WCN Opto Group Co., Limited

WCN5-0422WW-A31

SPECIFICATION

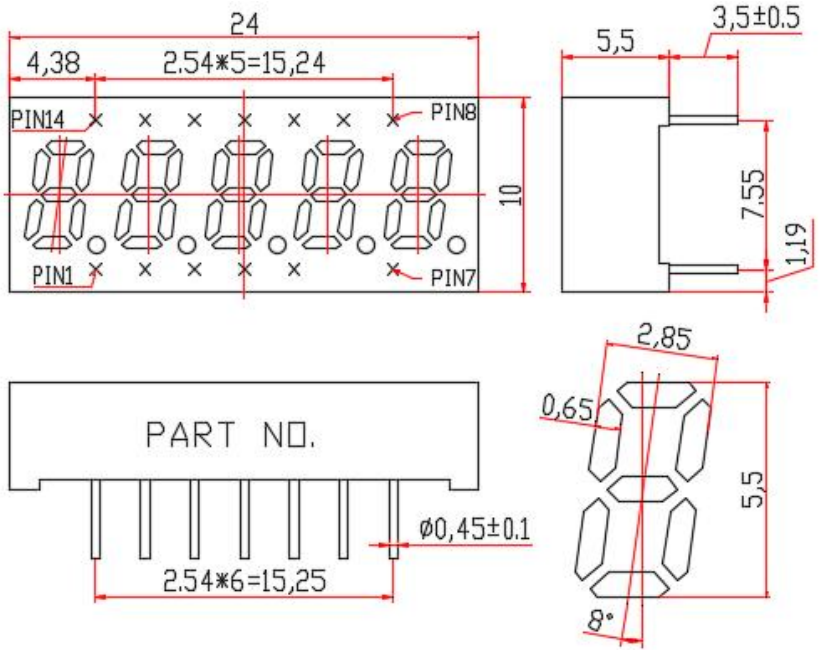
WCN			CUSTOMER Confirmed
Prepared by	Checked by	Approved by	
Liu 2024-1-10	Athena	William	

RoHS

恒盛源光电科技(深圳)有限公司 开发部 WCN

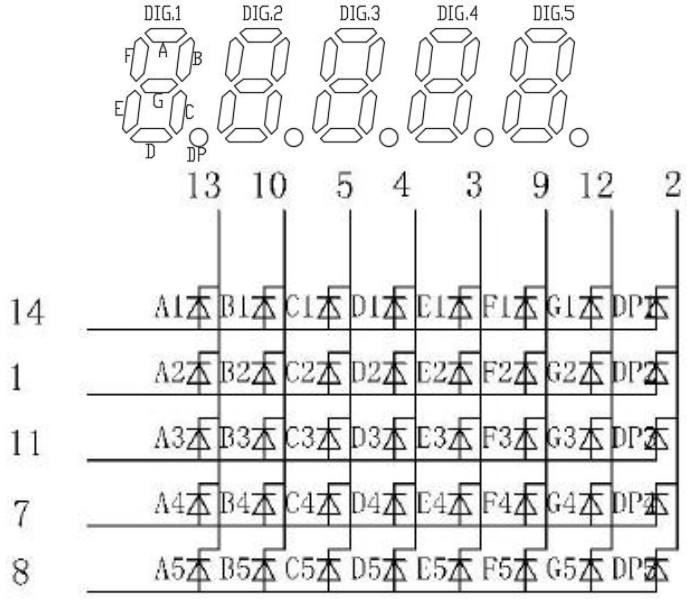
REVISION: A0

■ Outer Dimension:



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

■ Circuit Diagram:



NO PIN6

■ Pin Connection:

PIN NO.	CONNECTION	PIN NO.	CONNECTION
1	Common Anode DIG.2	8	Common Anode DIG.5
2	Cathode DP	9	Cathode F
3	Cathode E	10	Cathode B
4	Cathode D	11	Common Anode DIG.3
5	Cathode C	12	Cathode G
6	No PIN	13	Cathode A
7	Common Cathode DIG.4	14	Common Anode DIG.1

