

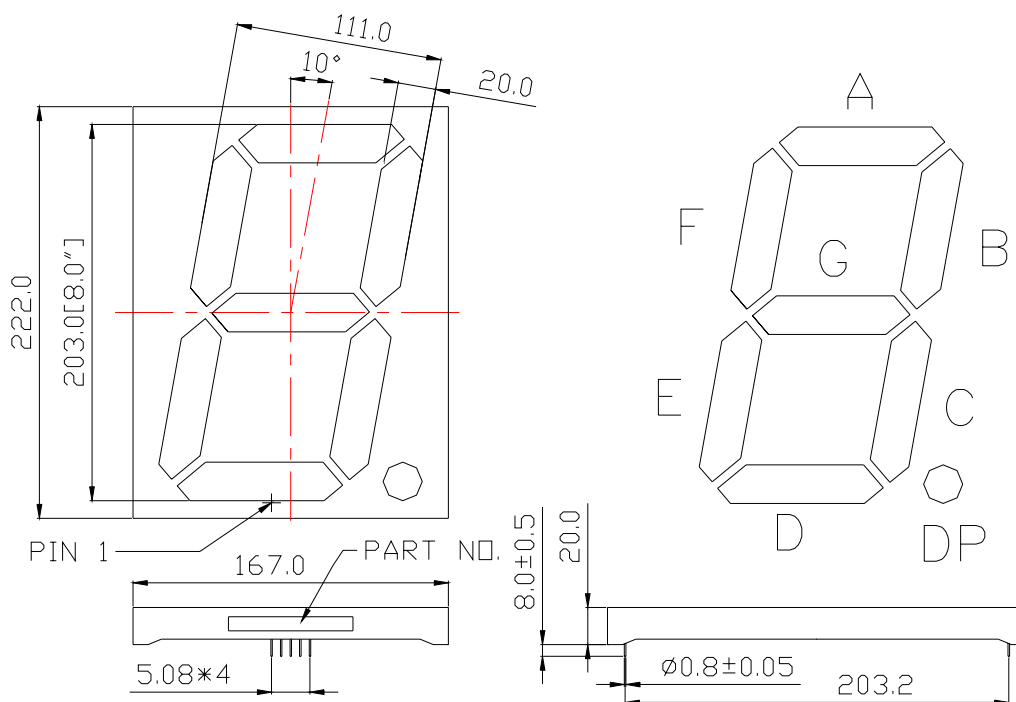
WCN1-00H0R6-A31**SPECIFICATION**

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



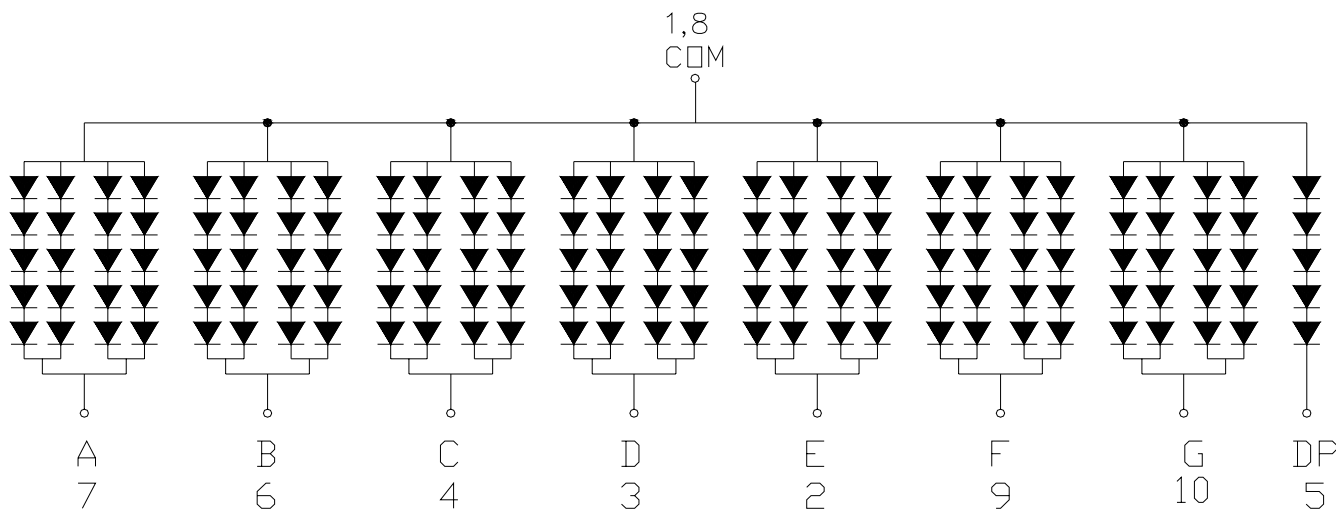
REVISION: A1

Outer Dimension:



Notes: Unless otherwise stated, The tolerance is ± 0.25 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

WCN Opto Group Co., Limited

■ Features:

- High Reliability
- Color: Super Bright Red
- 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	P _d	—	Red	960/240	mW
Forward Current Per Segment	I _F	—	Red	80/20	mA
Peak Forward Current Per Segment	I _{FP}	1/10 Duty 10KHz	Red	100	mA
Reverse Voltage Per Segment	V _R	—	Red	25	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 _F	I _F =80mA	Per Segment	—	10.00	13.00	V
		I _F =20mA	DP		10.00	13.00	
