

WCN1-00A5HY-A11

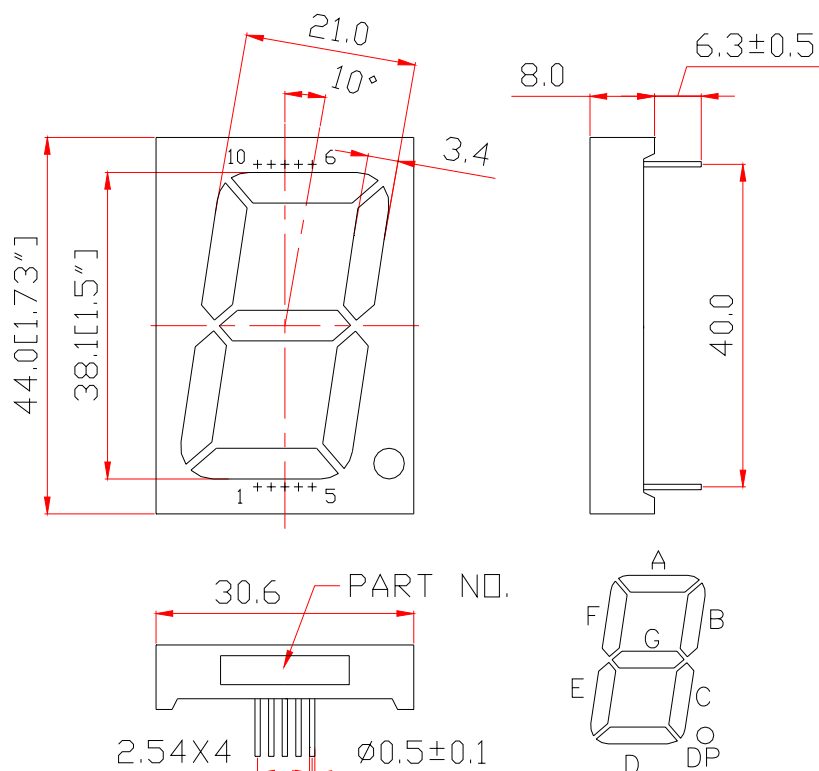
SPECIFICATION

WCN			CUSTOMER Confirmed
Prepared by	Checked by	Approved by	
Fei 2016-08-02	Athena		
REVISION RECORD			
A1:New Version issued(2016-08-02)			



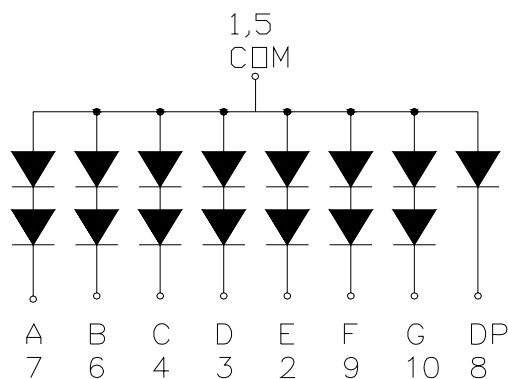
REVISION: A1

Outer Dimension:



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

Circuit Diagram:



Pin Connection:

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

■ Features:

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

■ Description:

- Single Digit Display
- Digit Height:38.1mm(1.5")
- Black Face and Milky Segment

■ Absolute Maximum Rating (Ta=25℃):

Parameter	Symbol	Condition	Color	Rating	Units
Power Dissipation Segment	P _d	—	Yellow	130/65	mW
Forward Current Segment	I _F	—	Yellow	25	mA
Peak Forward Current Per Segment	I _{FP}	1/10 Duty 10KHz	Yellow	100	mA
Reverse Voltage Per Segment	V _R	—	Yellow	10/5	V
Operating Temperature Range	T _{opr}	—		-35~+85	℃
Storage Temperature Range	T _{stg}	—		-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	3.6/1.8	4.0/2.0	5.2/2.6	V
Reverse Current	I _R	V _R =10V	Per Segment	—	—	100	μA
Luminous Intensity	I _V	I _F =10mA	Per Segment	10.501	16.5	26.0	mcd
Peak Emission Wave Length	λ _P	I _F =20mA	Per Segment	—	595	—	nm
	λ _D			585	589	594	
Spectral Line Half Width	△λ	I _F =20mA	Per Segment	—	20	—	nm
Luminous Intensity Matching Ratio	I _{V-m}	I _F =20mA				1.5:1	

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

Rank	Symbol	Condition	Min	Max	Unit
Q	Q	I _F =10mA	10.501	12.80	mcd
R	R	I _F =10mA	12.801	15.25	mcd
S	S	I _F =10mA	15.251	18.00	mcd
T	T	I _F =10mA	18.001	21.50	mcd
U	U	I _F =10mA	21.501	26.00	mcd

■ Hue Grade:(I_F=10mA, Tolerance:±1nm)