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■ **Features:**

- . High Reliability
- . Color: White
- . Low Power Requirement
- . Easy Assembly

■ **Description:**

- . Five Digit Display
- . Digit Height:5.5mm(0.22″)
- . Black Face and Yellow Segment

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

Parameter	Symbol	Condition	Color	Rating	Units
Power Dissipation Segment	P_d	—	White	90	mW
Forward Current Segment	I_F	—	White	25	mA
Peak Forward Current Per Segment	I_{FP}	1/10 Duty 10KHz	White	100	mA
Reverse Voltage Per Segment	V_R	—	White	5	V
Operating Temperature Range	Topr	—	—	-35～+85	℃
Storage Temperature Range	Tstg	—	—	-35～+85	℃

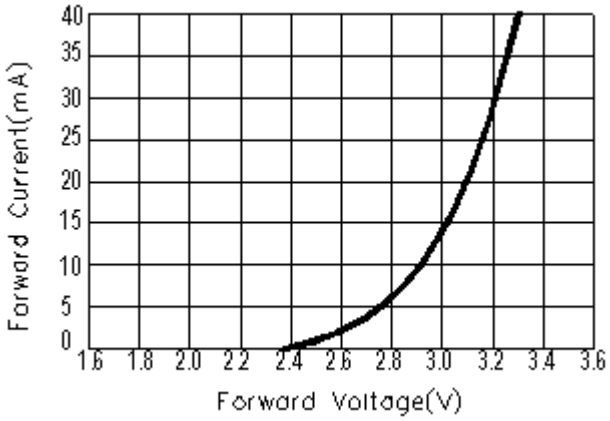
■**Electrical/Optical Characteristics Rating(Ta=25℃):**

Item	Symbol	Test conditions	Location	Rating			Units
				Min.	Typ.	Max.	
Forward Voltage	V_F	I_F=20mA	Per Segment	2.6	3.1	3.6	V
Reverse Current	I_R	V_R=5V	Per Segment	—	—	50	μA
Luminous Intensity	I_V	I_F=20mA	Per Segment	400	—	550	mcd
CIE Coordinate	X	I_F=20mA	Per Segment	—	0.285	—	—
	Y			—	0.285	—	
Luminous Intensity Matching Ratio (Segment to Segment)	I_{v-m}	I_F=10mA				1.2:1	

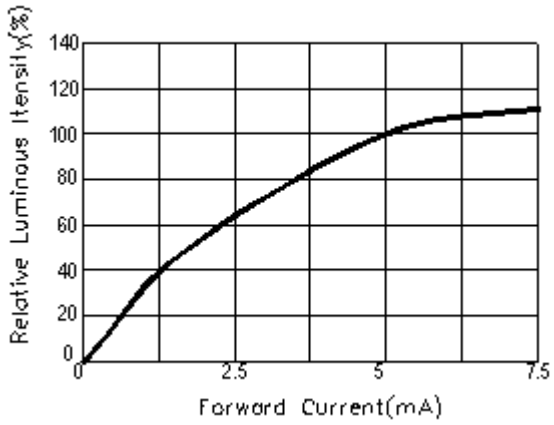
■ **Soldering Conditions: Soldering Temp. ≦+260℃,Soldering Time. ≦3sec.**
(at 2mm Distance from The Case of Reflector Edge)

■ Typical Elector-Optical Characteristics Curve:

