



WCN Opto Group Co., Limited

WCN-8808D6-DA06

SPECIFICATION

WCN			CUSTOMER Confirmed
Prepared by	Checked by	Approved by	
Fei 2016-06-18	Athena		
REVISION RECORD			



REVISION: A0

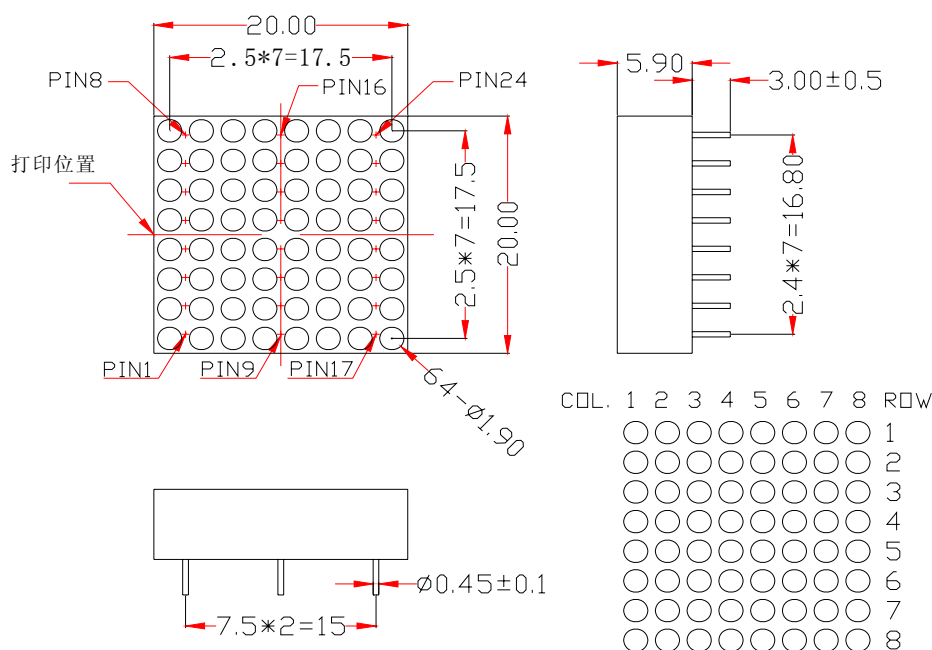
Features:

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

Description:

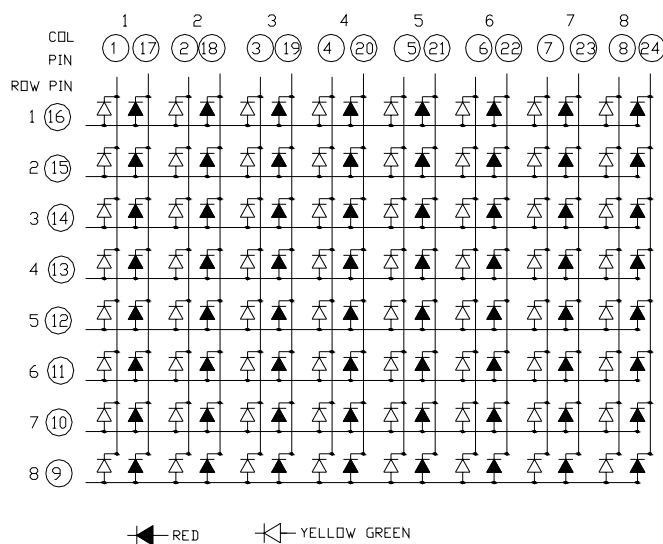
- 8X8 LED Dot Matrix
- $\phi 1.9$ mm Dot and Pitch 2.5 mm
- Black Face and Milky Diffused Dots

Outer Dimension:



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

Circuit Diagram



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

Parameter	Symbol	Condition	Color	Rating	Units
Maximal Power Dissipation (When completely Lighting)	P_d	—	Red/Yellow Green	65/65	mW
Maximal Forward Current (When completely Lighting)	I_F	—	Red/Yellow Green	25/25	mA
Peak Forward Current	I_{FP}	1/8Duty 10khz	Red/Yellow Green	100	mA
Reverse Voltage	V_R	—	Red/Yellow Green	5/5	V
Operating Temperature Range	T_{opr}	—	—	-40~+85	℃
Storage Temperature Range	T_{stg}	—	—	-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	Red	1.80	2.0	2.60	V
				Yellow Green	1.90	2.25	2.60	
Reverse Current	I _R	V _R =5V	Per Dice	Red	—	—	100	μ A
				Yellow Green				
Luminous Intensity	I _V	I _F =10mA	Per Dice	Red	—	7.8	—	mcd
				Yellow Green	—	6.5	—	
Wave Length	λ _P	I _F =20mA	Per Dice	Red	—	635	—	nm
			Yellow Green	—	568	—		
			Red	—	630	—		
			Yellow Green	—	571	—		
Spectral Line Half Width	△ λ	I _F =20mA	Per Dice	Red	—	20	—	nm
				Yellow Green		20		
Luminous Intensity Matching Ratio (Dot To Dot)	I _{V-M}	1/8Duty I _{FP} =40mA					1.2:1	

■ 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 of Red:

Fig 1. Forward Current vs. Forward Voltage

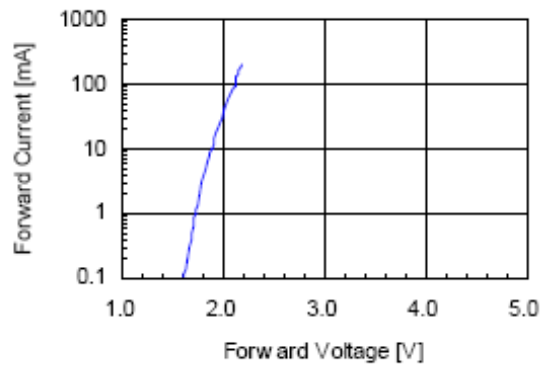


Fig 2. Relative Intensity vs. Forward Current

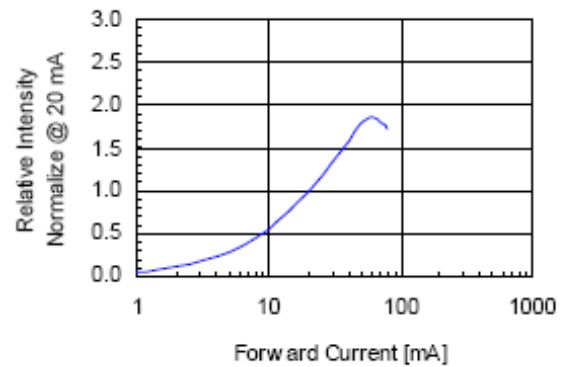


Fig 3. Forward Voltage vs. Temperature

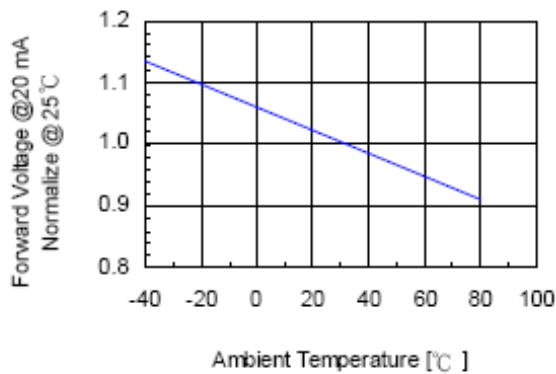


Fig 4. Relative Intensity vs. Temperature

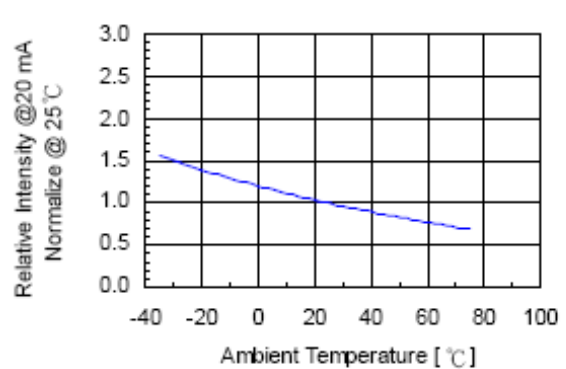
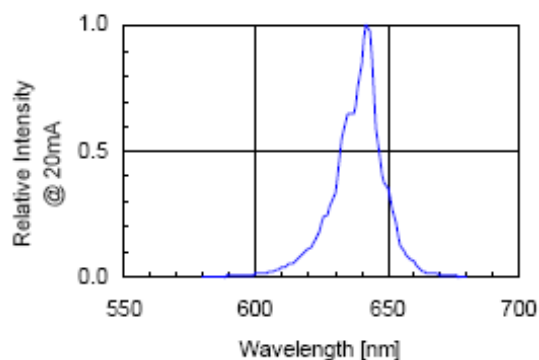


Fig 5. Relative Intensity vs. Wavelength



■ Typical Elector-Optical Characteristics Curve of Yellow Green:

