

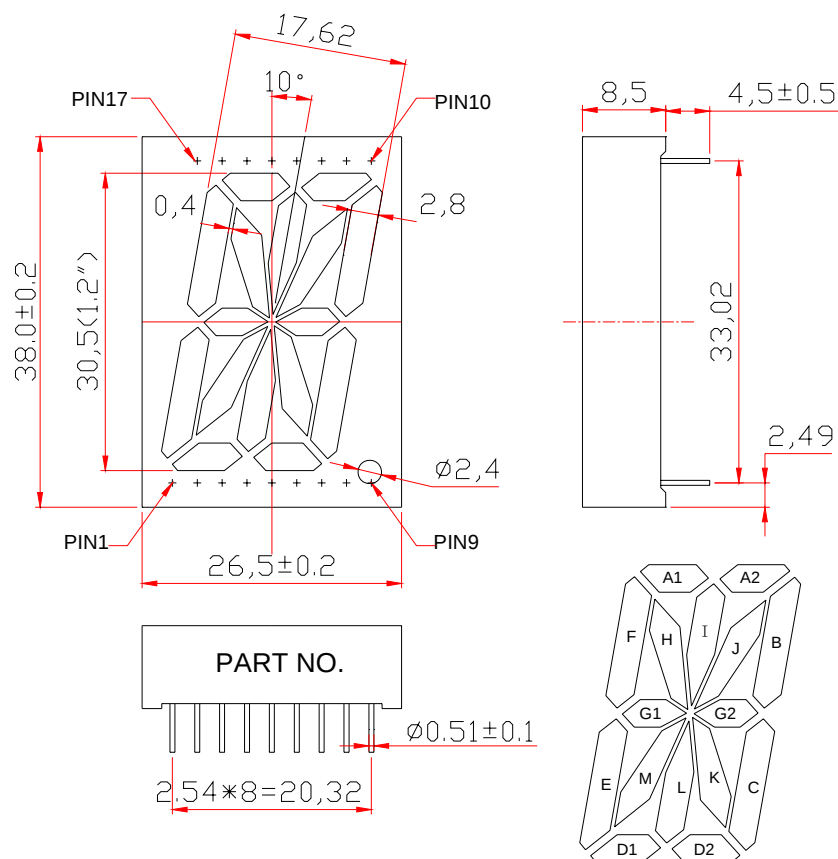
WCN1X-10A2R6-A21

SPECIFICATION

WCN			CUSTOMER Confirmed
Prepared by	Checked by	Approved by	
Fei 2016-08-02	Athena		
REVISION RECORD			

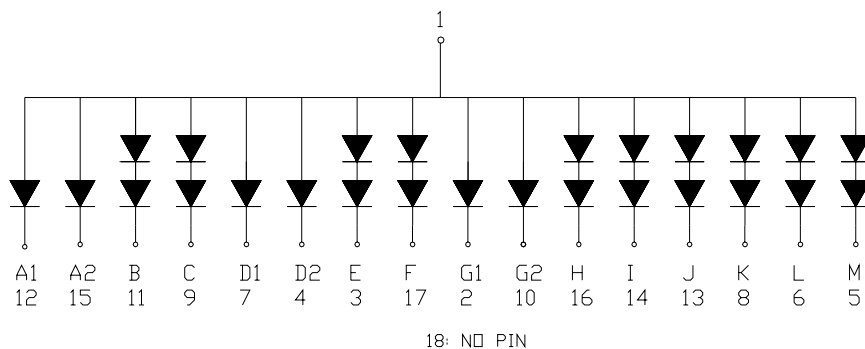
**REVISION: A0**

Outer Dimension:



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

Circuit Diagram:



Pin Connection

PIN NO.	CONNECTION	PIN NO.	CONNECTION	PIN NO.	CONNECTION
1	Common Anode	7	Cathode D1	13	Cathode J
2	Cathode G1	8	Cathode K	14	Cathode I
3	Cathode E	9	Cathode C	15	Cathode A2
4	Cathode D2	10	Cathode G2	16	Cathode H
5	Cathode M	11	Cathode B	17	Cathode F
6	Cathode L	12	Cathode A1	18	NO PIN

■ Features:

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

■ Description:

- Single Digit LED Display
- Digit Height: 30.5mm(1.2")
- Gray Face and Milky Segment

■ Absolute Maximum Rating (Ta=25℃):

Parameter	Symbol	Condition	Location	Color	Rating	Units
Power Dissipation Segment	P _d	—	Per Dice	Red	65	mW
Forward Current Segment	I _F	—	Per Dice	Red	25	mA
Peak Forward Current Per Segment	I _{FP}	1/10 Duty 10KHz	Per Dice	Red	100	mA
Reverse Voltage Per	V _R	—	Per Dice	Red	5	V
Operating Temperature	T _{opr}	—	Per Dice	Red	-40~+85	℃
Storage Temperature Range	T _{stg}	—	Per Dice	Red	-40~+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 Dice	1.8	2.0	2.6	V
Reverse Current	I _R	V _R =10/5V	Per Dice	—	—	100	μA
Luminous Intensity	I _v	I _F =10mA	Per Dice	10501	16500	26000	ucd
Peak Emission Wave Length	λ _P	I _F =20mA	Per Dice	—	635	—	nm
	λ _D			—	630	—	
Spectral Line Half Width	△λ	I _F =20mA	Per Dice	—	20	—	nm
Luminous Intensity Matching Ratio (Segment to Segment)	I _{v-m}	I _F =20mA				1.2:1	

