

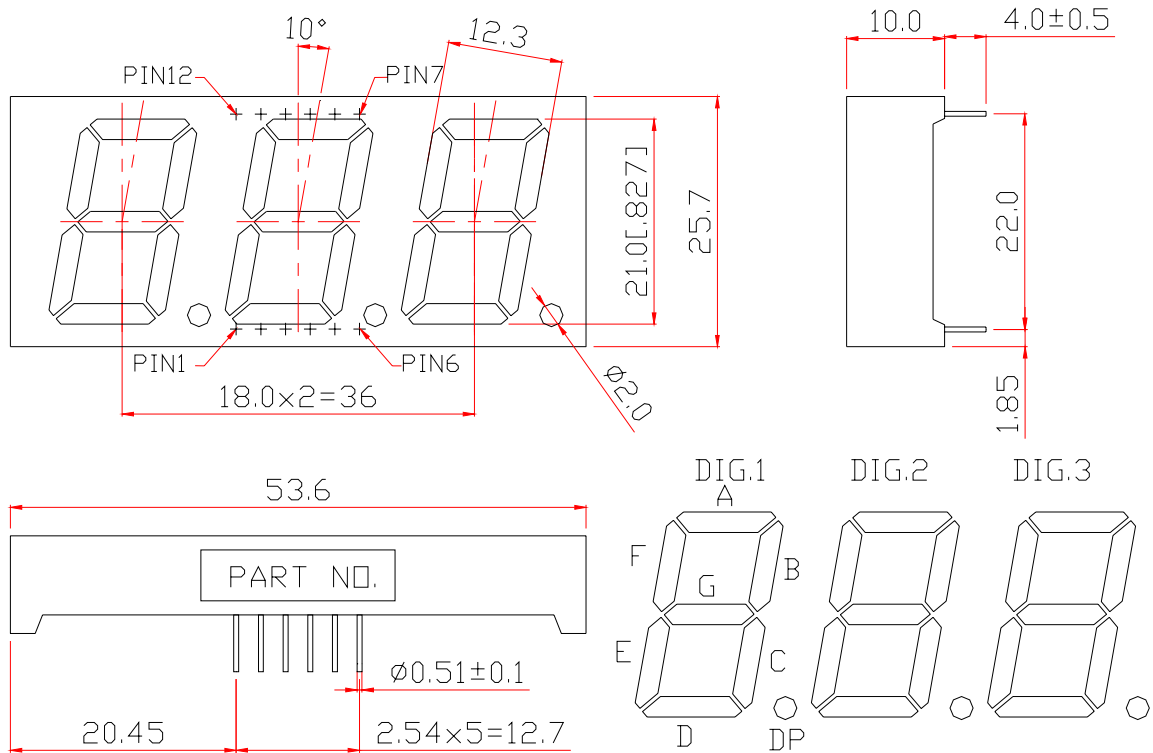
# WCN3-0080B7-C14

## SPECIFICATION

WCN			CUSTOMER Confirmed
Prepared by	Checked by	Approved by	
Fei 2016-7-7	Athena	William	
<b>REVISION RECORD</b>			
A1:New Version issued (2016-7-7)			

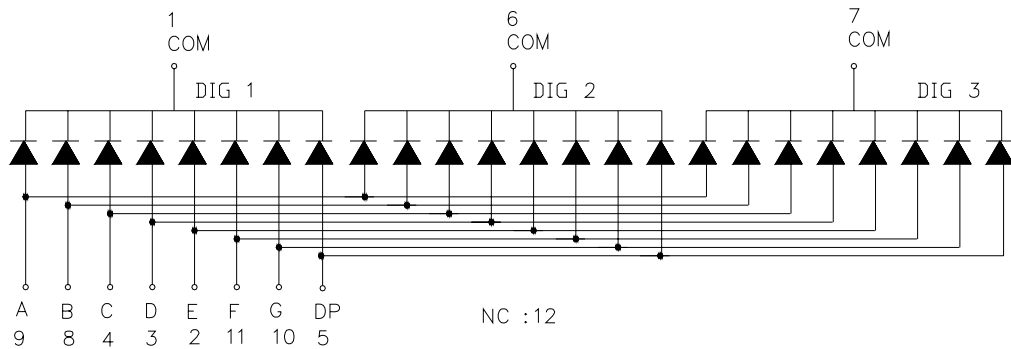
**REVISION: A1**

### 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 Cathode Dig.1	7	Common Cathode Dig.3
2	Anode E	8	Anode B
3	Anode D	9	Anode A
4	Anode C	10	Anode G
5	Anode DP	11	Anode F
6	Common Cathode Dig.2	12	NC

■ **Features:**

- High Reliability
- Color:Blue
- Low Power Requirement
- Easy Assembly

■ **Description:**

- Three Digit Display
- Digit Height:21.0mm(0.8" )
- Black Face and Milky Segment

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

Parameter	Symbol	Condition	Color	Rating	Units
Power Dissipation Per Segment	Pd	—	Blue	90	mW
Forward Current Per Segment	IF	—	Blue	25	mA
Peak Forward Current Per Segment	IFP	1/10 Duty 10KHz	Blue	100	mA
Reverse Voltage Per Segment	VR	—	Blue	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	VF	IF=20mA	Per Segment	—	3.20	3.60	V
Reverse Current	IR	VR=5V	Per Segment	—	—	100	μA
Luminous Intensity	IV	IF=10mA	Per Segment	5051	10500	20000	μcd
Peak Emission Wave Length	λP	IF=20mA	Per Segment	—	—	—	nm
	λD			—	470	—	
Spectral Line Half Width	Δλ	IF=20mA	Per Segment	—	20	—	nm
Luminous Intensity Matching Ratio (Segment to Segment)	Iv-m	IF=10mA	—	—	—	1.2:1	

