

WCNLB5-RG51

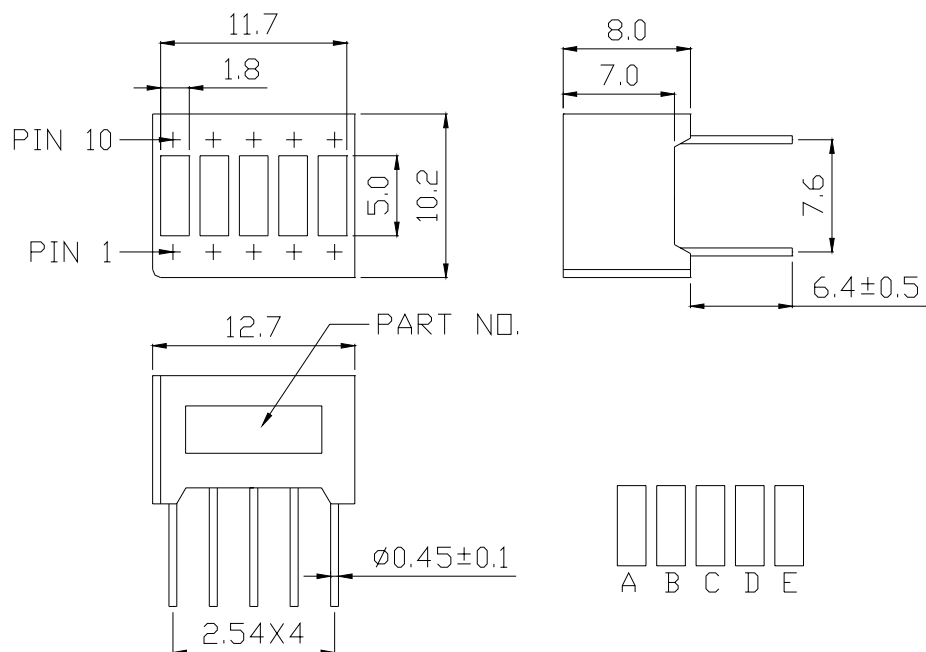
SPECIFICATION

WCN			CUSTOMER Confirmed
Prepared by	Checked by	Approved by	
Fei 2016-7-13	Athena		



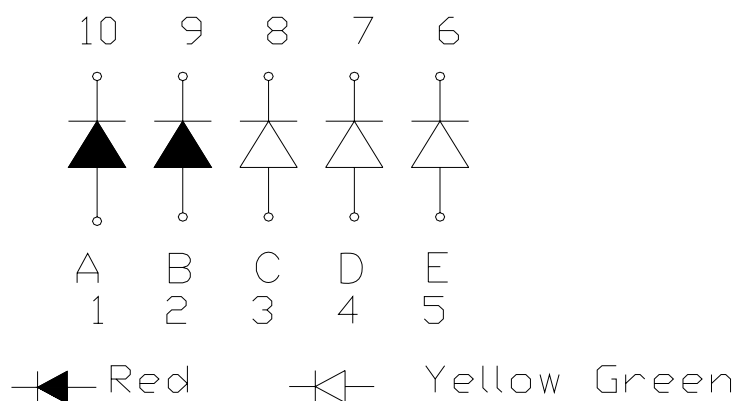
REVISION: A0

■ **Outer Dimension:**



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

■ **Circuit Diagram:**



■ Pin Connection:

PIN NO.	CONNECTION	PIN NO.	CONNECTION
1	Anode A	6	Cathode E
2	Anode B	7	Cathode D
3	Anode C	8	Cathode C
4	Anode D	9	Cathode B
5	Anode E	10	Cathode A

■ Features:

- High Reliability
- Color: Red and Yellow Green
- Low Power Requirement
- Easy Assembly

■ Description:

- Five Windows Display
- Digit Height 5.00mm(0.20") And Width 1.80mm(0.07")
- Black Face and Milky Bar

■ Absolute Maximum Rating (Ta=25°C):

Parameter	Symbol	Condition	Color	Rating	Unit
Power Dissipation Per Segment	P _d	—	Red / Yellow Green	65/65	mW
Forward Current Per Segment	I _F	—	Red / Yellow Green	25/25	mA
Peak Forward Current Per Segment	I _{FP}	1/10 Duty 10KHz	Red / Yellow Green	100	mA
Reverse Voltage Per Segment	V _R	—	Red / Yellow Green	5	V
Operating Temperature Range	Topr	—	—	-35~+85	°C
Storage Temperature Range	Tstg	—	—	-35~+85	°C

