



WCN Opto Group Co., Limited

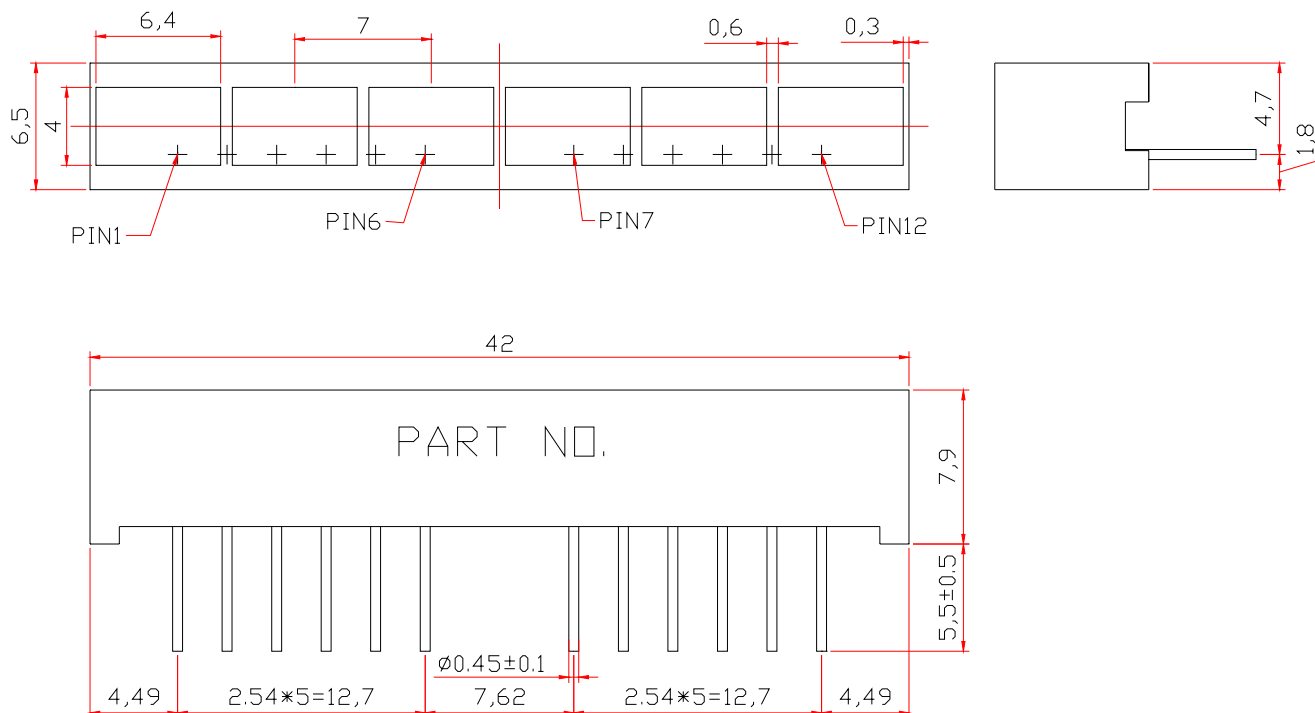
WCNLB6-R621 SPECIFICATION

WCN			CUSTOMER Confirmed
Prepared by	Checked by	Approved by	
Fei 2016-8-5	Athena	William	
REVISION RECORD			



REVISION: A0

Outer Dimension:



Notes: Unless otherwise stated, The tolerance is $\pm 0.25\text{mm}$.

Circuit Diagram:



Pin Connection:

PIN NO.	CONNECTION	PIN NO.	CONNECTION
1	Anode	2	Cathode
3	Anode	4	Cathode
5	Anode	6	Cathode
7	Anode	8	Cathode
9	Anode	10	Cathode
11	Anode	12	Cathode

■ Features:

- High Reliability
- Color: Super Bright Red
- Low Power Requirement
- Easy Assembly

■ Description:

- Six Windows Display
- Digit Height 4.0mm(0.16") and Width 6.4mm(0.25")
- Black Face and Milky Bar

■ Absolute Maximum Rating (Ta=25°C):

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

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

Item	Symbol	Test conditions	Location	Rating			Units
				Min.	Typ.	Max.	
Forward Voltage	V _F	I _F =20mA	Per Bar	—	2.0	2.50	V
Reverse Current	I _R	V _R =5V	Per Bar	—	—	100	μA
Luminous Intensity	I _V	I _F =10mA	Per Bar	10501	16500	26000	μcd
Wave Length	λ _P	I _F =20mA	Per Bar	—	635	—	nm
	λ _D				630		
Spectral Line Half Width	△λ	I _F =20mA	Per Bar	—	30	—	nm
Luminous Intensity Matching Ratio (Bar to Bar)	I _{v-m}	I _F =10mA				1.2:1	

