

WCN-8819RG-DA03**SPECIFICATION**

WCN			CUSTOMER Confirmed
Prepared by	Checked by	Approved by	
Fei 2016-6-21	Athena		
REVISION RECORD A1:New Version issued(2016-6-21)			

**REVISION: A1**

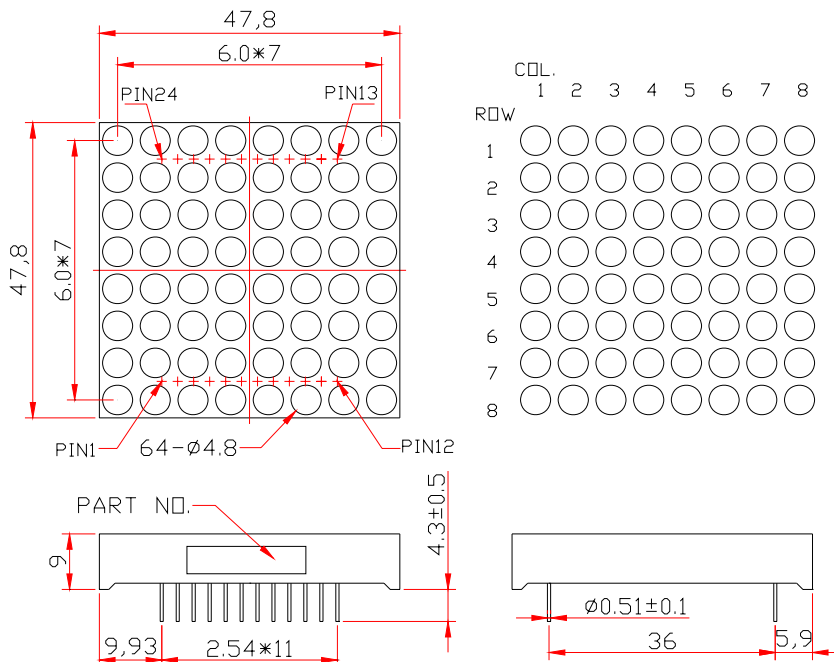
■ Features:

- High Reliability
- Color: Dual Color (Pure Green and Red)
- Low Power Requirement
- Easy Assembly

■ Description:

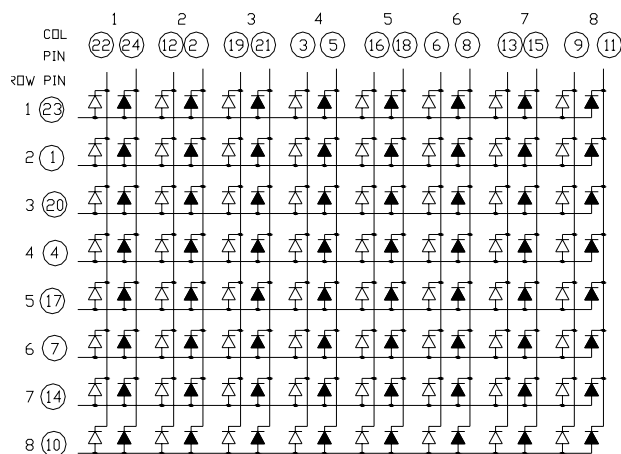
- 8x8 Dot Matrix Anode Row
- ϕ 4.8 mm Dot and Pitch 6.0 mm
- Black Face and Milky Dots

■ Outer Dimension



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

■ Circuit Diagram



The Sign \blacktriangle Represent for Red Chips
 The Sign \blacktriangledown Represent for Pure Green Chips

■ Absolute Maximum Rating (Ta=25°C):

Parameter	Symbol	Condition	Color	Rating	Units
Forward Current Per Dot	I _F	—	Red	25	mA
			Green	25	
Power Dissipation Per Dot	P _d	—	Red	62.5	mW
			Green	90	
Peak Forward Current Per Dot	I _{FP}	1/10 Duty with 1kHz	Red	90	mA
			Green		
Reverse Voltage Per Dot	V _R	—	Red	5	V
			Green		
Operating Temperature Range	Topr	—	—	-40~+85	°C
Storage Temperature Range	Tstg	—	—	-40~+85	°C

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

Item	Symbol	Test conditions	Location	Color	Rating			Units
					Min.	Typ.	Max.	
Forward Voltage	V _F	I _F =20mA	Per Dot	Red	—	2.00	2.50	V
				Green	—	3.2	3.60	
Reverse Current	I _R	V _R =5V	Per Dot	Red	—	—	100	μA
				Green	—	—	100	
Luminance	I _V	I _{FP} =40mA 1/8 Duty	Per Module	Red	—	558	—	cd/m ²
				Green				
Peak Emission Wave Length	I _V	I _F =20mA	Per Dot	Red	—	560	—	nm
				Green				
Spectral Line Half Width	Δ _λ	I _F =20mA	Per Dot	Red	—	20	—	nm
				Green		30		
Luminance Matching Ratio	I _{v-m}	I _{FP} =40mA 1/8 Duty					1.2:1	



WCN Opto Group Co., Limited

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

B IN COLOR	A	B	C	D	E
Green + Red (cd/m ²)	350-420	421-513	514-612	613-740	741-888

■ **Hue Grade (1/8Duty, I_{FP}=40mA; The Tolerance is +/-0.005)**

B IN COORDINATE	05	06	07	08	09
Green + Red (nm)	557.5-558.4	558.5-559.4	559.5-560.4	560.5-561.4	561.5-562.4

- **Soldering Conditions: Soldering Temp. $\leq +260^{\circ}\text{C}$**
Soldering Time. $\leq 3\text{sec.}$
(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: T _a =65±5°C) TEST TIME=1000Hrs(-24Hrs, +72Hrs)
	LOW 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: T _{hot} =65°C, T _{cold} =-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 _{hot} =65°C, T _{cold} =-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:

- 35 pcs / Expandable Polyethylene.
- 420 pcs / Box(360*260*255mm).
- 840 pcs / Catton(550*380*280mm).