Reverse Current	I _R	V _R =25V	Per Segment/DP	—	—	100	μA
Luminous Intensity	I _V	I _F =40mA	Per Segment	31001	46500	67000	ucd
Wave Length	λ _P	I _F =80mA	Per Segment	—	635	—	nm
	λ _D				630		
Spectral Line Half Width	Δλ	I _F =80mA	Per Segment	—	20	—	nm
Luminous Intensity Matching Ratio (Segment To Segment)	I _{v-m}	I _F =40mA				1.2:1	

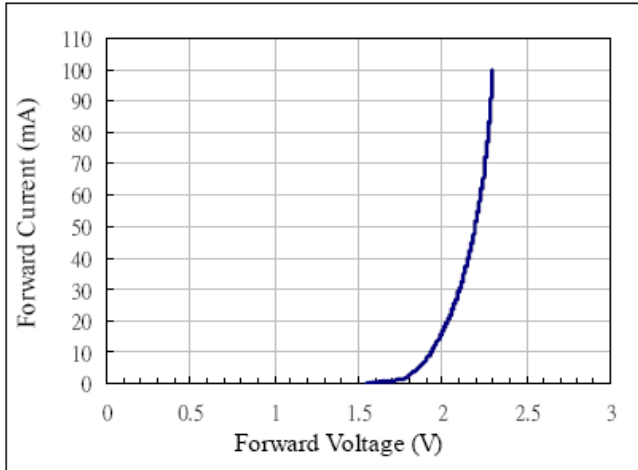
■ Luminous Intensity Sorting: (Luminous Intensity Tolerance is +/-10%)

Rank	Symbol	Condition	Min	Max	Unit
W	W	I _F =10mA	31001	37000	ucd
X	X	I _F =10mA	37001	43000	ucd
Y	Y	I _F =10mA	43001	50000	ucd
Z	Z	I _F =10mA	50001	58000	ucd
Z1	Z1	I _F =10mA	58001	67000	ucd

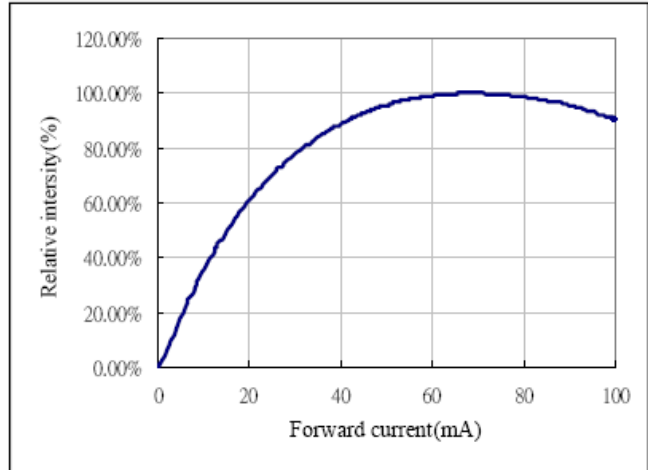
■ Soldering Conditions: Soldering Temp. ≤ +260°C, Soldering Time. ≤ 3sec.
(at 2mm Distance from The Case of Reflector Edge)