Rank	Symbol	Hue Range	Units
1	1	585.1-588	nm
2	2	588.1-591	nm
3	3	591.1-594	nm

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

■ Typical Elector-Optical Characteristics Curve:

Fig 1. Forward Current vs. Forward Voltage

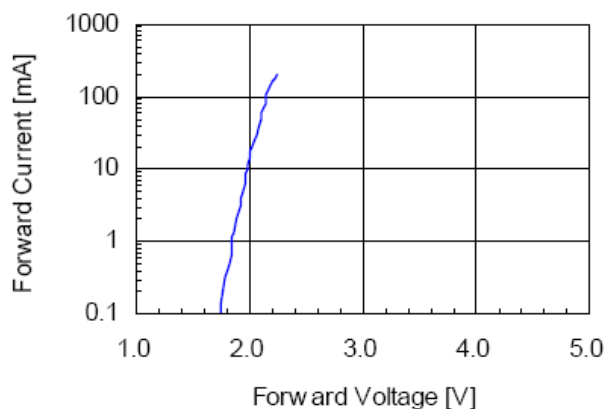


Fig 2. Relative Intensity vs. Forward Current

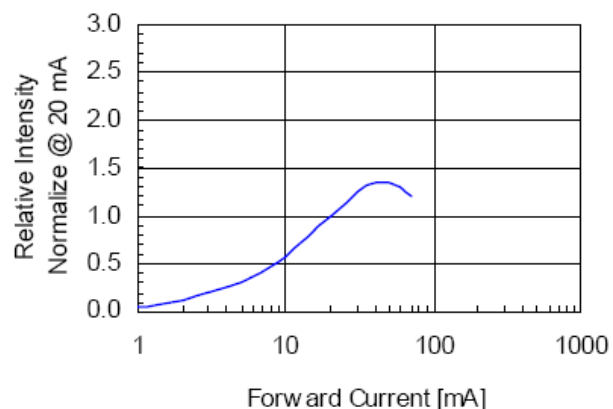


Fig 3. Forward Voltage vs. Temperature

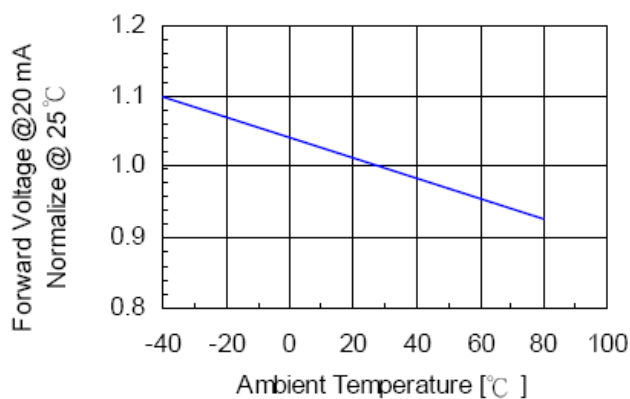


Fig 4. Relative Intensity vs. Temperature

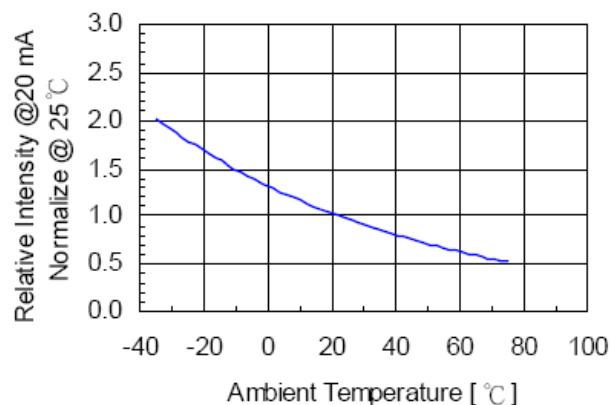
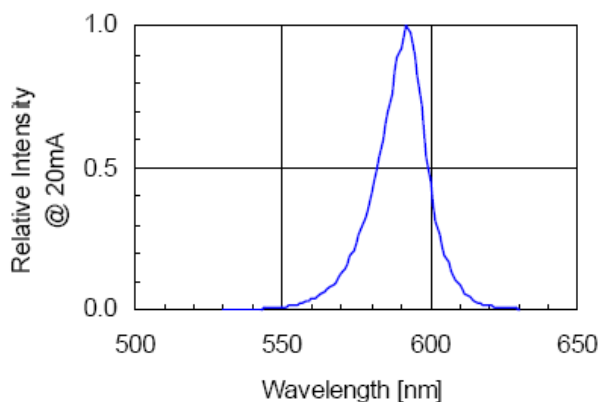


Fig 5. Relative Intensity vs. Wavelength





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 $I_F = I_F \text{ max}$
	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 A:

30 pcs / Red Expandable Polyethylene.

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

1080 pcs / Carton(550*380*280mm).