

**WCN-5707B7-DA15****SPECIFICATION**

WCN			CUSTOMER Confirmed
Prepared by	Checked by	Approved by	
Fei 2016-3-25	Athena		
REVISION RECORD			



REVISION: A0

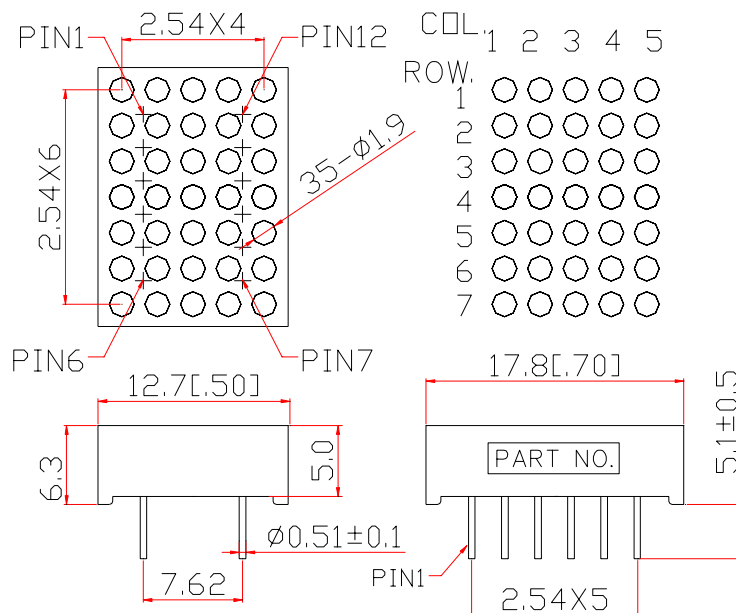
## ■ Features:

- High Reliability
- Color: Blue
- Low Power Requirement
- Flat Package and Light Weight
- Easy Assembly

## ■ Description:

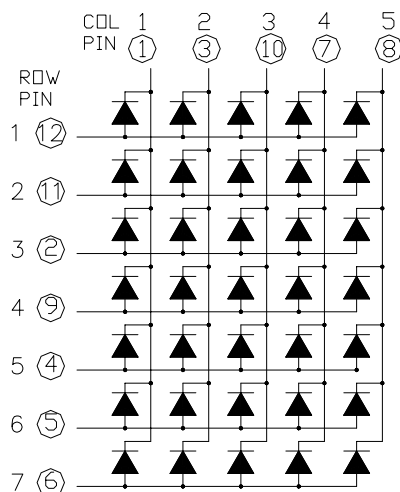
- 5X7 LED Dot Matrix
- $\phi$  1.9 mm Dot and Pitch 2.54 mm
- Gray Face and Milky Diffused Dots

## ■ Outer Dimension:



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

## ■ Circuit Diagram



■ Absolute Maximum Rating (Ta=25°C) / Per Dice:

Parameter	Symbol	Condition	Color	Rating	Units
Maximal Power Dissipation (When completely Lighting)	P <sub>d</sub>	—	Blue	90	mW
Maximal Forward Current (When completely Lighting)	I <sub>F</sub>	—	Blue	25	mA
Peak Forward Current	I <sub>FP</sub>	1/8Duty 10khz	Blue	100	mA
Reverse Voltage	V <sub>R</sub>	—	Blue	5	V
Operating Temperature Range	Topr	—	—	-40~+85	°C
Storage Temperature Range	Tstg	—	—	-40~+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 Dice	2.60	3.2	3.60	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V	Per Dice	—	—	100	μA
Luminous Intensity	I <sub>V</sub>	I <sub>F</sub> =10mA	Per Dice	6.1	9.5	15.25	mcd
Wave Length	λ <sub>p</sub>	I <sub>F</sub> =20mA	Per Dice	—	465	—	nm
	λ <sub>d</sub>				470		
Spectral Line Half Width	△λ	I <sub>F</sub> =20mA	Per Dice	—	20	—	nm
Luminous Intensity Matching Ratio (Dot To Dot)	I <sub>V-M</sub>	1/8Duty I <sub>FP</sub> =40mA				1.2:1	

■ Luminous Intensity Sorting (1/8Duty ; I<sub>FP</sub> =40mA ; The Tolerance is +/-10%)

BIN Color	N	O	P	Q	R
Blue ( mcd )	6.101-7.20	7.201-8.50	8.501-10.5	10.501-12.8	12.801-15.250