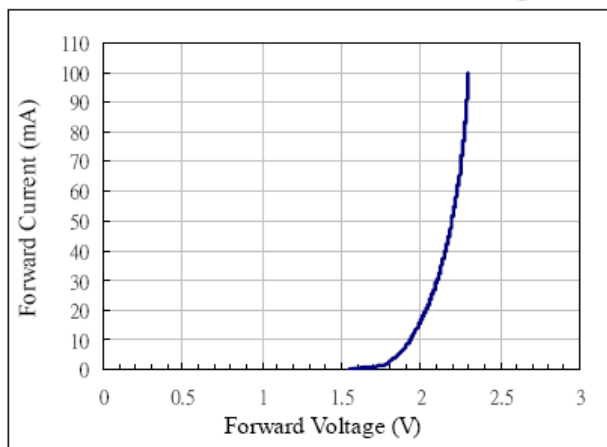
■ Luminous Intensity Sorting: (Luminous Intensity Tolerance is +/-10%)

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

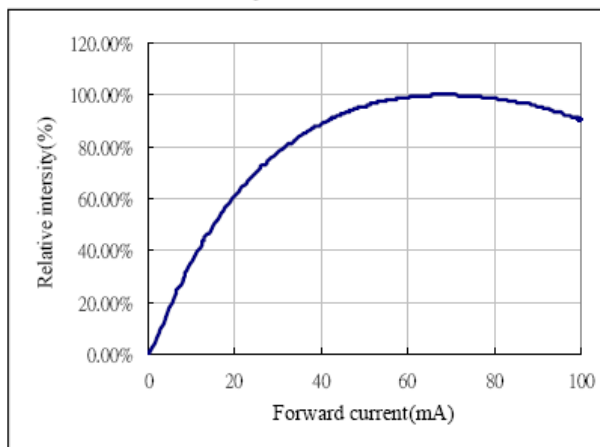
■ Soldering Conditions: Soldering Temp. ≤+260℃, Soldering Time. ≤3sec.
(at 2mm Distance from The Case of Reflector Edge)

■ Typical Elector-Optical Characteristics Curve:

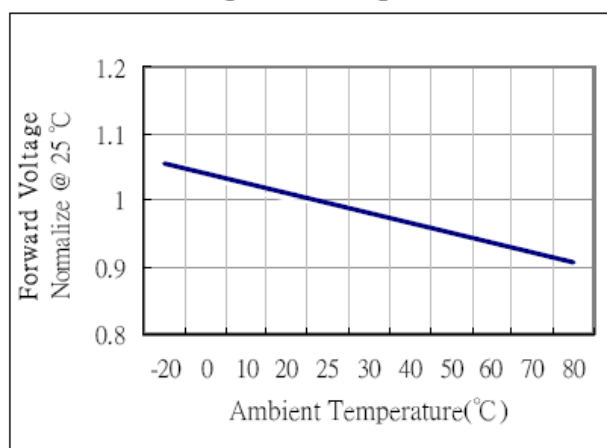
Forward current vs. Forward voltage



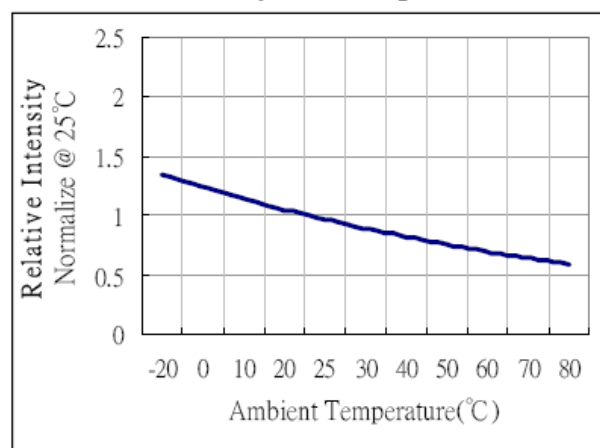
Relative intensity vs. Forward current



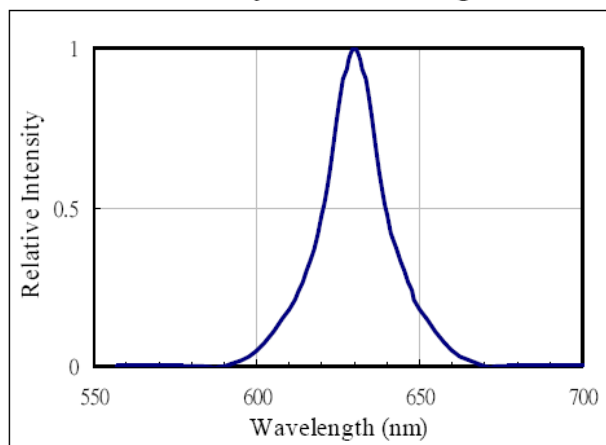
Forward voltage vs. Temperature



Relative intensity vs. Temperature



Relative intensity vs. Wavelength



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 :

32 pcs / Plastic Tray

480pcs / Box(360*260*255mm).

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