

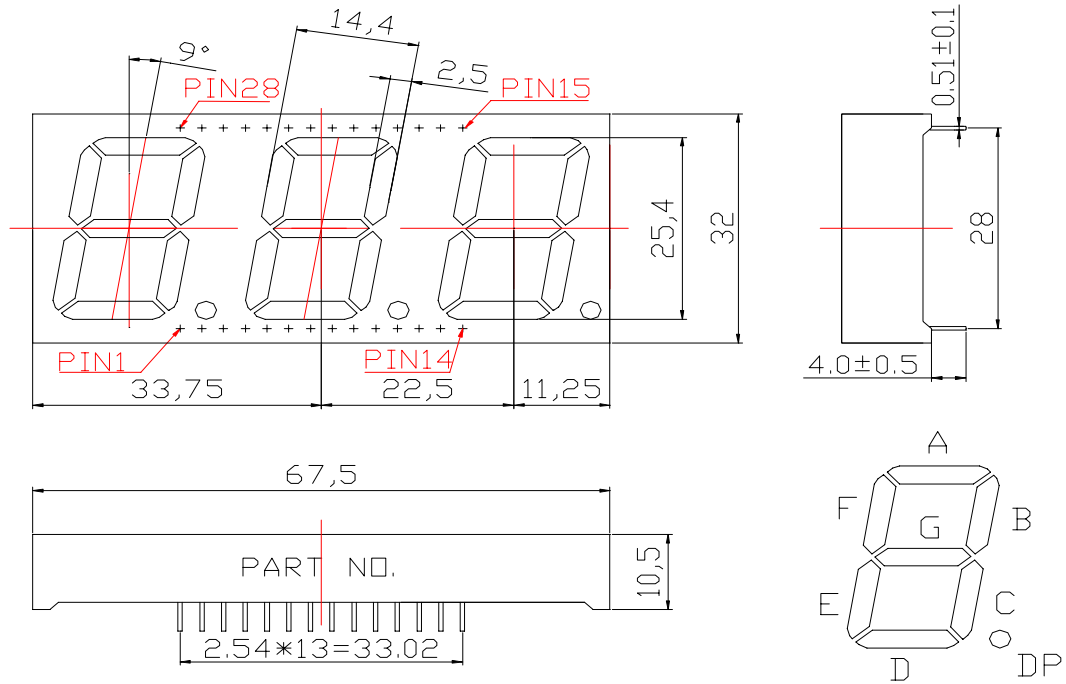
# **WCN3-00A0R6-A11**

## **SPECIFICATION**

<b>WCN</b>			<b>CUSTOMER Confirmed</b>
<b>Prepared by</b>	<b>Checked by</b>	<b>Approved by</b>	
<b>Fei</b> 2016-7-8	<b>Athena</b>		
<b>REVISION RECORD</b>			

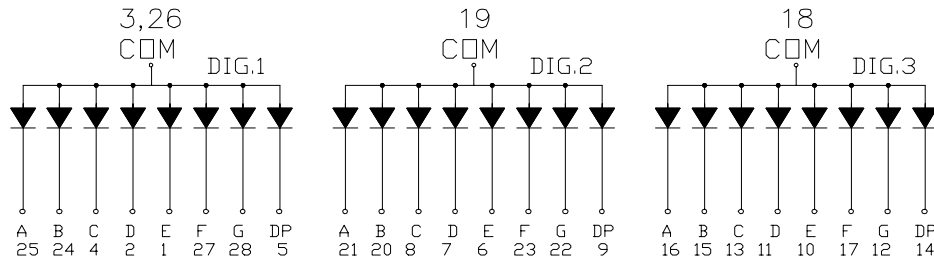
**REVISION: A0**

### Outer Dimension:



Notes: Unless otherwise stated, The tolerance is  $\pm 0.25\text{mm}$ .

### Circuit Diagram:



### Pin Connection:

PIN NO.	CONNECTION	PIN NO.	CONNECTION	PIN NO.	CONNECTION	PIN NO.	CONNECTION
1	Cathode DIG.1 E	8	Cathode DIG.2 C	15	Cathode DIG.3 B	22	Cathode DIG.2 G
2	Cathode DIG.1 D	9	Cathode DIG.2 DP	16	Cathode DIG.3 A	23	Cathode DIG.2 F
3	Common DIG.1	10	Cathode DIG.3 E	17	Cathode DIG.3 F	24	Cathode DIG.1 B
4	Cathode DIG.1 C	11	Cathode DIG.3 D	18	Common DIG.3	25	Cathode DIG.1A
5	Cathode DIG.1 DP	12	Cathode DIG.3 G	19	Common DIG.2	26	Common DIG.1
6	Cathode DIG.2 E	13	Cathode DIG.3 C	20	Cathode DIG.2 B	27	Cathode DIG.1 F
7	Cathode DIG.2 D	14	Cathode DIG.3 DP	21	Cathode DIG.2 A	28	Cathode DIG.1G

■ **Features:**

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

■ **Description:**

- Three Digit LED Display
- Digit Height:25.4mm(1.0" )
- 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	65	mW
Forward Current Per Segment	I <sub>F</sub>	—	Red	25	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	5	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 <sub>F</sub>	I <sub>F</sub> =20mA	Per Segment	—	2.0	2.6	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	10501	16500	26000	μcd
Peak Emission Wave Length	λ <sub>P</sub>	I <sub>F</sub> =20mA	Per Segment	—	635	—	nm
	λ <sub>D</sub>			—	630	—	
Spectral Line Half Width	Δλ	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> =20mA	—	—	—	1.2:1	

