WCN Opto Group Co., Limited

WCN-5824D6-DA04

SPECIFICATION

WCN			CUSTOMER Confirmed
Prepared by	Checked by	Approved by	
Zhang 2018-6-22	Athena		

RoHS

恒盛源光电科技(深圳)有限公司 开发部 WCN

REVISION: A1

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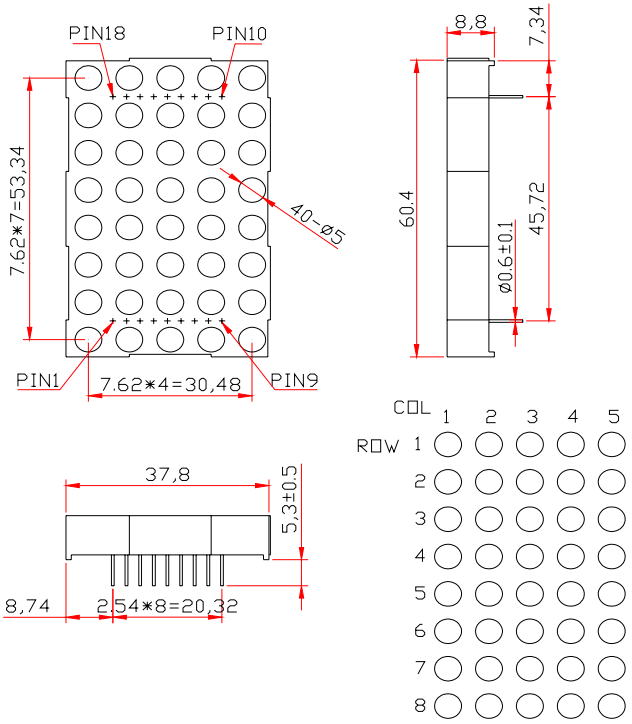
■ Features:

- . High Reliability
- . Color: Dual Color (Yellow Green and Red)
- . Low Power Requirement
- . Flat Package and Light Weight
- . Easy Assembly

■ Description:

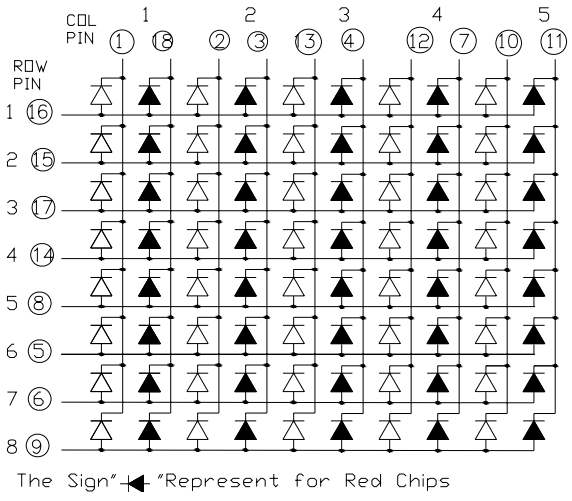
- . 5*8 LED Dot Matrix
- . ϕ 5 mm Dot and Pitch 7.62 mm
- . Black Face and Milky Dots

■ Outer Dimension:



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

■ Circuit Diagram



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

Parameter	Symbol	Condition	Color	Rating	Units
Maximal Power Dissipation (When completely Lighting) Per Dice	P_d	—	Yellow Green	65	mW
			Red	62.5	
Maximal Forward Current (When completely Lighting) Per Dice	I_F	—	Yellow Green	25	mA
			Red	25	
Peak Forward Current Per Dice	I_{FP}	1/8Duty 10khz	Yellow Green	80	mA
			Red	80	
Reverse Voltage Per Dice	V_R	—	Yellow Green	5	V
			Red	5	
Operating Temperature Range	Topr	—	—	-40～+85	℃
Storage Temperature Range	Tstg	—	—	-40～+85	℃

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

Item	Symbol	Test conditions	Location	Color	Rating			Units
					Min.	Typ.	Max.	
Forward Voltage	V_F	I_F=20mA	Per Dice	Yellow Green	—	2.1	2.60	V
				Red	—	2.0	2.50	
Reverse Current	I_R	VR=5V	Per Dice	Yellow Green	—	—	100	μA
				Red	—	—	100	
Luminance	I_V	I_{FP}=40mA 1/8 Duty	Per Dice	Yellow Green	—	30	—	mcd
				Red		40		
Peak Emission Wave Length	λ_P / λ_D	I_F=20mA	Per Dice	Yellow Green	—	568/571	—	nm
				Red	—	660/640	—	
Spectral Line Half Width	$\triangle_\lambda$	I_F=20mA	Per Dice	Yellow Green	—	30	—	nm
				Red	—	20	—	
Luminance Matching Ratio	I_{v-m}	I_{FP}=40mA 1/8 Duty					1.2:1	

