WCN

WCN Opto Group Co., Limited

WCN1-1056HO-A72

SPECIFICATION

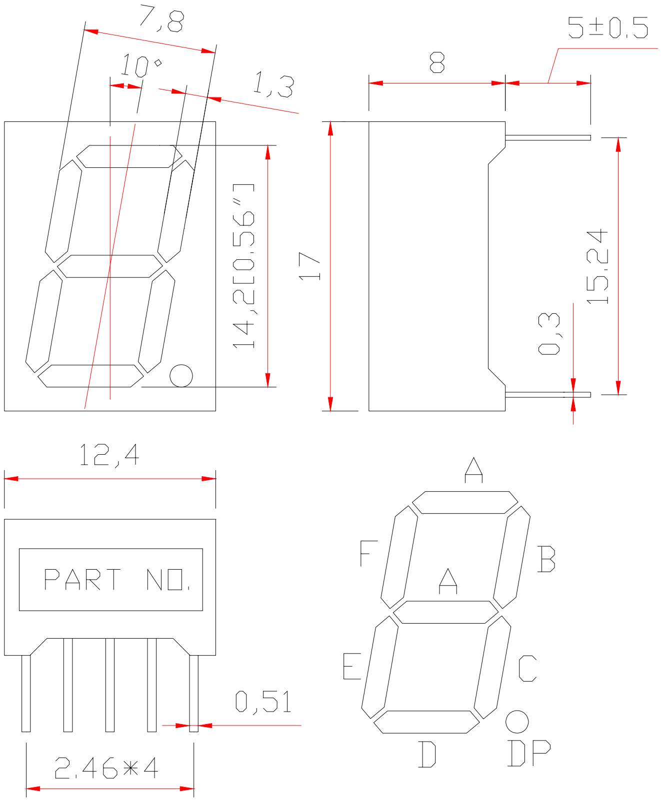
WCN			CUSTOMER Confirmed
Prepared by	Checked by	Approved by	
Fei 2016-11-23	Athena		
REVISION RECORD			

RoHS

恒盛源光电科技(深圳)有限公司
开发部
WCN

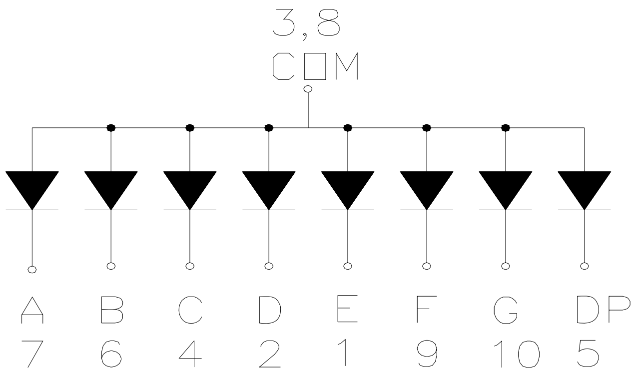
REVISION: A0

Outer Dimension:



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

Circuit Diagram:



Pin Connection:

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

Features:

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

Description:

- Single Digit LED Display
- Digit Height: 14.2 mm (0.56″)
- Gray Face and Milky Segment

Absolute Maximum Rating (Ta=25℃):

Parameter	Symbol	Condition	Color	Rating	Units
Power Dissipation Per Segment	P_d	—	Orange	65	mW
Forward Current Per Segment	I_F	—	Orange	25	mA
Derating Of If Per Segment	$\triangle I_F$	Ta≧25℃	Orange	0.30	mA/℃
Peak Forward Current Per Segment	I_{FP}	1/10 Duty 10KHz	Orange	100	mA
Reverse Voltage Per Segment	V_R	—	Orange	5	V
Operating Temperature Range	Topr	—	—	-35～+85	℃
Storage Temperature Range	Tstg	—	—	-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	—	1.95	2.60	V
Reverse Current	I_R	V_R=5V	Per Segment	—	—	100	μA
Luminous Intensity	I_V	I_F=10mA	Per Segment	4001	6000	—	μcd
Peak Emission Wave Length	λ_P	I_F=20mA	Per Segment	—	627	—	nm
	λ_D				620		
Spectral Line Half Width	$\triangle\lambda$	I_F=20mA	Per Segment	—	20	—	nm
Luminous Intensity Matching Ratio (Segment to Segment)	$I_{v\text{-}m}$	I_F=10mA	—	—	—	2:1	

