WCN

WCN Opto Group Co., Limited

WCN-5711SR-DA01

SPECIFICATION

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

REVISION: A0

WCN Opto Group Co., Limited

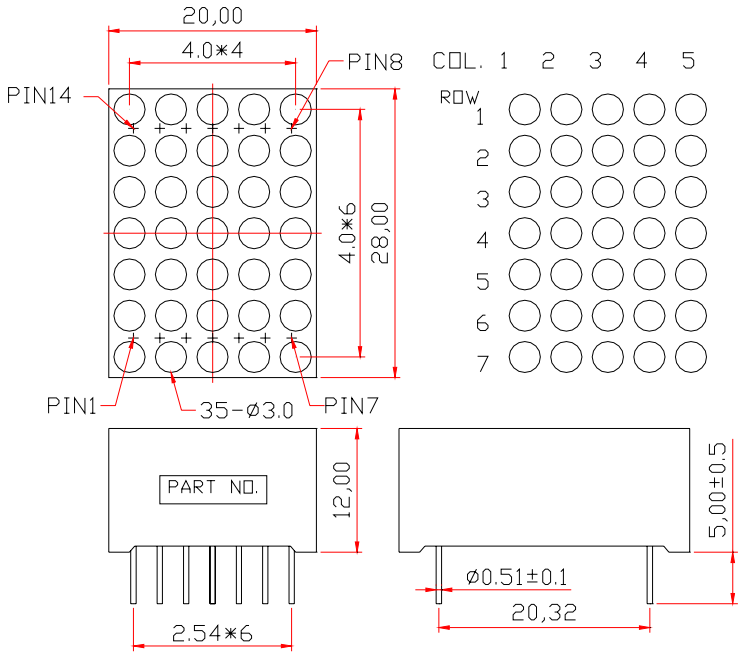
■ Features:

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

■ Description:

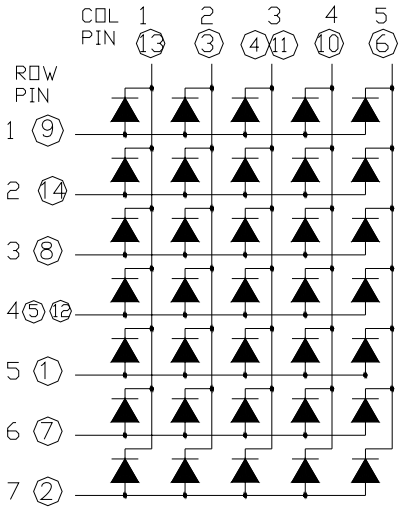
- . 5X7 LED Dot Matrix
- . ϕ 3mm Dot and Pitch 4.0 mm
- . Black Face and Milky Dots

■ Outer Dimensions:



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	—	Red	65	mW
Maximal Forward Current (When completely Lighting)	I_F	—	Red	25	mA
Peak Forward Current	I_{FP}	1/8Duty 10khz	Red	100	mA
Reverse Voltage	V_R	—	Red	5	V
Operating Temperature Range	Topr	—	—	-40～+85	℃
Storage Temperature Range	Tstg	—	—	-40～+85	℃

■ **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	1.80	2.0	2.60	V
Reverse Current	I_R	V_R=5V	Per Dice	—	—	100	μA
Luminous Intensity	I_V	I_F=10mA	Per Dice	4.001	6.8	10.5	mcd
Wave Length	λ_P	I_F=20mA	Per Dice	—	638	—	nm
	λ_d				633		
Spectral Line Half Width	△λ	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
Red (mcd)	4.001-5.0	5.001-6.1	6.101-7.2	7.201-8.50	8.501-10.5

■**Soldering Conditions: Soldering Temp. ≦+260℃**

Soldering Time. ≦3sec.

