WCN Opto Group Co., Limited

WCN3-0039WW-C92-T

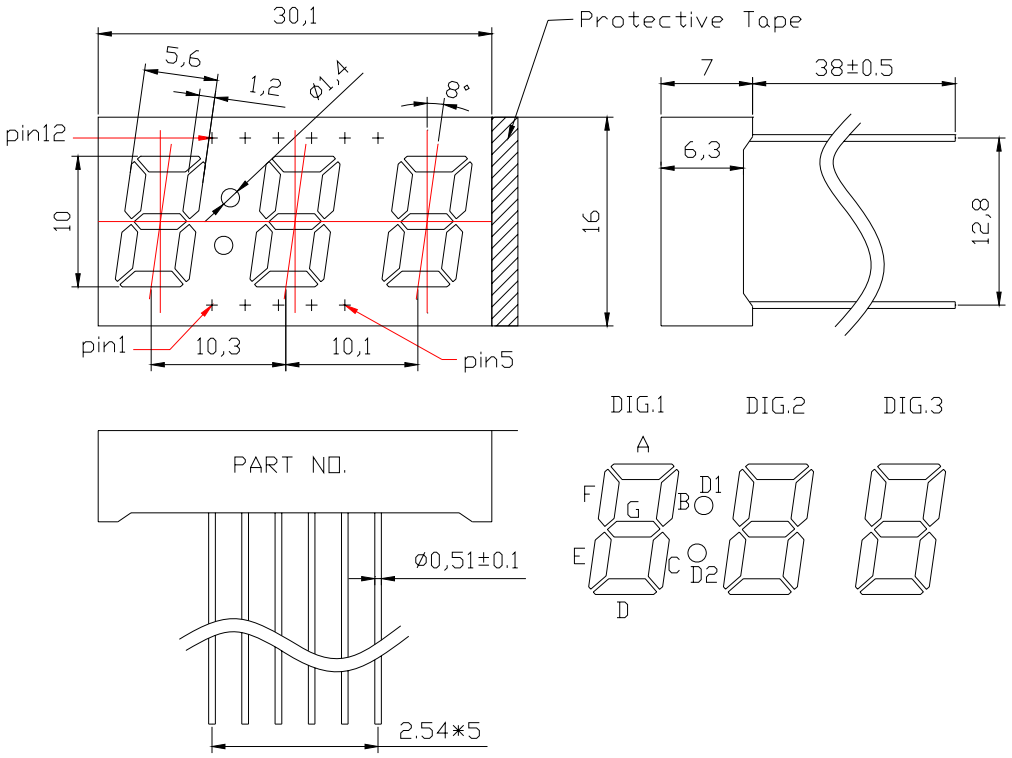
SPECIFICATION

WCN			CUSTOMER Confirmed
Prepared by	Checked by	Approved by	
Fei 2016-6-28	Athena		
REVISION RECORD A1: Change Outer Dimension(2016-5-4) A2:New Version issued (2016-6-28)			

RoHS

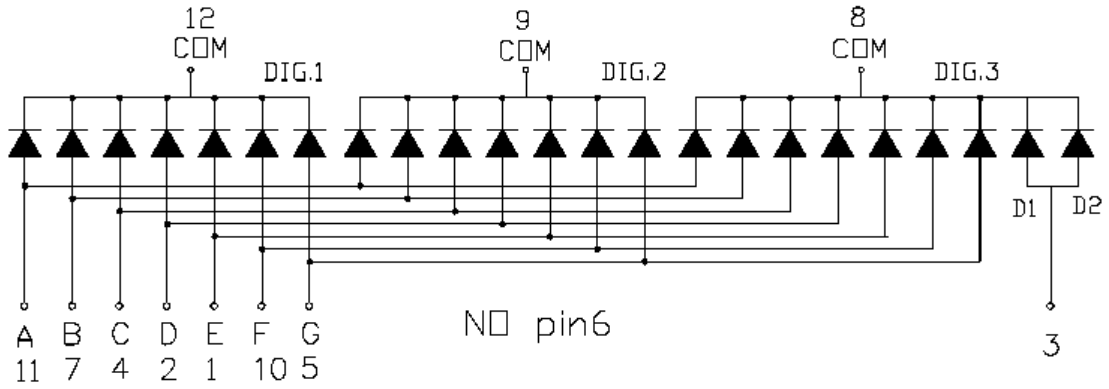
REVISION: A2

■ Outer Dimension:



