

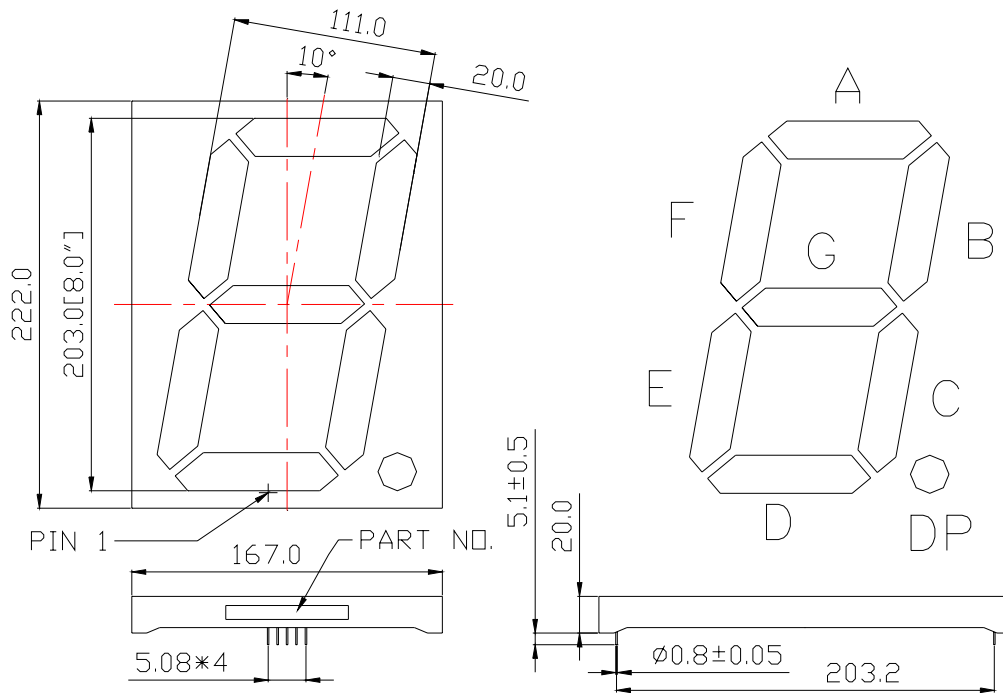
**WCN1-00H0R6-A11****SPECIFICATION**

WCN			CUSTOMER Confirmed
Prepared by	Checked by	Approved by	
Fei	Athena		
<b>REVISION RECORD</b>			



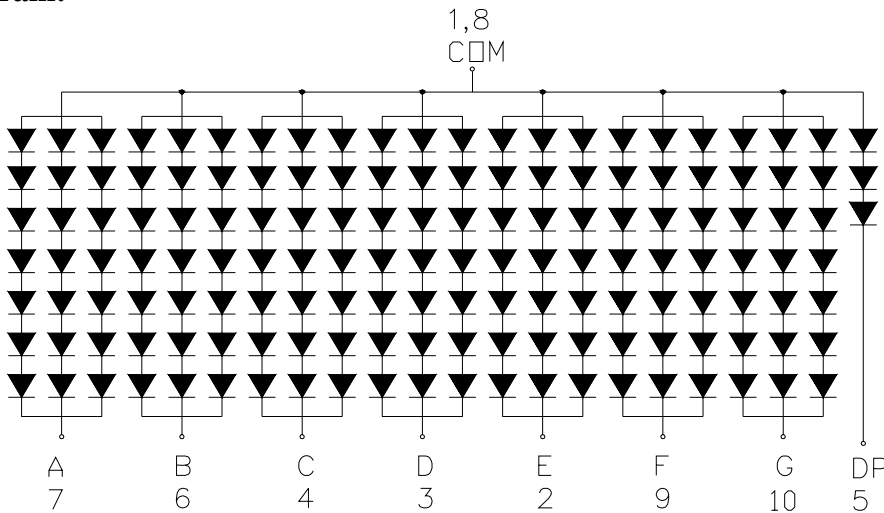
REVISION: A0

■ **Outer Dimension:**



Notes: Unless otherwise stated, The tolerance is  $\pm 0.25$ 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 <sub>d</sub>	—	Red	1100/160	mW
Forward Current Per Segment	I <sub>F</sub>	—	Red	60/20	mA
Peak Forward Current Per Segment	I <sub>FP</sub>	1/10 Duty 10KHz	Red	100	mA
Reverse Voltage Per Segment	V <sub>R</sub>	—	Red	35/15	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> =60mA	Per Segment	—	14.0	18.2	V
		I <sub>F</sub> =20mA	DP	—	6.0	7.8	
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =35/15V	Per Segment/DP	—	—	100	μA
Luminous Intensity	I <sub>V</sub>	I <sub>F</sub> =30mA	Per Segment	31001	46500	67000	ucd
Wave Length	λ <sub>P</sub>	I <sub>F</sub> =60mA	Per Segment	—	635	—	nm
	λ <sub>D</sub>				630		
Spectral Line Half Width	Δλ	I <sub>F</sub> =60mA	Per Segment	—	20	—	nm
Luminous Intensity Matching Ratio (Segment To Segment)	I <sub>v-m</sub>	I <sub>F</sub> =30mA				1.2:1	