■ **Soldering Conditions : Soldering Temp. ≦+260℃. Soldering Time. ≦3sec.**

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

■ Typical Electro-Optical Characteristics Curve of Red:

Fig 1. Forward Current vs. Forward Voltage

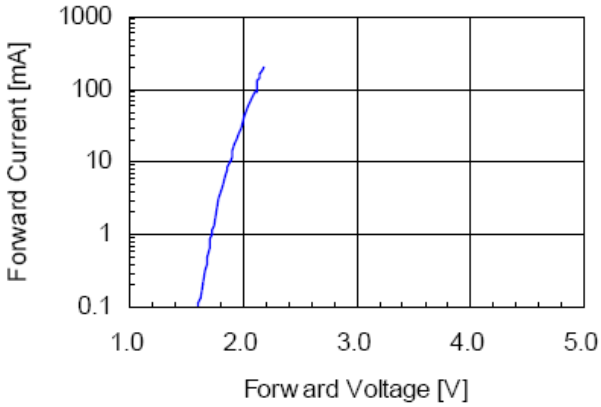


Fig 2. Relative Intensity vs. Forward Current

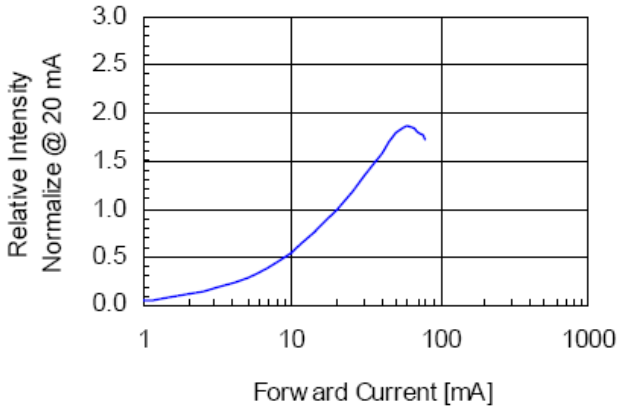


Fig 3. Forward Voltage vs. Temperature

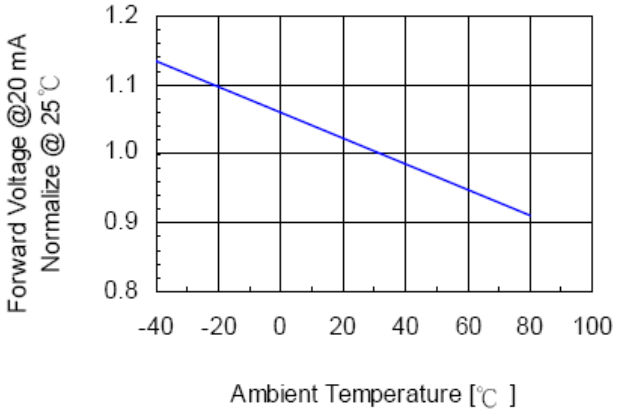


Fig 4. Relative Intensity vs. Temperature

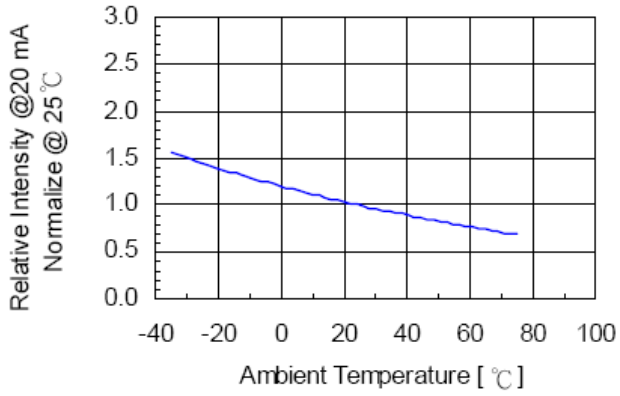
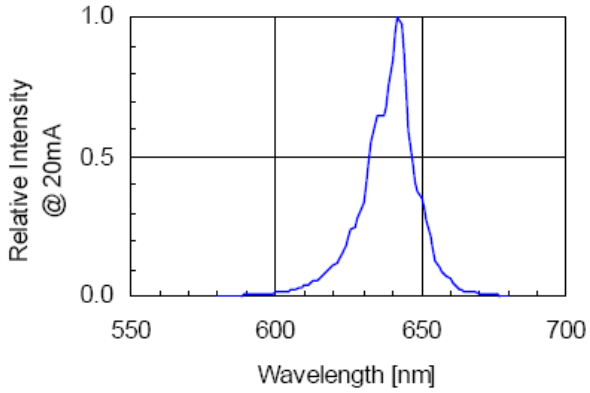


