



WCN Opto Group Co., Limited

WCNLB2-B713

SPECIFICATION

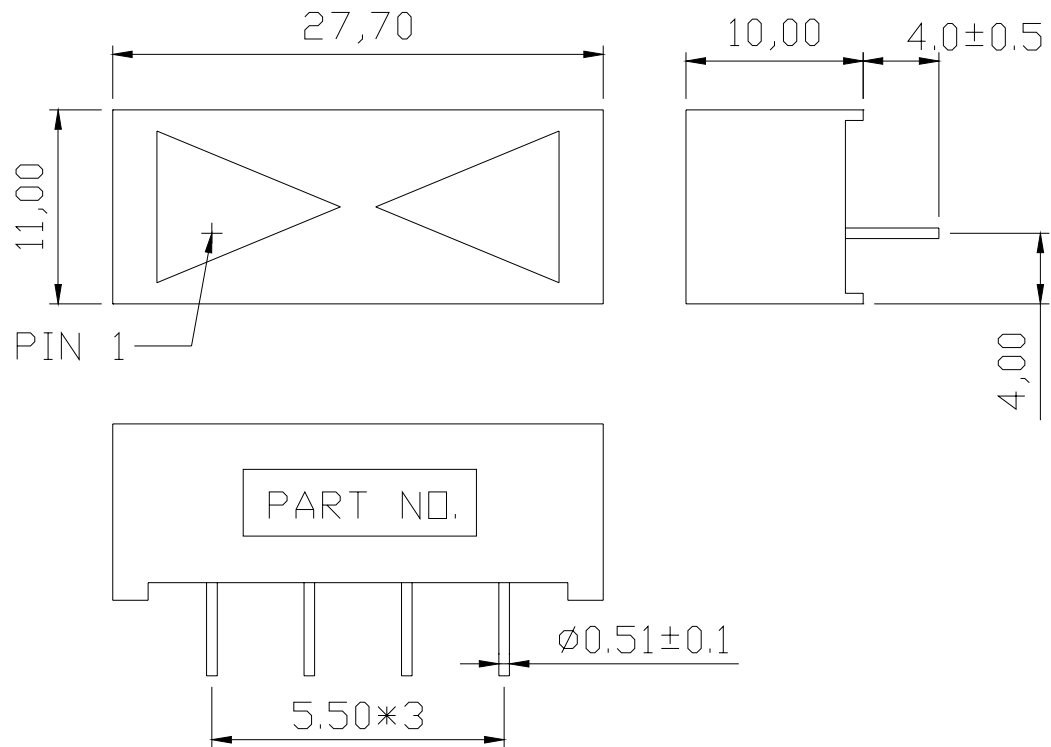
WCN			CUSTOMER Confirmed
Prepared by	Checked by	Approved by	
Fei 2015-1-19	Afhena		



REV.A0

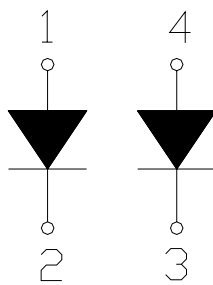
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Outer Dimension:



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

Circuit Diagram:



Pin Connection:

PIN NO.	CONNECTION	PIN NO.	CONNECTION
1	Anode	4	Anode
2	Cathode	3	Cathode



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■ Features:

- High Reliability
- Color: Blue
- Low Power Requirement
- Easy Assembly

■ Description:

- Two Window Bar Display
- .. Gray Face and Milky Bar

■ Absolute Maximum Rating (Ta=25°C):

Parameter	Symbol	Condition	Color	Rating	Units
Power Dissipation Per Bar	P_d	—	Blue	120	mW
Forward Current Per Bar	I_F	—	Blue	20	mA
Derating Of If Per Bar	ΔI_F	$T_a \geq 25^\circ\text{C}$	Blue	0.30	mA/°C
Peak Forward Current Per Bar	I_{FP}	1/10 Duty 10KHz	Blue	100	mA
Reverse Voltage Per Bar	V_R	—	Blue	5	V
Operating Temperature Range	T_{opr}	—	—	-40~+110	°C
Storage Temperature Range	T_{stg}	—	—	-40~+110	°C

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

Item	Symbol	Test conditions	Location	Rating			Units
				Min.	Typ.	Max.	
Forward Voltage	V_F	$I_F=20\text{mA}$	Per Bar	—	3.2	4.0	V
Reverse Current	I_R	$V_R=5\text{V}$	Per Bar	—	—	50	μA
Luminous Intensity	I_V	$I_F=10\text{mA}$	Per Bar	—	20	—	mcd
Wave Length	λ_P	$I_F=20\text{mA}$	Per Bar	—	455	—	nm
	λ_D				465		
Spectral Line Half Width	$\Delta\lambda$	$I_F=20\text{mA}$	Per Bar	—	26	—	nm
Luminous Intensity Matching Ratio	I_{v-m}	$I_F=20\text{mA}$				2:1	