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

Item	Symbol	Test conditions	Color	Location	Rating			Units
					Min.	Typ.	Max.	
Forward Voltage	V _F	I _F =20mA	Red	Per Segment	1.8	2.00	2.60	V
			Yellow Green		1.9	2.2	2.60	
Reverse Current	I _R	V _R =5V	—	Per Segment	—	—	100	μ A
Luminous Intensity	I _V	I _F =10mA	Red	Per Segment	—	6500	—	ucd
			Yellow Green		—	3500	—	
Wave Length	λ _P / λ _D	I _F =20mA	Red	Per Segment	—	638	—	nm
			—		633	—		
			—		568	—		
			—		571	—		
Luminous Intensity Matching Ratio (Bar to Bar)	I _{V-m}	I _F =10mA	—				1.2:1	

■ Soldering Conditions: Soldering Temp. ≤ +260°C Soldering Time. ≤ 3sec.
(at 2mm Distance from The Case of Reflector Edge)

■ Typical Elector-Optical Characteristics Curve of Red:

Fig 1. Forward Current vs. Forward Voltage

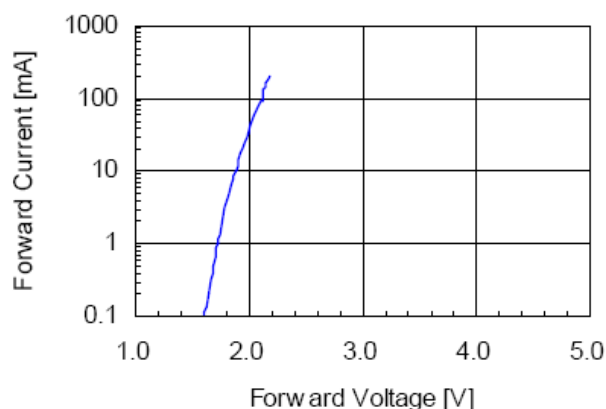


Fig 2. Relative Intensity vs. Forward Current

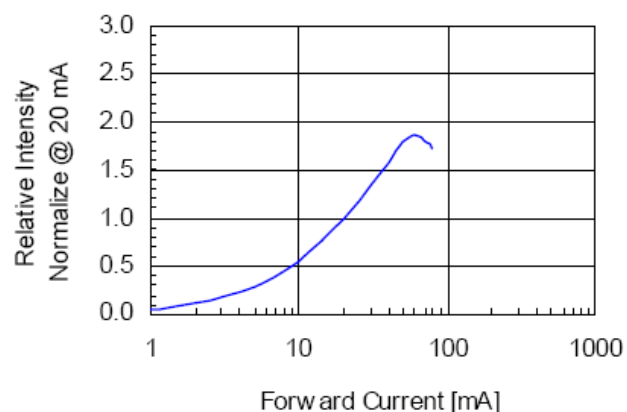


Fig 3. Forward Voltage vs. Temperature

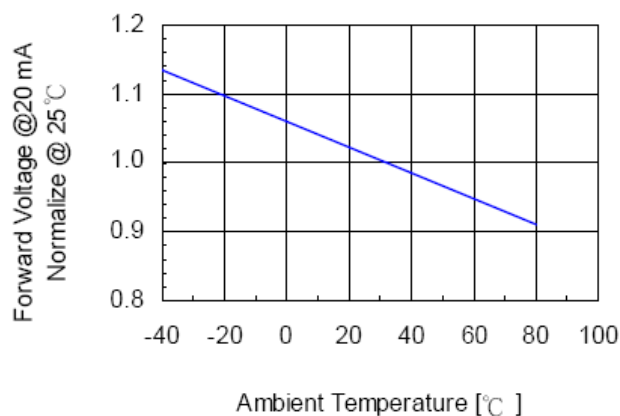


Fig 4. Relative Intensity vs. Temperature

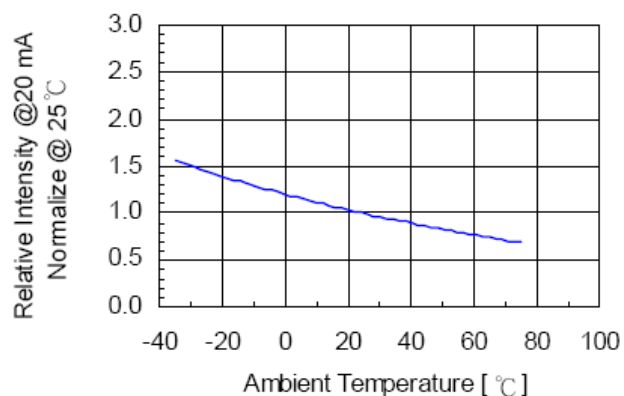
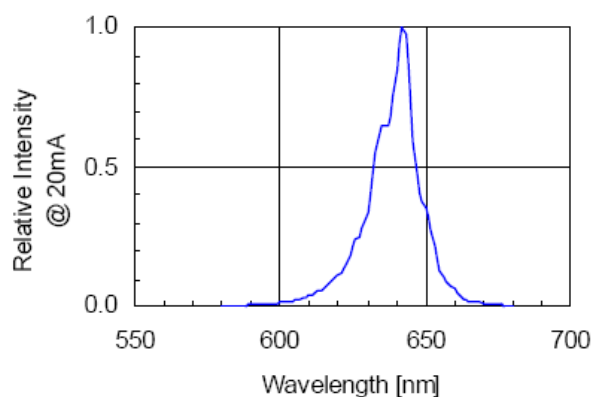