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

Rank	Symbol	Condition	Min	Max	Unit
L	L	I_F=10mA	4001	5000	μcd
M	M	I_F=10mA	5001	6100	μcd
N	N	I_F=10mA	6101	7200	μcd

Soldering Conditions: Soldering Temp. ≦+260℃, Soldering Time. ≦3sec.

(at 2mm Distance from The Case of Reflector Edge)

■ Typical Electro-Optical Characteristics Curve:

Fig1. Intensity vs. Forward Current

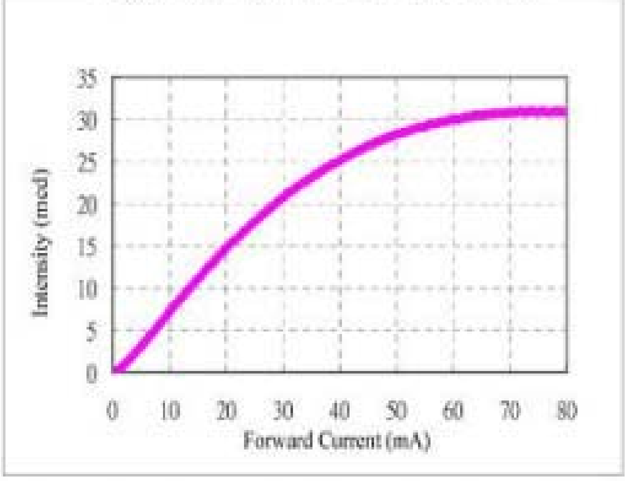


Fig2. Forward Current vs. Forward Voltage

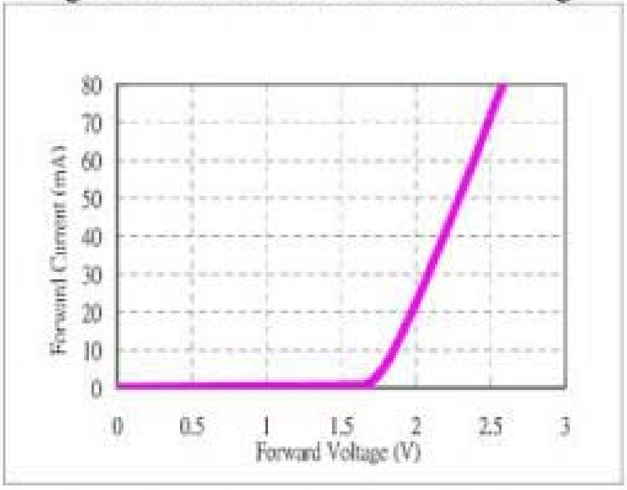


Fig3. Wavelength vs. Forward Current

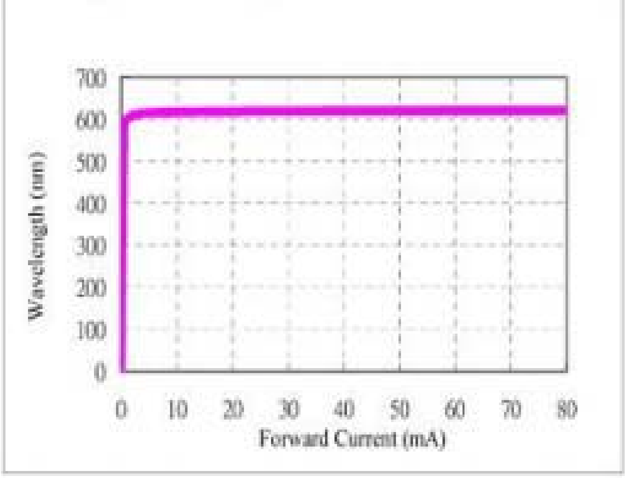