■ Soldering Conditions: Soldering Temp. $\leq +260^\circ\text{C}$, Soldering Time. $\leq 3\text{sec}$.
(at 2mm Distance from The Case of Reflector Edge)

■ Typical Elector-Optical Characteristics Curve:

Fig1. Forward Current vs. Forward Voltage:

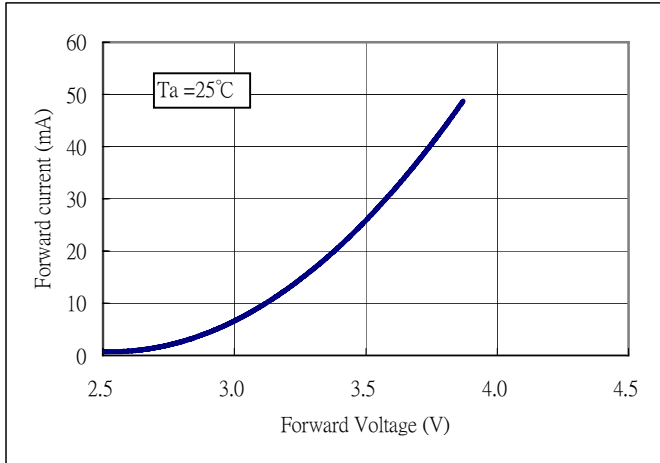


Fig2. Forward Current vs. Relative Intensity:

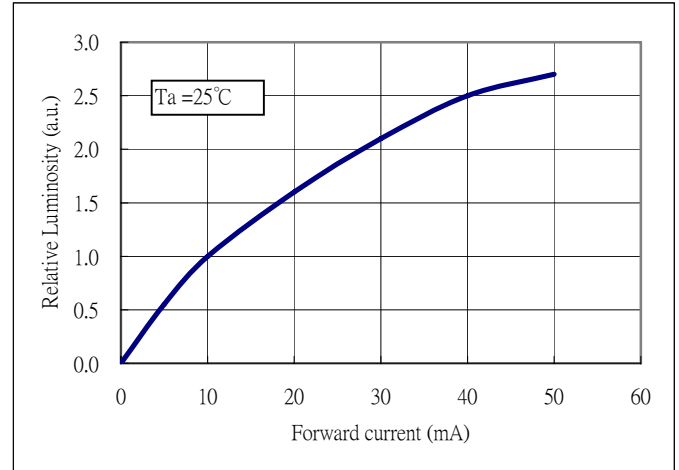


Fig3. Forward Current vs. Relative wavelength:

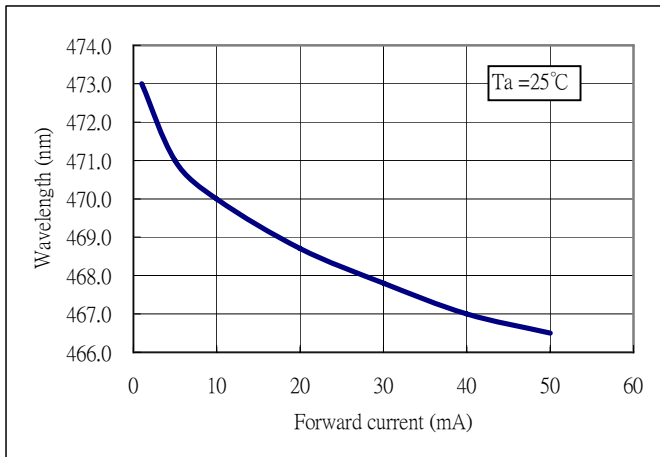
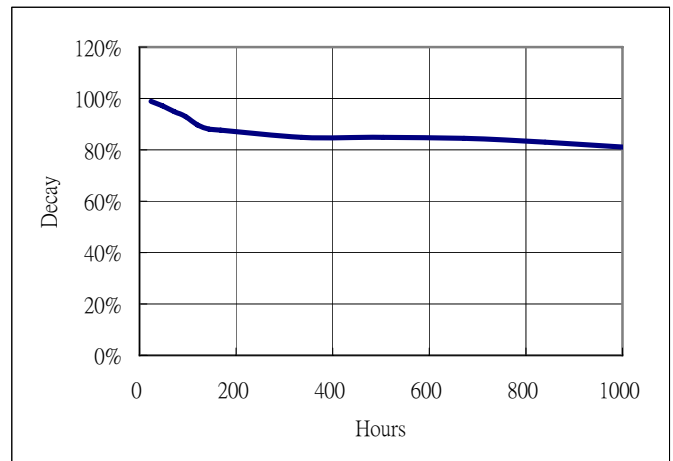


Fig4. Life Test at 20mA R.T. 1000hrs:





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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 $^\circ\text{C}$ ~ 25 $^\circ\text{C}$ ~ -35 $^\circ\text{C}$ ~ 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 $\pm 5^\circ\text{C}$ ~ -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 :

156 pcs / Red Expandable Polyethylene.

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

5580 pcs / Carton(550*380*280mm).