■ Typical Electro-Optical Characteristics Curve:

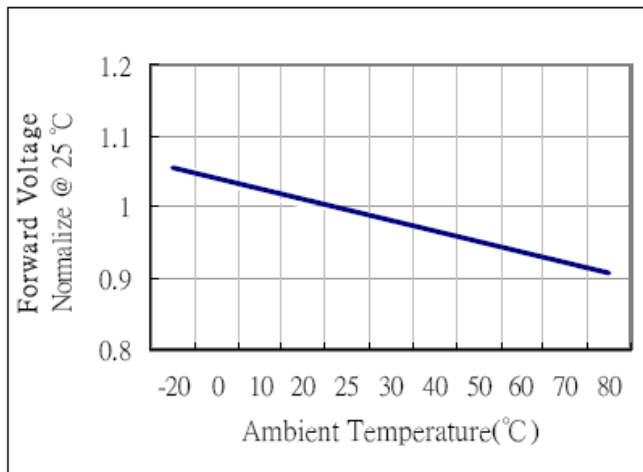
Forward current vs. Forward voltage



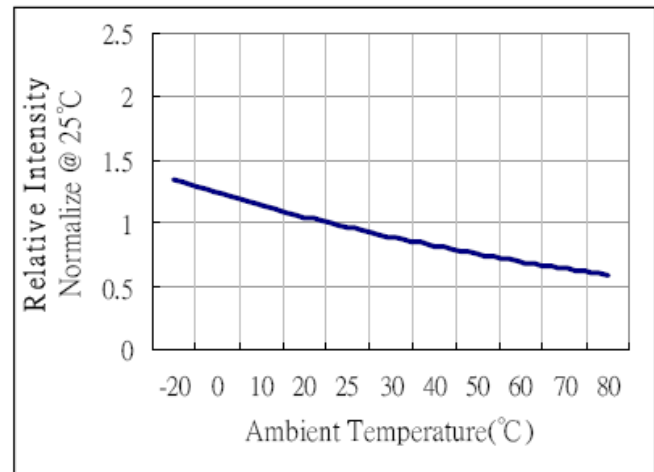
Relative intensity vs. Forward current



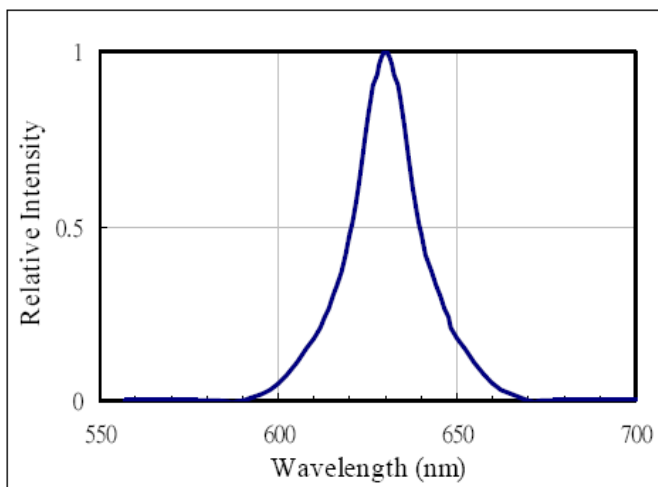
Forward voltage vs. Temperature



Relative intensity vs. Temperature



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 $I_F = I_F \text{ max}$
	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± 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±1sec.
	SOLDER RESISTANCE	EVALUATES RESISTANCE TO THERMAL STRESS CAUSED BY SOLDERING $T_{\text{SOL}}=260 \pm 5^\circ\text{C}$ DWELL TIME=10±1sec.

Packing method A:

2 pcs / Red Expandable Polyethylene.

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

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