Fig 5. Relative Intensity vs. Wavelength



■ Typical Elector-Optical Characteristics Curve of Yellow Green:

Fig 1. Forward Current vs. Forward Voltage

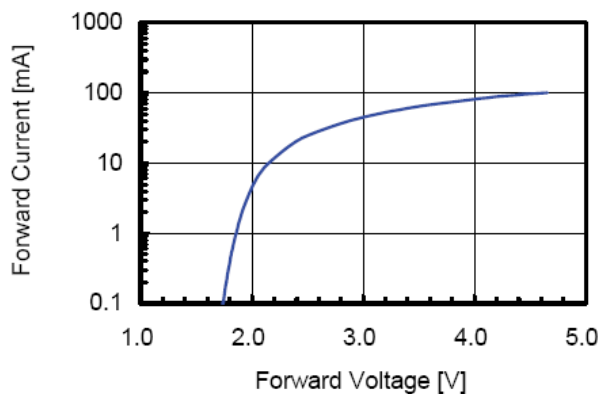


Fig 2. Relative Intensity vs. Forward Current

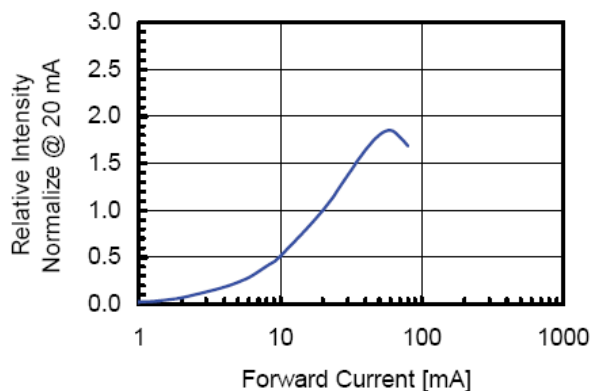


Fig 3. Forward Voltage vs. Temperature

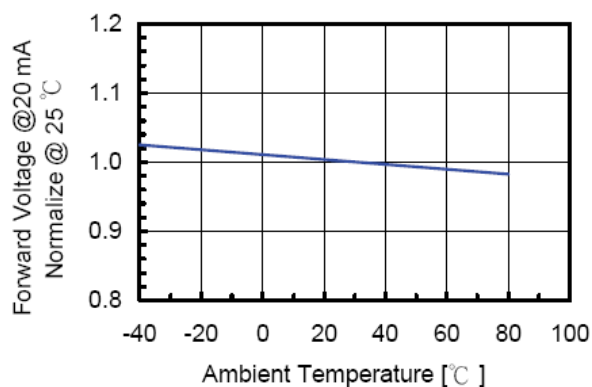


Fig 4. Relative Intensity vs. Temperature

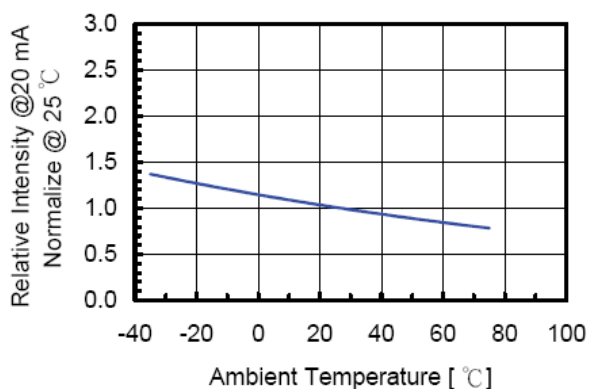
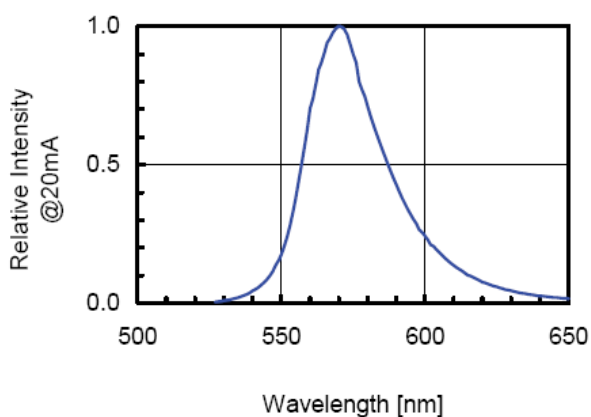


Fig 5. Relative Intensity vs. Wavelength



WCN Opto Group Co., Limited

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: 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:

350 pcs / Red Expandable Polyethylene.
2100 pcs / Box(360*175*130mm).
12600 pcs / Carton(550*380*280mm).