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

■ Circuit Diagram



■ Pin Connection:

PIN NO.	CONNECTION	PIN NO.	CONNECTION
1	Anode E	7	Anode B
2	Anode D	8	Common Cathode D1, D2 DIG.3
3	Anode D1,D2	9	Common Cathode DIG.2
4	Anode C	10	Anode F
5	Anode G	11	Anode A
6	NP	12	Common Cathode DIG.1

■ Features:

- . High Reliability
- . Color: White
- . Low Power Requirement
- . Easy Assembly

■ Description:

- . Triad Digit LED Display
- . Digit Height: 10.0mm(0.39″)
- . Black Face and White Segment

■ Absolute Maximum Rating (Ta=25℃):

Parameter	Symbol	Condition	Color	Rating	Units
Power Dissipation Per Segment	P_d	—	White	92.5	mW
Forward Current Per Segment	I_F	—	White	25	mA
Peak Forward Current Per Segment	I_{FP}	1/10 Duty 10KHz	White	100	mA
Reverse Voltage Per Segment	V_R	—	White	5	V
Operating Temperature Range	Topr	—	—	-40～+85	℃
Storage Temperature Range	Tstg	—	—	-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 Segment	2.6	3.0	3.7	V
Reverse Current	I_R	V_R=5V	Per Segment	—	—	100	μA
Luminous Intensity	I_V	I_F=5mA	Per Segment	43	55	68	mcd
CIE Coordinate	X	I_F=5mA	Per Segment	0.2423	0.2551	0.2679	—
	Y			0.2206	0.2425	0.2644	
Luminous Intensity Matching Ratio (Segment to Segment)	I_{v-m}	I_F=5mA	—	—	—	1.2:1	

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

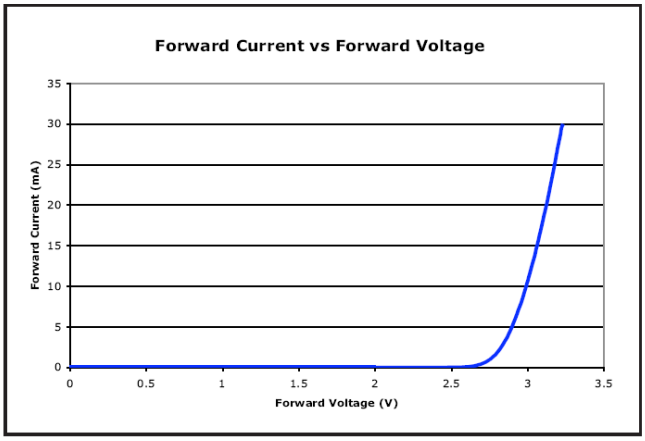
Rank	Symbol	Condition	Min	Max	Unit
X	X	I_F=5mA	43	50	mcd
Y	Y	I_F=5mA	50	58	mcd
Z	Z	I_F=5mA	58	68	mcd