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

■ Typical Elector-Optical Characteristics Curve:

Fig 1. Forward Current vs. Forward Voltage

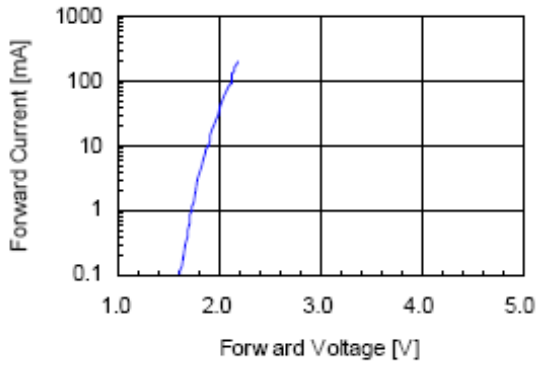


Fig 2. Relative Intensity vs. Forward Current

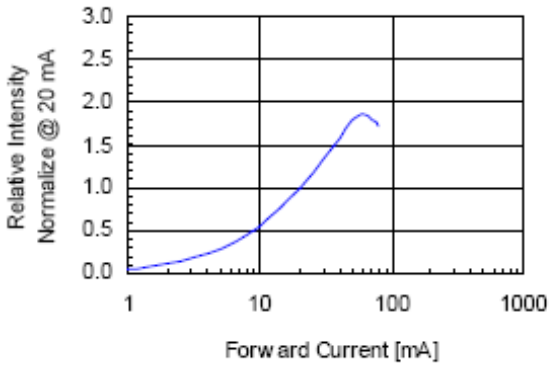


Fig 3. Forward Voltage vs. Temperature

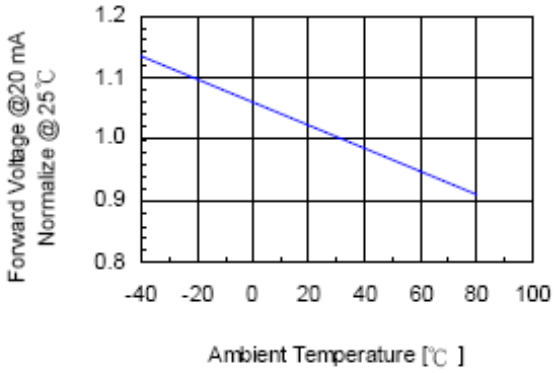
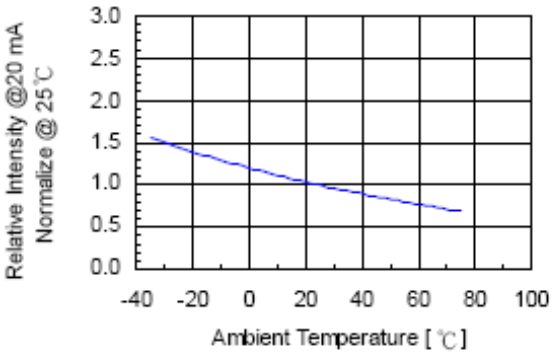


Fig 4. Relative Intensity vs. Temperature



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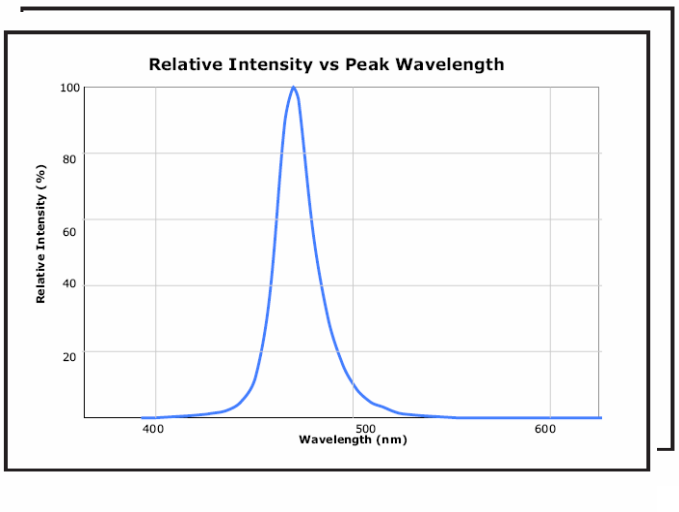

LED Displays Reliability Test:

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:

120 pcs / Expandable Polyethylene.
1200 pcs / Box(360*260*255mm).
2400 pcs / Catton(550*380*280mm).