■ 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:

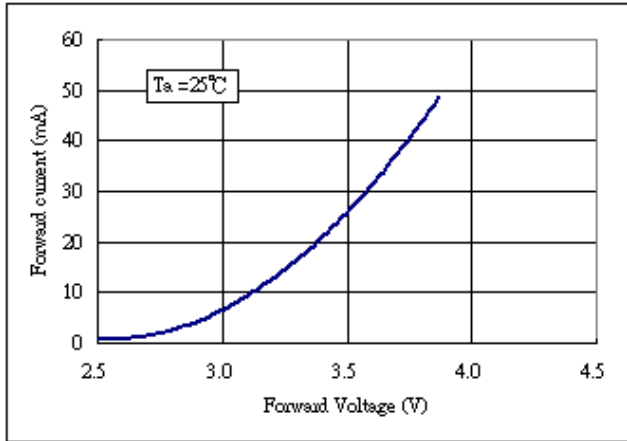


Fig2. Forward Current vs. Relative Intensity:

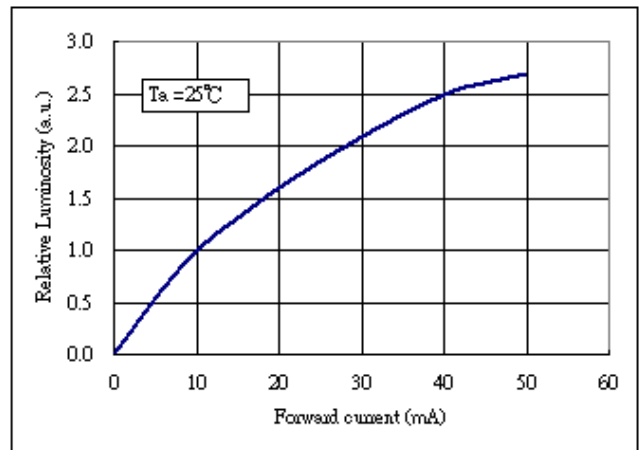


Fig3. Forward Current vs. Relative Wavelength:

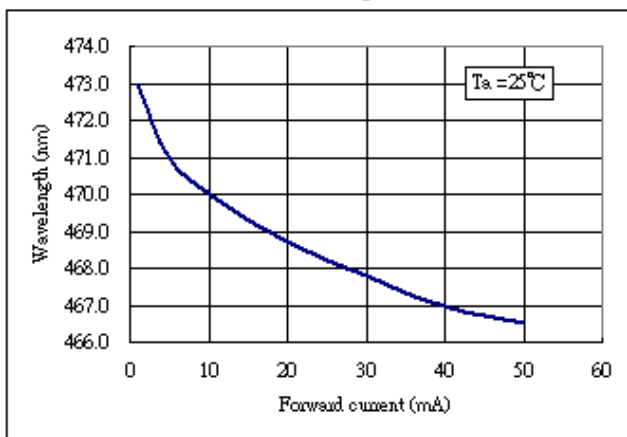
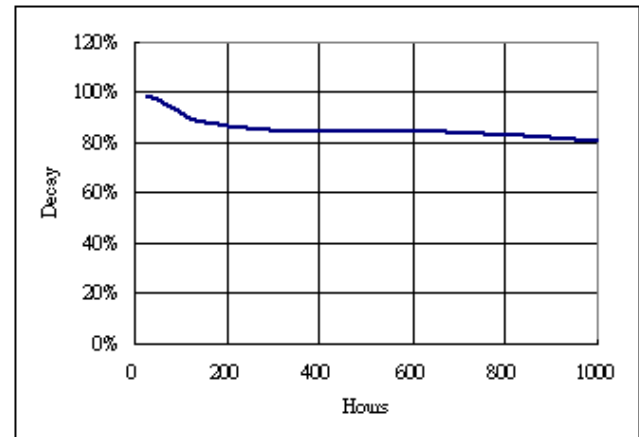


Fig4. Life Test at 20mA R.T. 1000hrs:



## 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:

200 pcs / Expandable Polyethylene.  
1400 pcs / Box(360\*175\*130mm).  
8400 pcs / Catton(550\*380\*280mm).

### Packing method B:

28 pcs / IC Tube.(530\*14.5\*15.5)  
2156 pcs / Box(537\*175\*125mm).  
8624 pcs / Catton(550\*380\*280mm).