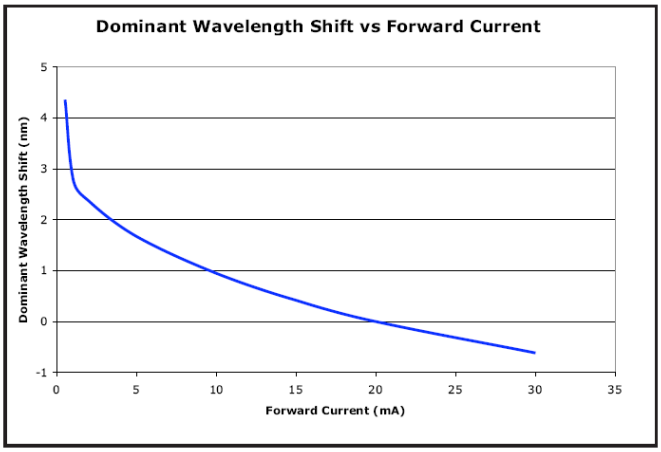
■Coordinate Grating:

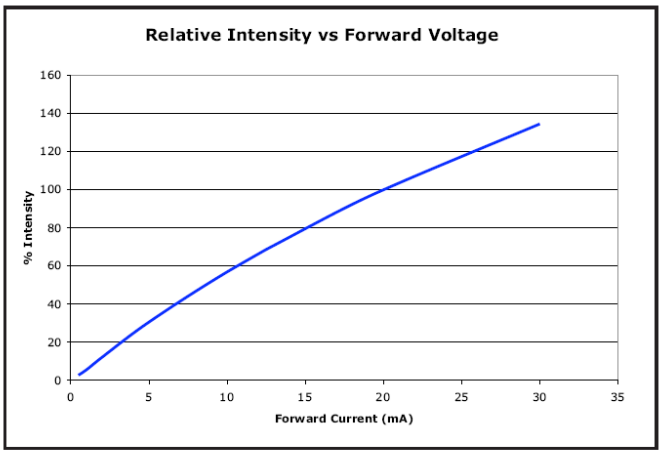
Rank	CIE-X1	CIE-Y1	CIE-X2	CIE-Y2	CIE-X3	CIE-Y3	CIE-X4	CIE-Y4
K21	0.2615	0.2525	0.2577	0.2544	0.2641	0.2644	0.2679	0.2625
B52	0.2589	0.2406	0.2551	0.2425	0.2615	0.2525	0.2653	0.2506
B51	0.2551	0.2425	0.2513	0.2444	0.2577	0.2544	0.2615	0.2525
B22	0.2525	0.2306	0.2487	0.2325	0.2551	0.2425	0.2589	0.2406
B12	0.2487	0.2325	0.2449	0.2344	0.2513	0.2444	0.2551	0.2425
B21	0.2461	0.2206	0.2423	0.2225	0.2487	0.2325	0.2525	0.2306

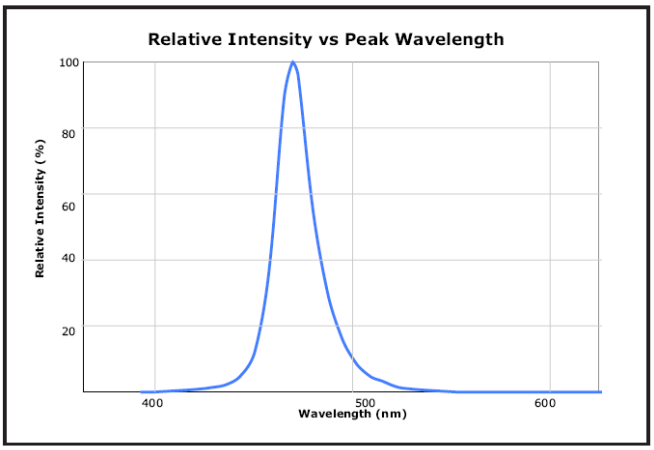
■ **Soldering Conditions: Soldering Temp. ≦+260℃, Soldering Time. ≦3sec.**
(at 2mm Distance from The Case of Reflector Edge)

■ **Typical Elector-Optical Characteristics Curve:**









■ 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:

84 pcs / OneTray contained

1092 pcs / Box(365*265*255mm).

2184pcs / Carton(550*380*280mm).