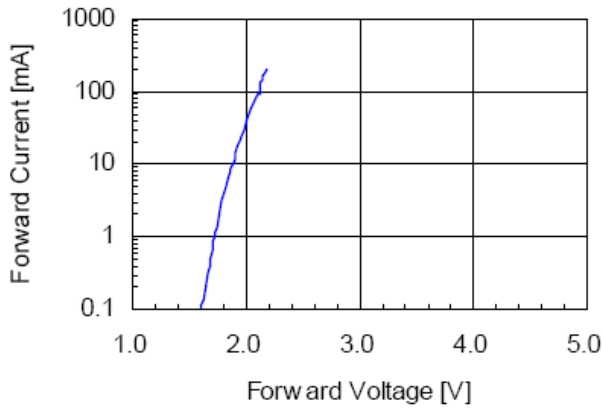


Fig 2. Relative Intensity vs. Forward Current

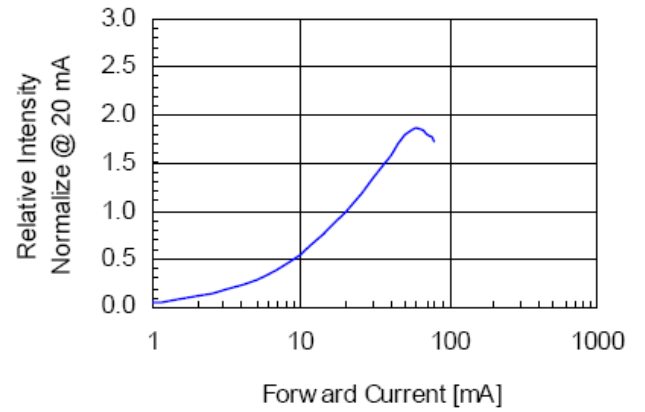


Fig 3. Forward Voltage vs. Temperature

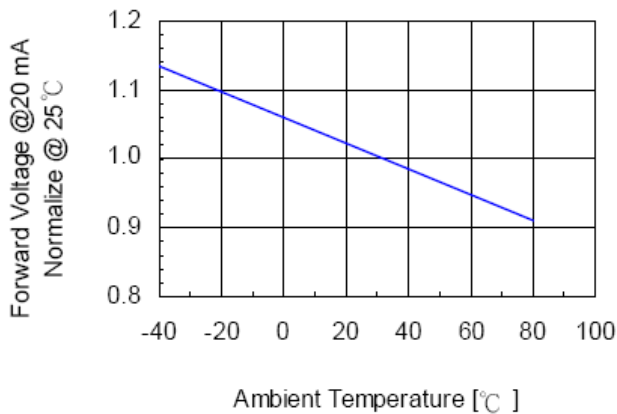


Fig 4. Relative Intensity vs. Temperature

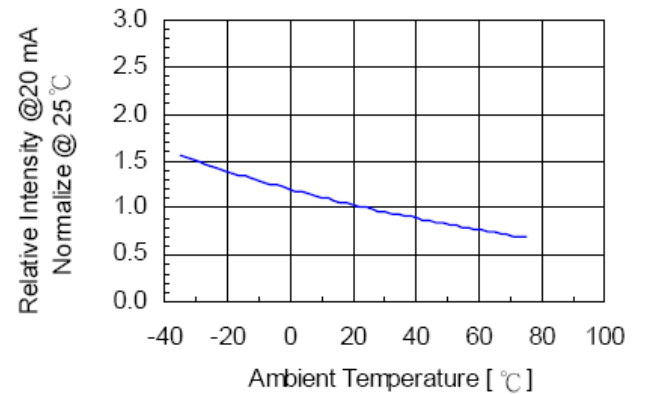
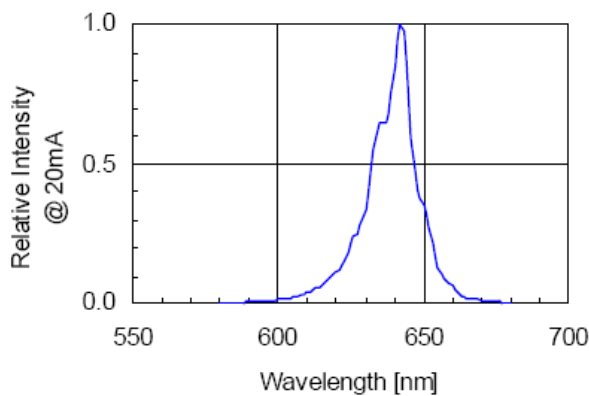


