

**WCN-5742GU-DA01****SPECIFICATION**

WCN			CUSTOMER Confirmed
Prepared by	Checked by	Approved by	
Fei 2016-3-28	Athena		
REVISION RECORD			

**REVISION: A0**

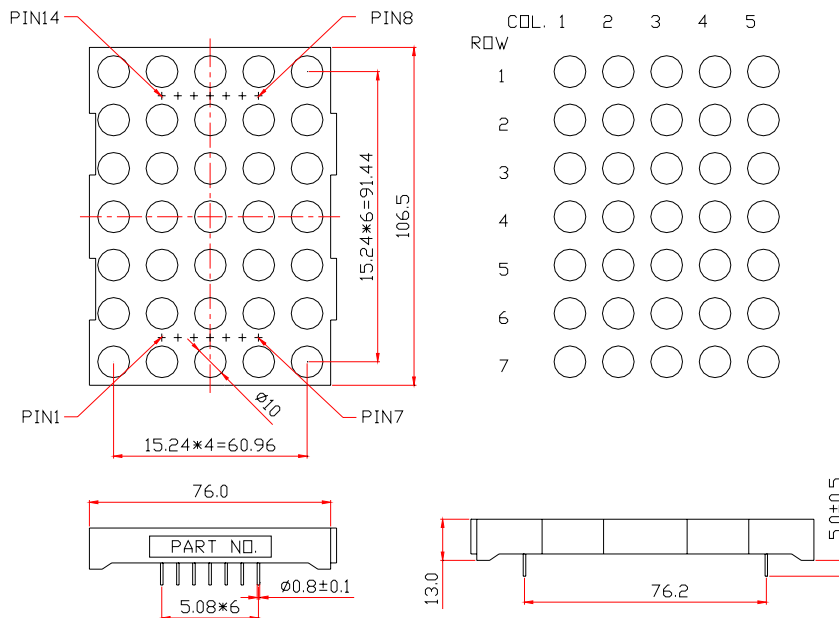
## ■ Features:

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

## ■ Description:

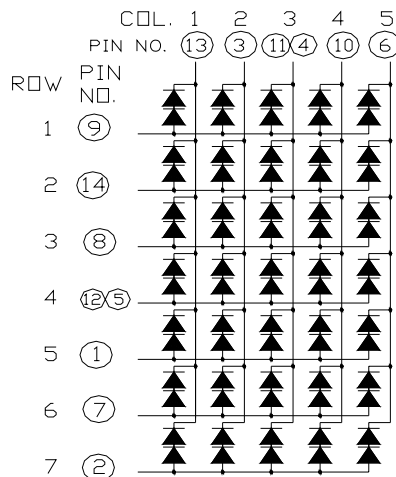
- 5X7 LED Dot Matrix
- $\phi$  10mm Dot and Pitch 15.24 mm
- Black Face and Milky Dots

## ■ Outer Dimension:



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

## ■ Circuit Diagram



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

Parameter	Symbol	Condition	Color	Rating	Units
Maximal Power Dissipation (When completely Lighting)	$P_d$	—	Yellow Green	130	mW
Maximal Forward Current (When completely Lighting)	$I_F$	—	Yellow Green	25	mA
Peak Forward Current	$I_{FP}$	1/8Duty 10khz	Yellow Green	100	mA
Reverse Voltage	$V_R$	—	Yellow Green	5	V
Operating Temperature Range	$T_{opr}$	—	—	-40~+85	°C
Storage Temperature Range	$T_{stg}$	—	—	-40~+85	°C

■ **Electrical/Optical Characteristics Rating(Ta=25°C)**

Item	Symbol	Test conditions	Location	Rating			Units
				Min.	Typ.	Max.	
Forward Voltage	$V_F$	$I_F=20mA$	Per Dice	3.6	4.5	5.2	V
Reverse Current	$I_R$	$V_R=5V$	Per Dice	—	—	100	$\mu A$
Luminous Intensity	$I_V$	$I_F=10mA$	Per Dice	4.001	6.8	10.5	mcd
Wave Length	$\lambda_P$	$I_F=20mA$	Per Dice	—	568	—	nm
	$\lambda_d$				571		
Spectral Line Half Width	$\Delta \lambda$	$I_F=20mA$	Per Dice	—	20	—	nm
Luminous Intensity Matching Ratio (Dot To Dot)	$I_{V-M}$	1/8Duty $I_{FP}=40mA$				1.2:1	

■ **Luminous Intensity Sorting (1/8Duty ;  $I_{FP}=40mA$  ; The Tolerance is +/-10%)**

BIN Color	L	M	N	O	P
Yellow Green ( mcd )	4.001-5.000	5.001-6.1	6.101-7.2	7.201-8.5	8.501-10.5

■ **Soldering Conditions: Soldering Temp.  $\leq +260^\circ C$**

Soldering Time.  $\leq 3sec.$

( at 2mm Distance from The Case of Reflector Edge)

■ Typical Elector-Optical Characteristics Curve:

Fig1. Forward Current vs. Forward Voltage:

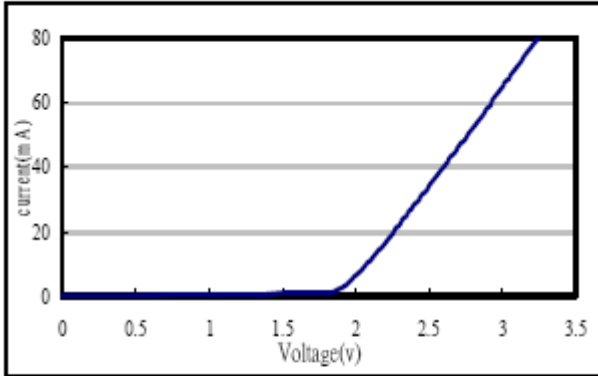


Fig2. Forward Current vs. Relative Intensity:

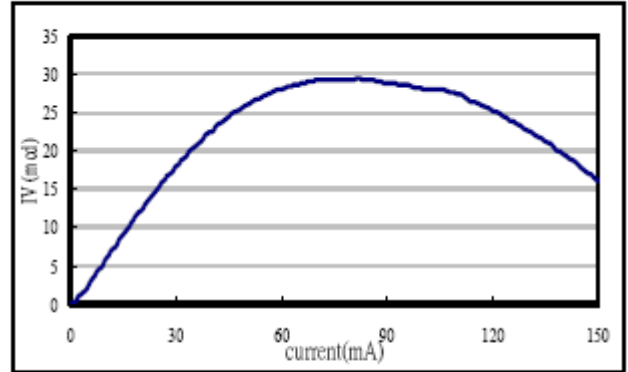


Fig3. Forward Current vs. Relative Wavelength:

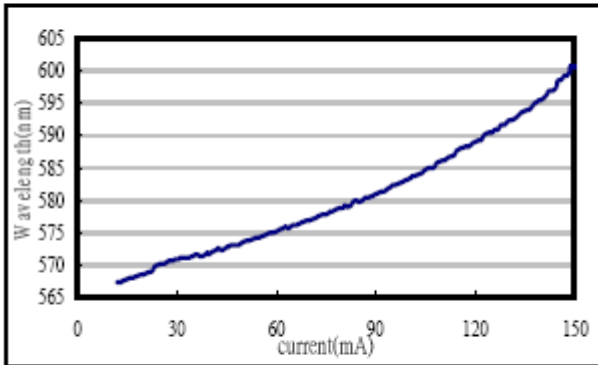


Fig4. Temperature vs. Relative Intensity:

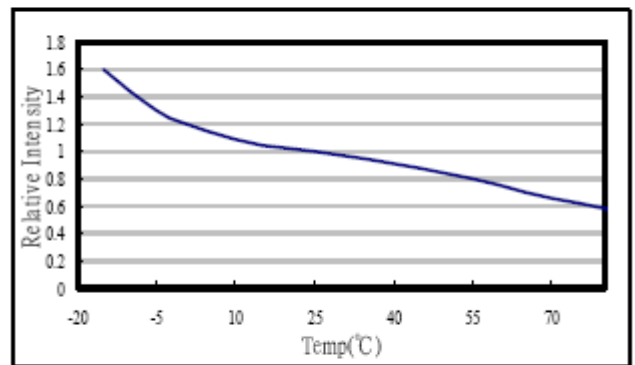


Fig5. Temperature vs. Relative Wavelength:

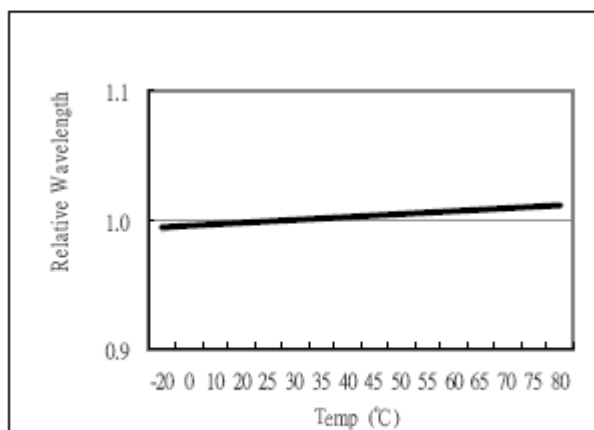
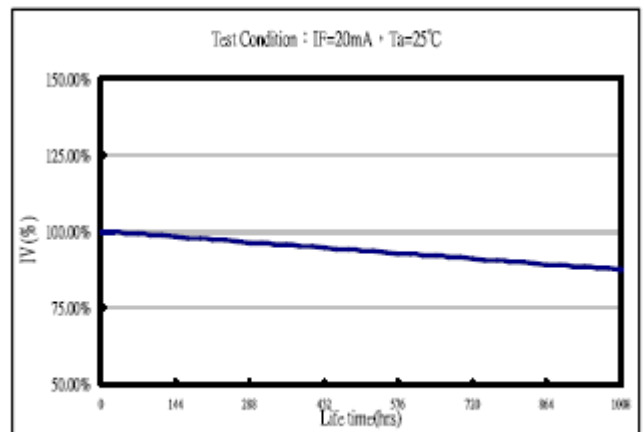


Fig6. Life Test at 20mA R.T. 1000hrs:



## 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:

9 pcs / Expandable Polyethylene.

90 pcs / Box(360\*260\*255mm).

180 pcs / Catton(550\*380\*280mm).