WCN

WCN Opto Group Co., Limited

WCN-5707WW-DA15

SPECIFICATION

WCN			CUSTOMER Confirmed
Prepared by	Checked by	Approved by	
Fei 2016-8-31	Athena		

REVISION RECORD
A2: New Version issued.(2016-6-23)
A3:Change Luminous Intensity Sorting and Hue Grade (2016-8-31)

RoHS

恒盛源光电科技(深圳)有限公司 开发部 WCN

REVISION: A3

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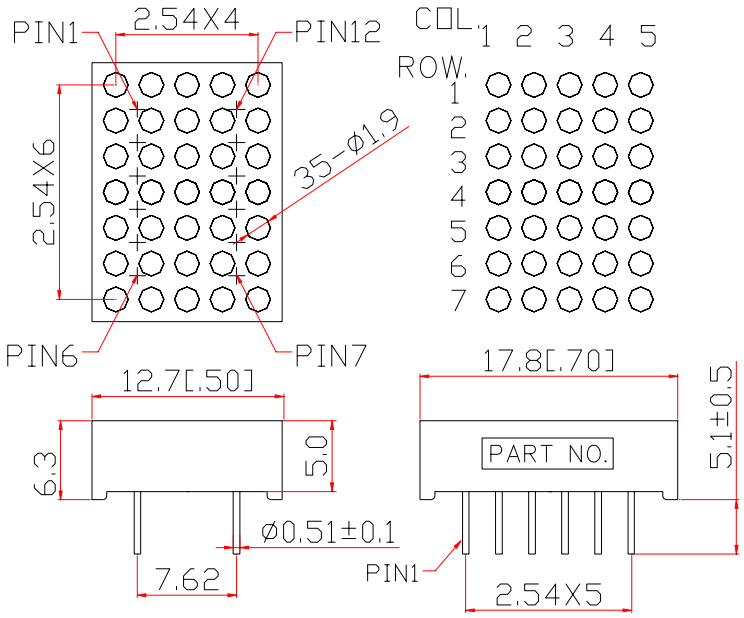
■ Features:

- . **High Reliability**
- . **Color : White**
- . **Low Power Requirement**
- . **Flat Package and Light Weight**
- . **Easy Assembly**

■ Description:

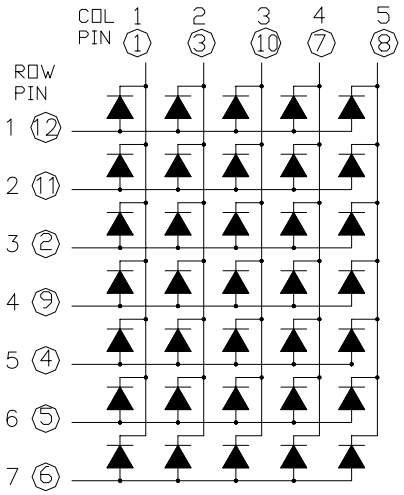
- . **5X7 LED Dot Matrix**
- . **ϕ 1.9 mm Dot and Pitch 2.54 mm**
- . **Gray Face and Yellow Diffused Dots**

■ Outer Dimension:



Notes : Unless otherwise stated, The tolerance is ±0.25mm.

■ Circuit Diagram



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

Parameter	Symbol	Condition	Color	Rating	Units
Maximal Power Dissipation (When completely Lighting)	P_d	—	White	90	mW
Maximal Forward Current (When completely Lighting)	I_F	—	White	25	mA
Peak Forward Current	I_{FP}	1/8Duty 10khz	White	100	mA
Reverse Voltage	V_R	—	White	5	V
Operating Temperature Range	Topr	—	—	-40～+105	℃
Storage Temperature Range	Tstg	—	—	-40～+105	℃

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

Item	Symbol	Test conditions	Location	Rating			Units
				Min.	Typ.	Max.	
Forward Voltage	V_F	I_F=20mA	Per Dice	2.60	3.00	3.60	V
Reverse Current	I_R	V_R=5V	Per Dice	—	—	100	μA
Luminous Intensity	I_V	I_F=10mA	Per Dice	—	36.5	—	mcd
Wave Length	X	I_F=20mA	Per Dice		0.278		
	Y				0.267		
Luminous Intensity Matching Ratio (Dot To Dot)	I_{V-M}	1/8Duty I_{FP} =40mA				1.2:1	

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

Rank	Symbol	Condition	Min	Max	Unit
I	I	I_F=10mA	21.0	25.0	mcd
J	J	I_F=10mA	25.1	30.0	mcd
K	K	I_F=10mA	30.1	36.0	mcd
L	L	I_F=10mA	36.1	43.0	mcd

■**Hue Grade:**

BIN CODE	CIE-X1	CIE-Y1	CIE-X2	CIE-Y2	CIE-X3	CIE-Y3	CIE-X4	CIE-Y4
E04	0.288	0.252	0.279	0.261	0.290	0.270	0.299	0.261
E05	0.279	0.261	0.270	0.270	0.281	0.279	0.290	0.270
E06	0.270	0.270	0.261	0.279	0.272	0.288	0.281	0.290
F04	0.299	0.261	0.290	0.270	0.301	0.279	0.31	0.270
F05	0.390	0.270	0.281	0.279	0.292	0.288	0.301	0.279
F06	0.281	0.279	0.272	0.288	0.283	0.297	0.292	0.288
G04	0.310	0.270	0.301	0.279	0.312	0.288	0.321	0.279
G05	0.301	0.279	0.292	0.288	0.303	0.297	0.312	0.288
G06	0.292	0.288	0.283	0.297	0.294	0.306	0.303	0.297
H04	0.321	0.279	0.312	0.288	0.323	0.297	0.332	0.288
H05	0.312	0.288	0.303	0.297	0.314	0.306	0.323	0.397
H06	0.303	0.397	0.294	0.306	0.306	0.314	0.314	0.306

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

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 $I_F = I_F$ 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±5°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±5°C(COB: Ta=65±5°C) TEST TIME=1000Hrs(-24Hrs, +72Hrs)
	IOW TEMPERATURE STORAGE	EVALUATES DEVICE DURABILITY FOR LONG TERM STORAGE IN LOW TEMPERATURE T_a =-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: Thot=65°C, Tcold=-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: Thot=65°C,Tcold=-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.

2156 pcs / Box(537*175*125mm).

8624 pcs / Catton(550*380*280mm).