Fig 1. Forward Current vs. Forward Voltage

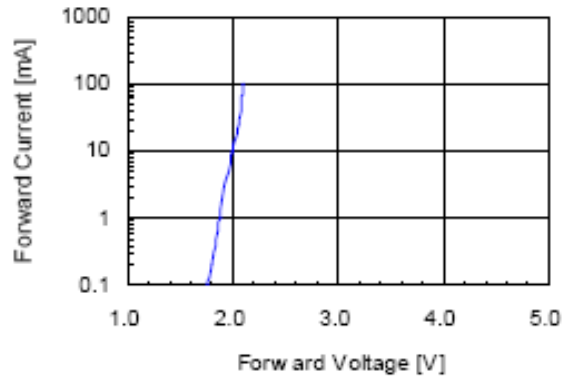


Fig 2. Relative Intensity vs. Forward Current

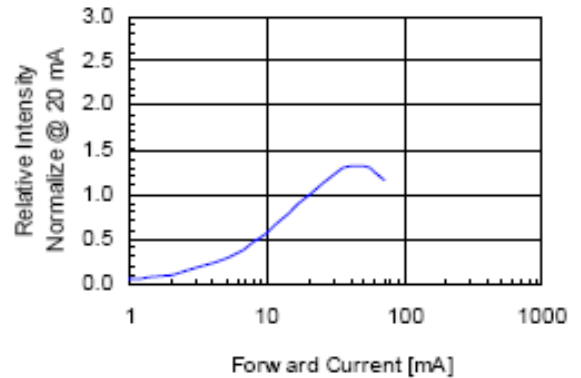


Fig 3. Forward Voltage vs. Temperature

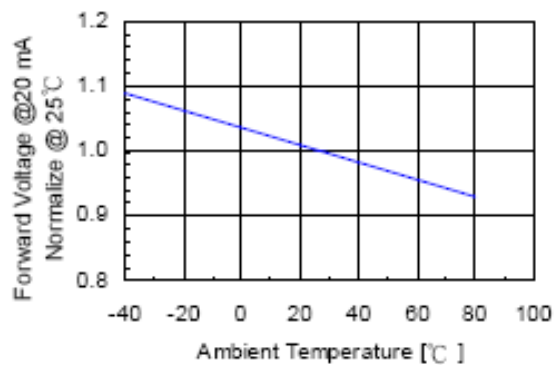


Fig 4. Relative Intensity vs. Temperature

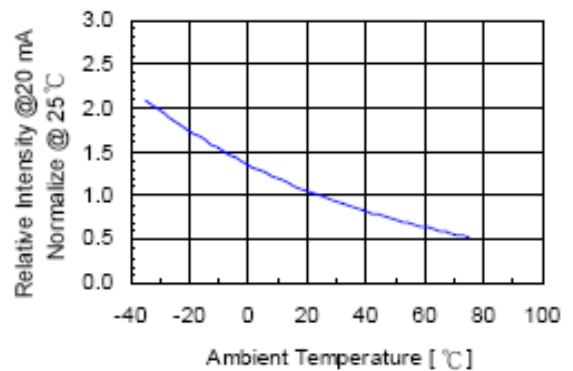
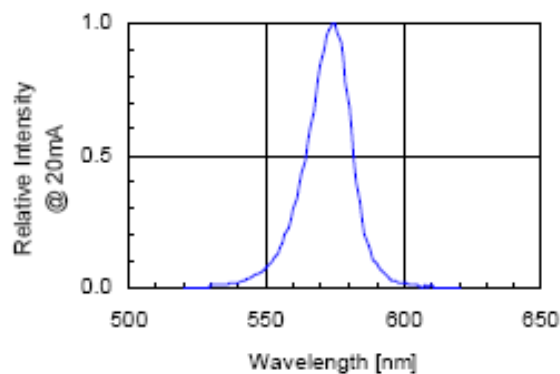


Fig 5. Relative Intensity vs. Wavelength



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 $I_F = I_F \text{ max}$
	HIGH TEMPERATURE HIGH HUMIDITY STORAGE	EVALUATES MOISTURE RESISTANCE OF THE DEVICE WHEN STORED FOR A LONG TERM AT HIGH TEMPERATURE AND HUMIDITY $T_a = 65 \pm 5^\circ\text{C}$ RH=90~95%RH TEST TIME=240 $\pm$ 2Hrs
	HIGH TEMPERATURE STORAGE	EVALUATES DEVICE DURABILITY FOR LONG TERM STORAGE IN HIGH TEMPERATURE $T_a = 85 \pm 5^\circ\text{C}$ (COB: $T_a = 65 \pm 5^\circ\text{C}$) TEST TIME=1000Hrs(-24Hrs, +72Hrs)
	LOW TEMPERATURE STORAGE	EVALUATES DEVICE DURABILITY FOR LONG TERM STORAGE IN LOW TEMPERATURE $T_a = -35 \pm 5^\circ\text{C}$ TEST TIME=1000Hrs(-24Hrs, +72Hrs)
ENVIRONMENTAL TEST	TEMPERATURE CYCLING	EVALUATES RESISTANCE OF DEVICE AT THERMAL STRESSES OR EXPANSION AND CONTRACTION $85^\circ\text{C} \sim 25^\circ\text{C} \sim -35^\circ\text{C} \sim 25^\circ\text{C}$ 30min 5min 30min 5min 10 CYCLES(COB: $T_{\text{hot}}=65^\circ\text{C}$, $T_{\text{cold}}=-25^\circ\text{C}$)
	THERMAL SHOCK	EVALUATES DEVICE STRUCTURE AND STRUCTURE AND MECHANICAL RESISTANCE WHEN SUDDENLY EXPOSED AT SERVE CHANGES $85 \pm 5^\circ\text{C} \sim -35 \pm 5^\circ\text{C}$ 10min 10min 10 CYCLES(COB: $T_{\text{hot}}=65^\circ\text{C}$, $T_{\text{cold}}=-25^\circ\text{C}$)
	SOLDERABILITY	EVALUATES SOLDERABILITY ON LEADS OF DEVICE $T_{\text{SOL}}=230 \pm 5^\circ\text{C}$ DWELL TIME=5 $\pm$ 1sec.
	SOLDER RESISTANCE	EVALUATES RESISTANCE TO THERMAL STRESS CAUSED BY SOLDERING $T_{\text{SOL}}=260 \pm 5^\circ\text{C}$ DWELL TIME=10 $\pm$ 1sec.

Packing method A:

112 pcs / Expandable Polyethylene.

780 pcs / Box(360*175*130mm).

4680 pcs / Catton(550*380*280mm).