Fig 5. Relative Intensity vs. Wavelength



■ Typical Elector-Optical Characteristics Curve of Yellow Green:

Fig 1. Forward Current vs. Forward Voltage

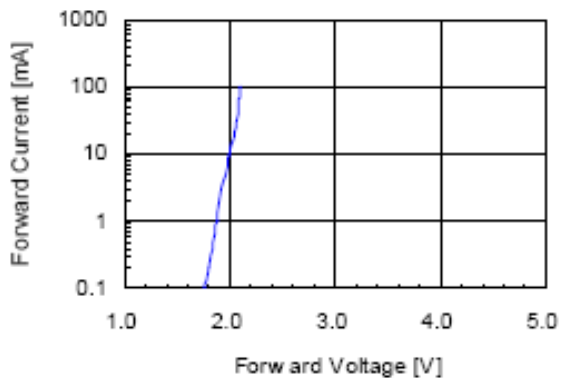


Fig 2. Relative Intensity vs. Forward Current

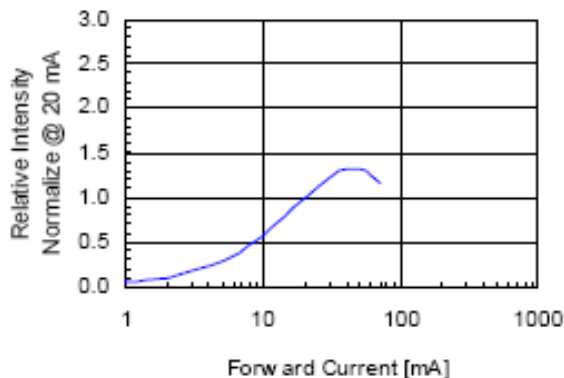


Fig 3. Forward Voltage vs. Temperature

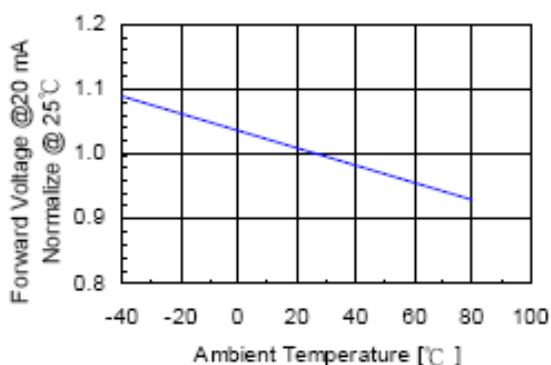


Fig 4. Relative Intensity vs. Temperature

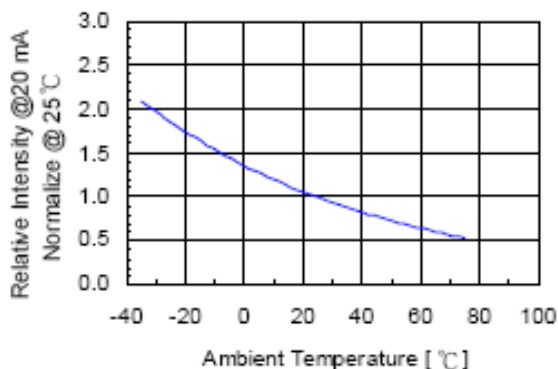
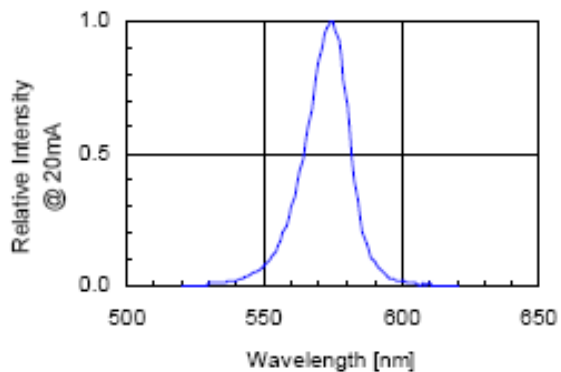


Fig 5. Relative Intensity vs. Wavelength



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:

80 pcs / Red Expandable Polyethylene.

480 pcs / Box(360*175*130mm).

2880 pcs / Carton(550*380*280mm).

Packing method B:

18 pcs / IC Tube.(520*24.2*19)

756 pcs / Box(537*175*125mm).

3024 pcs / Carton(550*380*280mm).