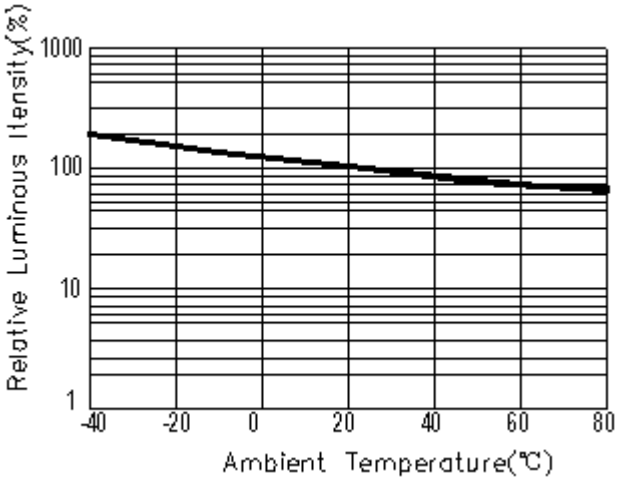
Forward Current VS Forward Voltage



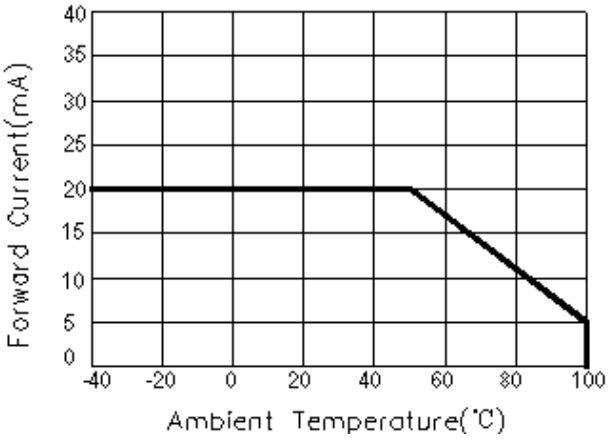
Relative Flux VS Forward Current



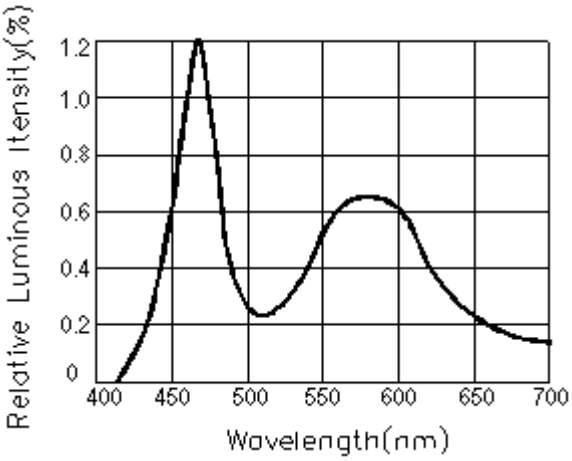
Relative Flux VS Ambient Temperature



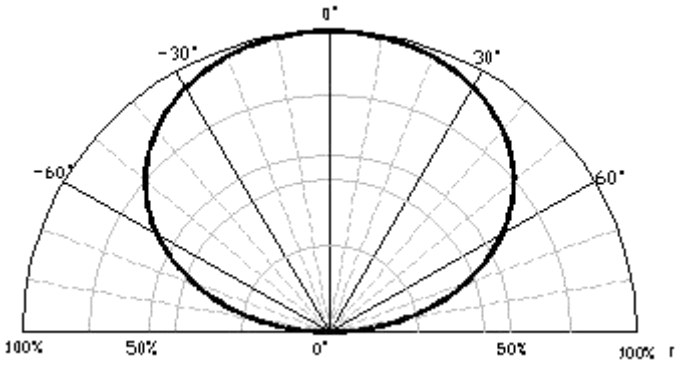
Forward Current VS Ambient Temperature



Relative Spectral Distribution



Typical Spectral Distribution



■ 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 TEST TIME=1000Hrs(-24Hrs, +72Hrs)
	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 methodA:

192 pcs / Red Expandable Polyethylene.

1344 pcs / Box(360*175*130mm).

8064 pcs / Carton(550*380*280mm).