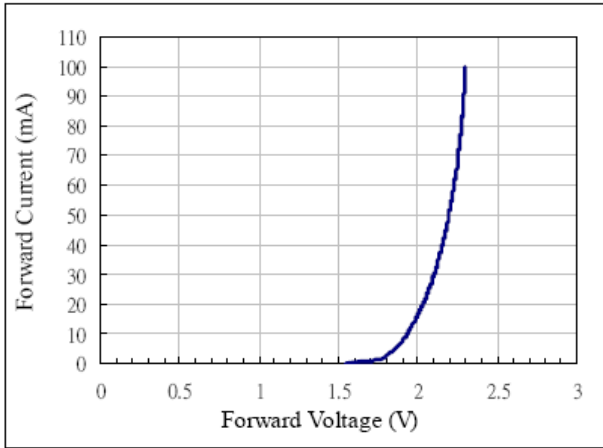
■ **Luminous Intensity Sorting: (Luminous Intensity Tolerance is +/-10%)**

Rank	Symbol	Condition	Min	Max	Unit
Q	Q	I <sub>F</sub> =10mA	10501	12800	μcd
R	R	I <sub>F</sub> =10mA	12801	15250	μcd
S	S	I <sub>F</sub> =10mA	15251	18000	μcd
T	T	I <sub>F</sub> =10mA	18001	21500	μcd
U	U	I <sub>F</sub> =10mA	21501	26000	μcd

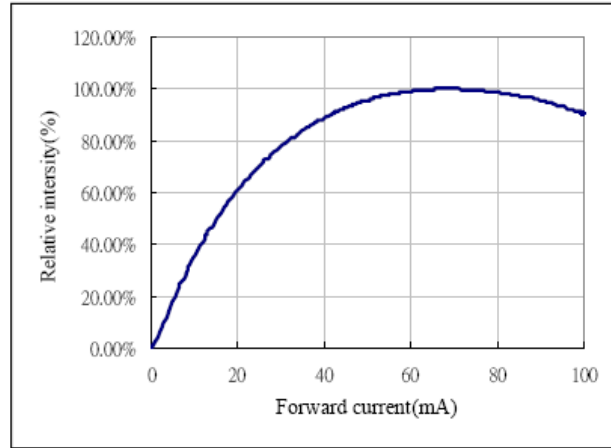
■ **Soldering Conditions: Soldering Temp. ≤+260°C, Soldering Time. ≤3sec.**  
(at 2mm Distance from The Case of Reflector Edge)

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

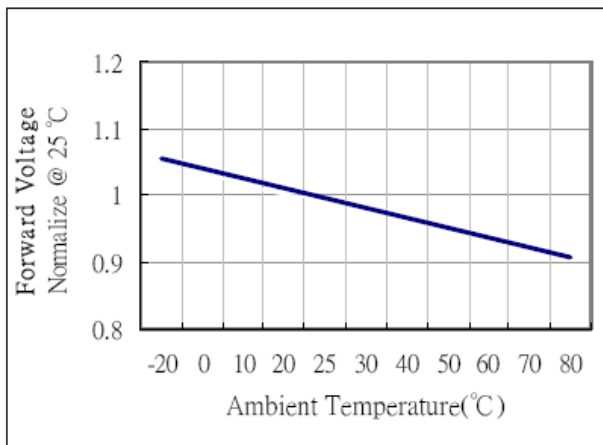
Forward current vs. Forward voltage



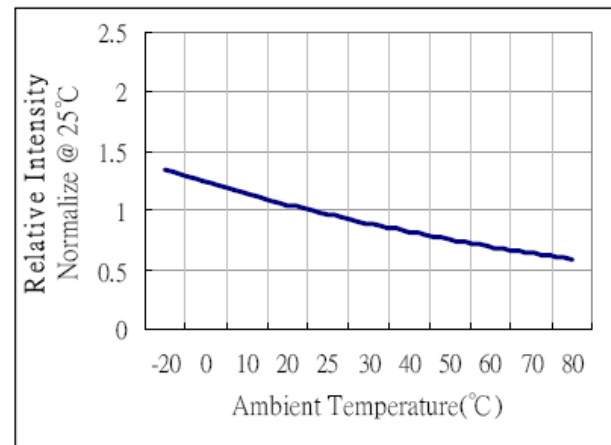
Relative intensity vs. Forward current



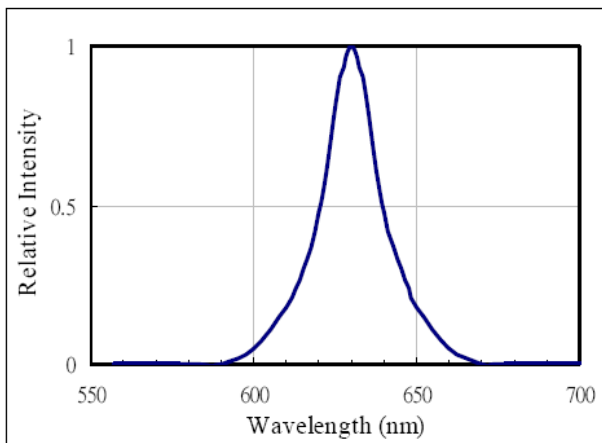
Forward voltage vs. Temperature



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 <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.

## Packing method A:

20pcs / Red Expandable Polyethylene.

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

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

## Packing method B:

7 pcs / IC Tube(520\*37\*21).

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

672 pcs / Carton(550\*380\*280mm)