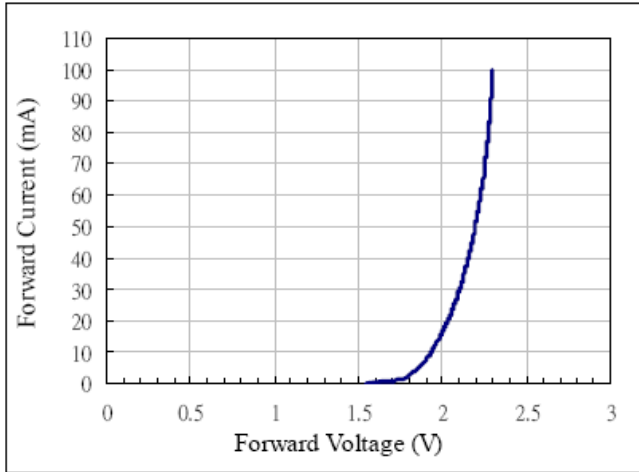
## ■ Luminous Intensity Sorting: (Luminous Intensity Tolerance is +/-10%)

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

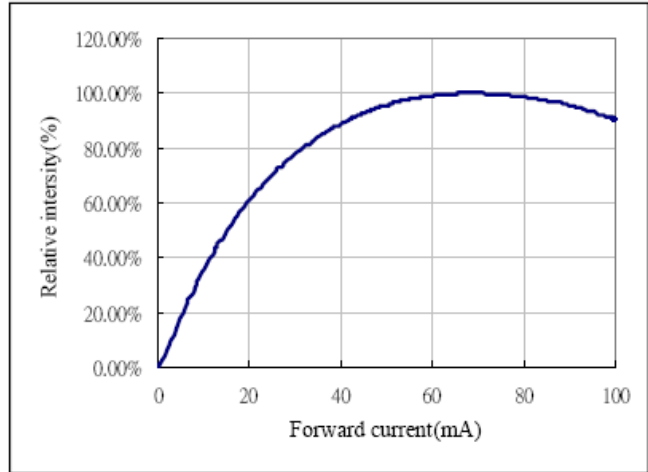
■ Soldering Conditions: Soldering Temp. ≤ +260°C, Soldering Time. ≤ 3sec.  
(at 2mm Distance from The Case of Reflector Edge)

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

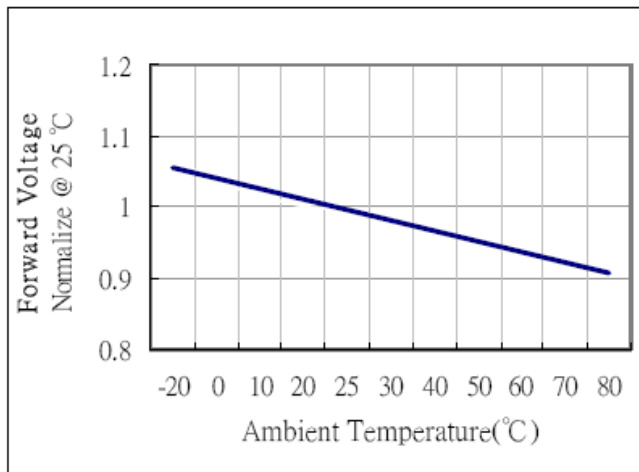
Forward current vs. Forward voltage



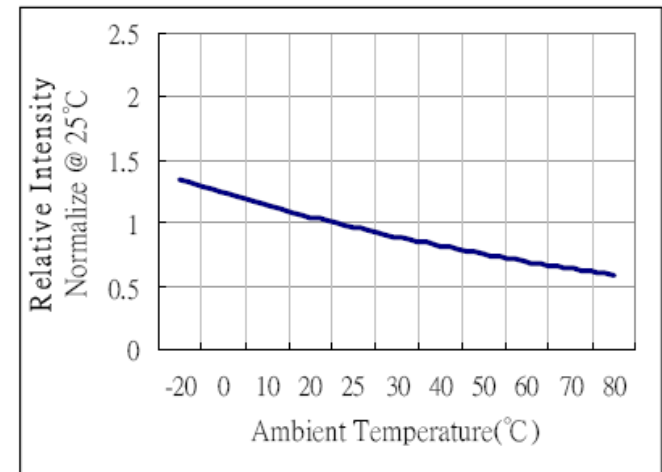
Relative intensity vs. Forward current



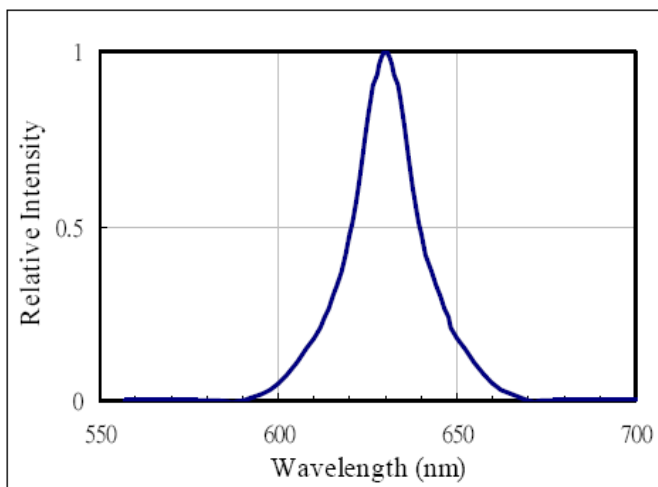
Forward voltage vs. Temperature



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).