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

Rank	Symbol	Condition	Min	Max	Unit
K	K	IF=10mA	5051	8000	μcd
L	L	IF=10mA	8001	12560	μcd
M	M	IF=10mA	12561	20000	μcd

■ **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:

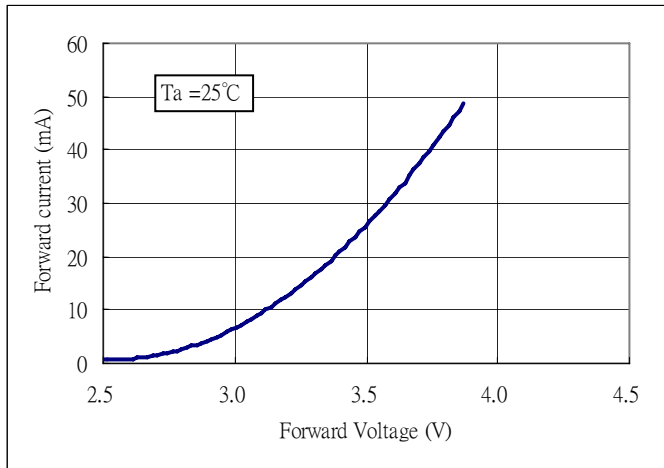


Fig2. Forward Current vs. Relative Intensity:

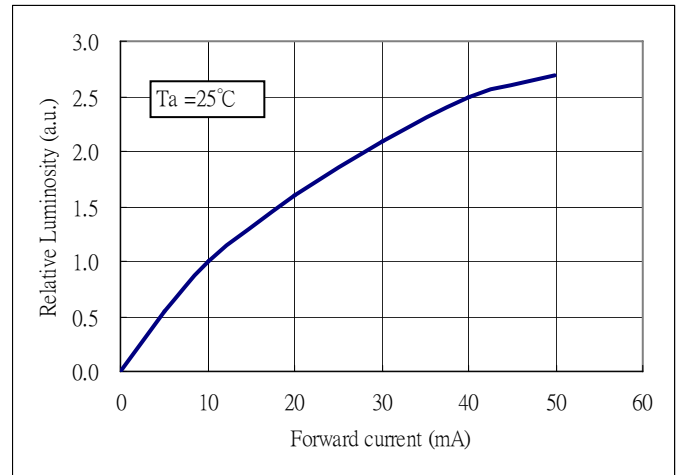


Fig3. Forward Current vs. Relative wavelength:

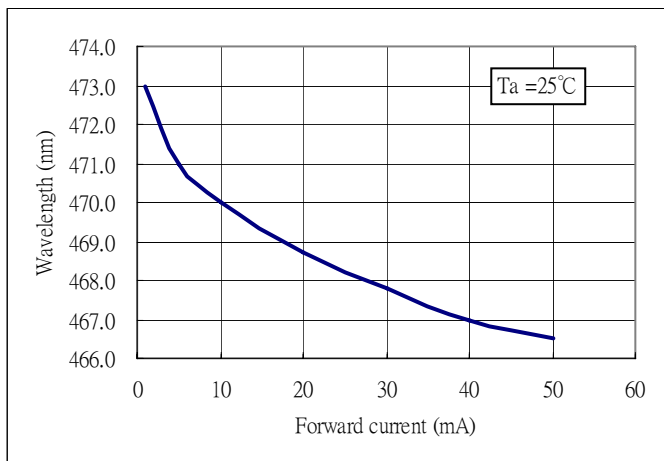
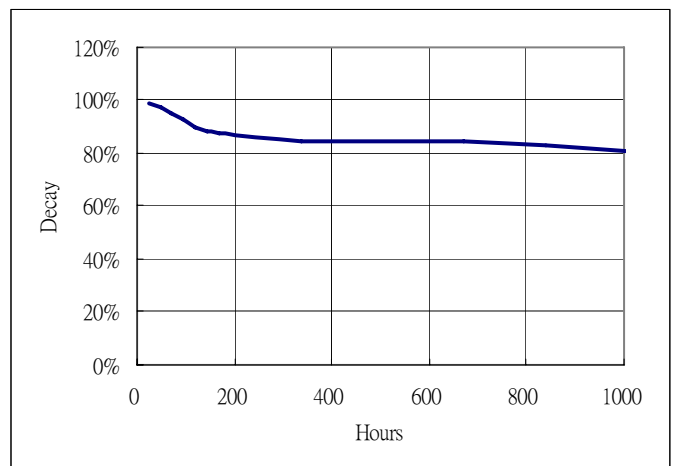


Fig4. Life Test at 20mA R.T. 1000hrs:



# WCN Opto Group Co., Limited

## ■ 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:

**30 pcs / Red Expandable Polyethylene.**

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

**1080 pcs / Carton(550\*380\*280mm).**

## ■ Packing method B:

**9 pcs / IC Tube.(520\*27.6\*21)**

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

**1080 pcs / Carton(550\*380\*280mm).**