Fig 5. Relative Intensity vs. Wavelength



■ Typical Electro-Optical Characteristics Curve of Yellow Green:

Fig 1. Forward Current vs. Forward Voltage

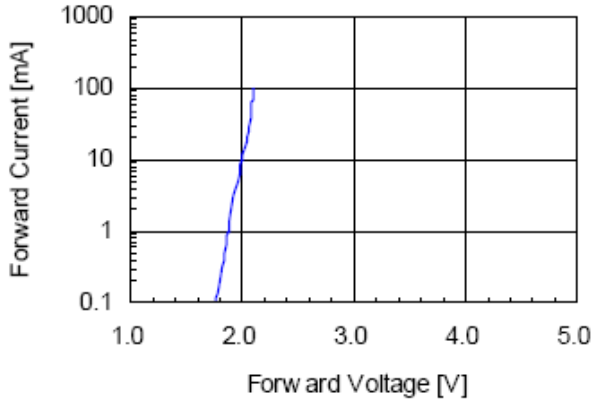


Fig 2. Relative Intensity vs. Forward Current

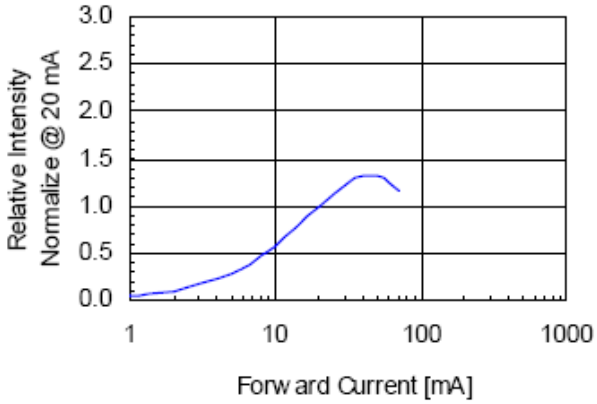


Fig 3. Forward Voltage vs. Temperature

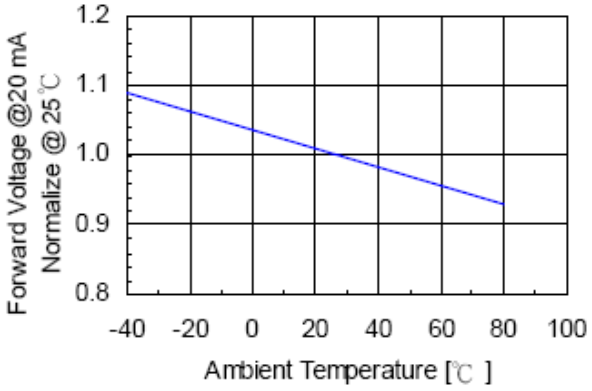


Fig 4. Relative Intensity vs. Temperature

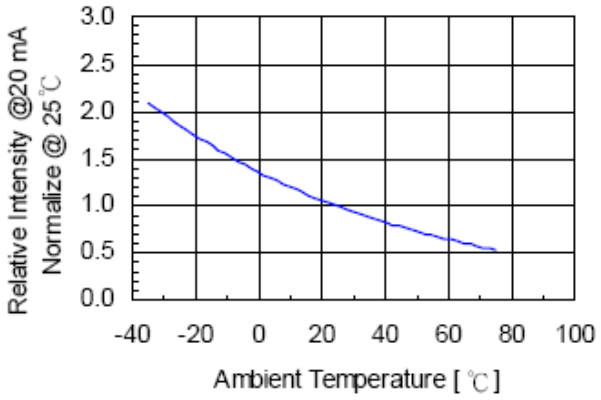
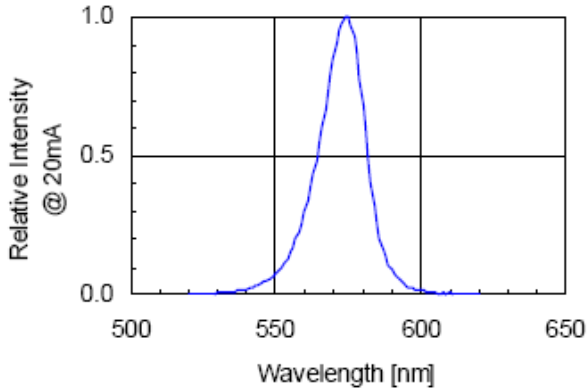


Fig 5. Relative Intensity vs. Wavelength



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 :

30pcs/ExpandablePolyethylene.

360pcs / Box.

5720pcs / Carton (550*380*280mm).