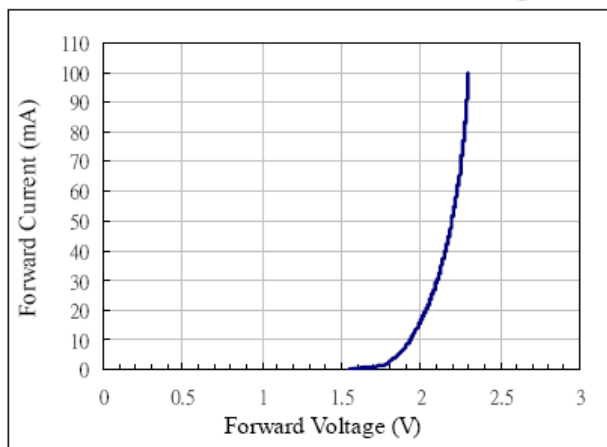
■ Luminous Intensity Sorting: (Luminous Intensity Tolerance is +/-10%)

Rank	Symbol	Condition	Min	Max	Unit
Q	Q	I _F =10mA	10501	12800	μcd
R	R	I _F =10mA	12801	15250	μcd
S	S	I _F =10mA	15251	18000	μcd
T	T	I _F =10mA	18001	21500	μcd
U	U	I _F =10mA	21501	26000	μcd

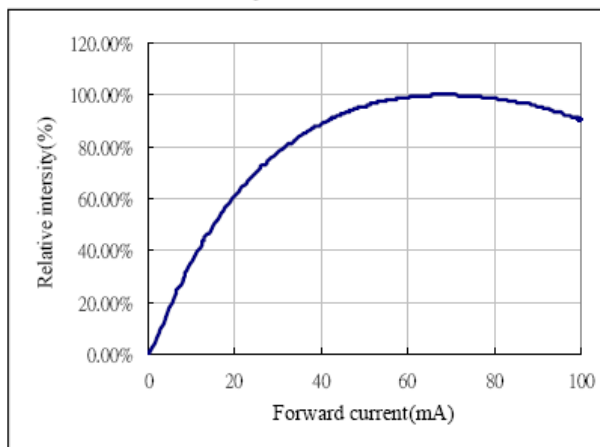
■ Soldering Conditions: Soldering Temp. ≤ +260°C Soldering Time. ≤ 3sec.
(at 2mm Distance from The Case of Reflector Edge).

■ Typical Elector-Optical Characteristics Curve:

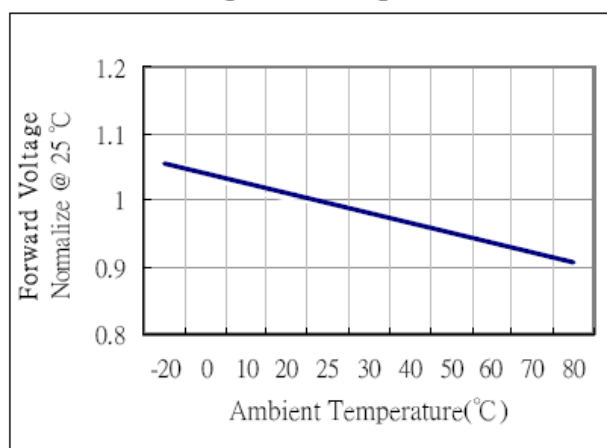
Forward current vs. Forward voltage



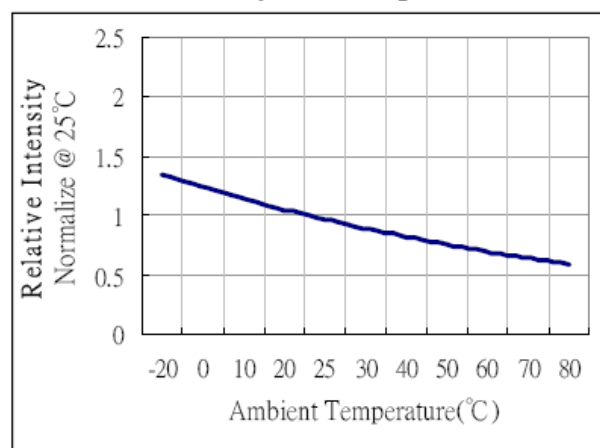
Relative intensity vs. Forward current



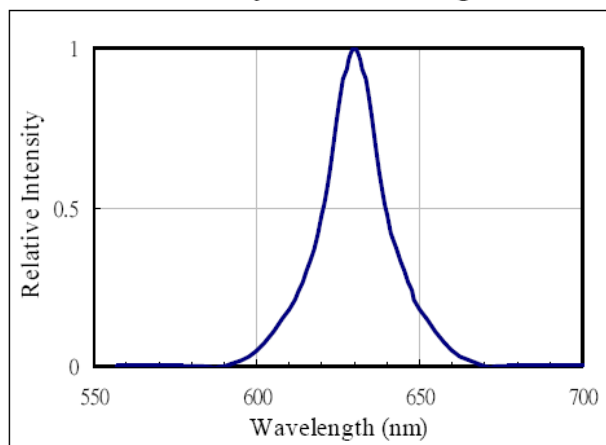
Forward voltage vs. Temperature



Relative intensity vs. Temperature



Relative intensity vs. Wavelength





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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 :

150pcs / Red Expandable Polyethylene.

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

5400 pcs / Catton(550*380*280mm).