Fig4. Relative Wavelength vs. Temperature

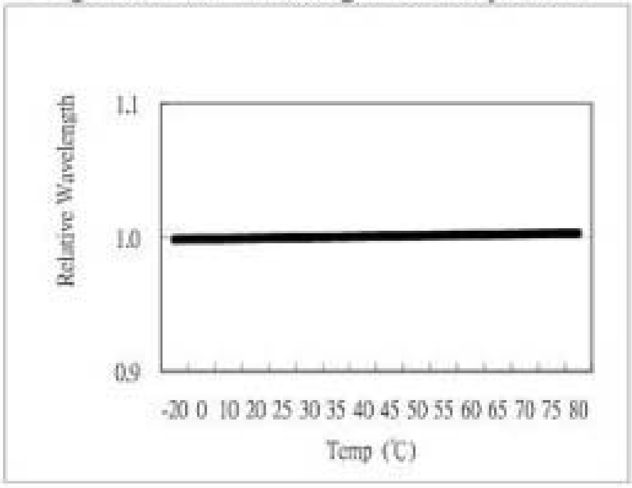


Fig5. Relative Intensity vs. Temperature

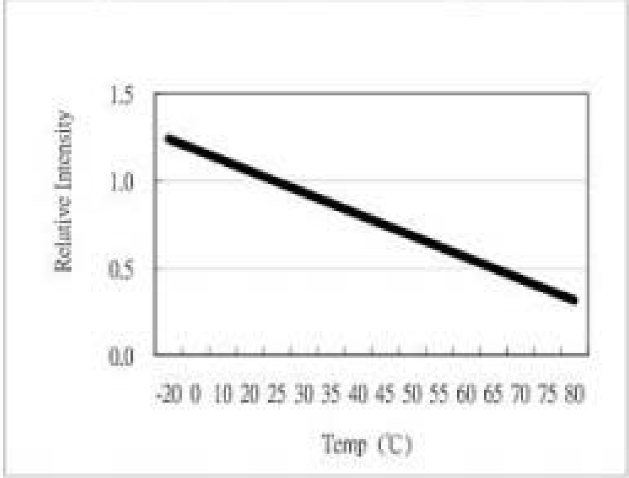
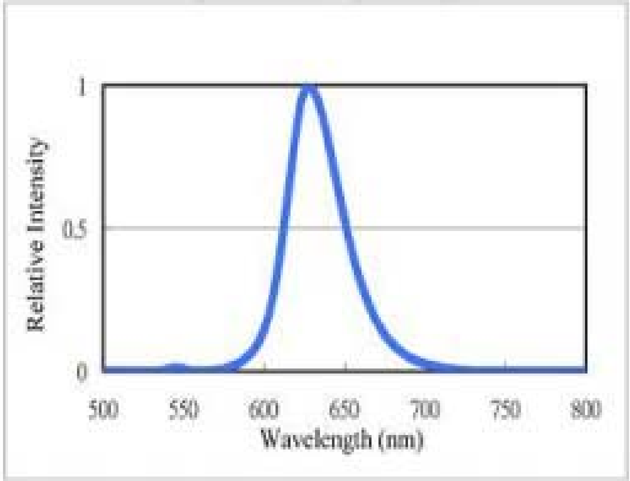


Fig6. Wavelength range



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: Ta=65±5°C) TEST TIME=1000Hrs(-24Hrs, +72Hrs)
	IOW 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:

200 pcs / Red Expandable Polyethylene.
1200 pcs / Box(360*175*130mm).
7200 pcs / Carton(550*380*280mm).

Packing method B:

40 pcs / IC Tube. (520*19.7*18.6)
2160 pcs / Box(537*175*125mm).
8640 pcs / Carton(550*380*280mm).