



**WCN1-XX56XX-XXXR**  
**WCN2-XX56XX-XXXR**  
**WCN3-XX56XX-XXXR**  
**WCN4-XX56XX-XXXR**

**SERIES**

**0.56"SEVEN-SEGMENT NUMERIC LED DISPLAYS**

**FEATURES**

- High intensity and reliability.
- High quality and low cost.
- Choice of colors: Red/Orange/Green/Blue,etc
- Low power requirement.
- I. C. compatible.
- Easy assembly.

**DESCRIPTION**

The WCN1-XX56XX-XXXR,WCN2-XX56XX-XXXR, WCN3-XX56XX-XXXR and WCN4-XX56XX-XXXR series are 0.56 inch (14.2mm) height single, dual, triad and quad digit displays.

SH. Red displays have black face or gray face and milky segment or red segment.

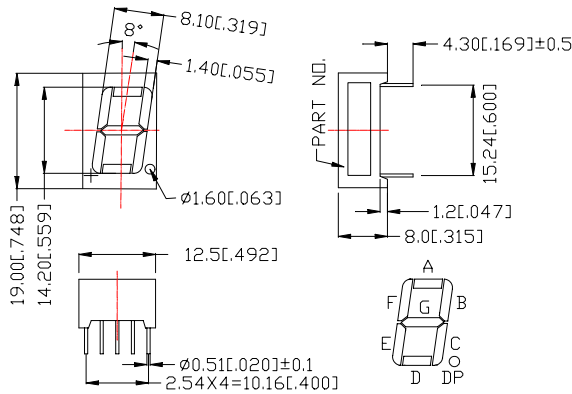
Orange displays have black face or gray face and milky segment or red segment.

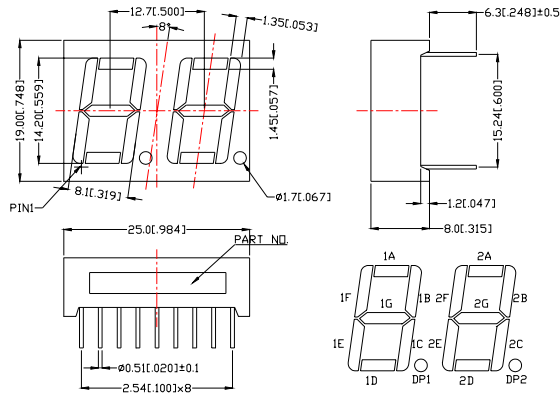
Bright Green displays have black face or gray face and milky segment or green segment.

**PACKAGE DIMENSIONS**

A. WCN1-XX56XX-A1XR/C1XR

B. WCN2-XX56XX-A1XR/C1XR

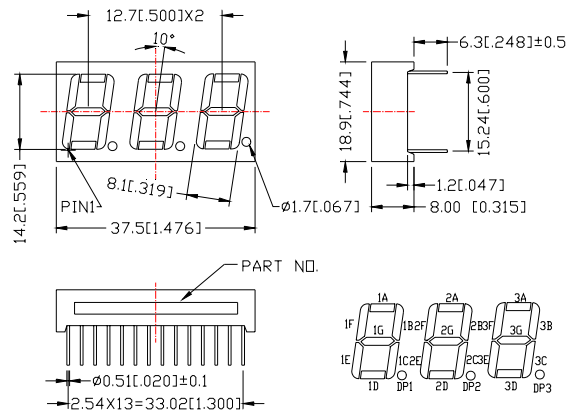
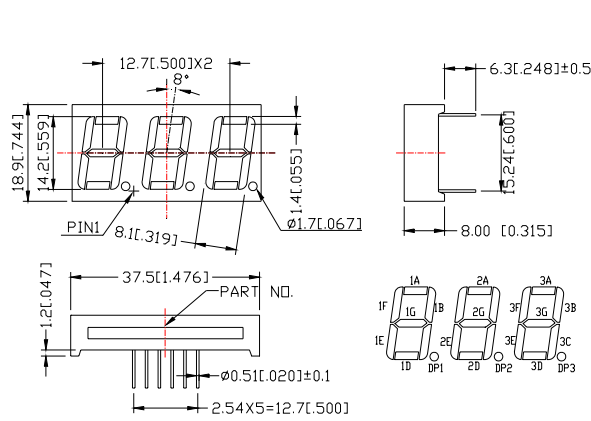




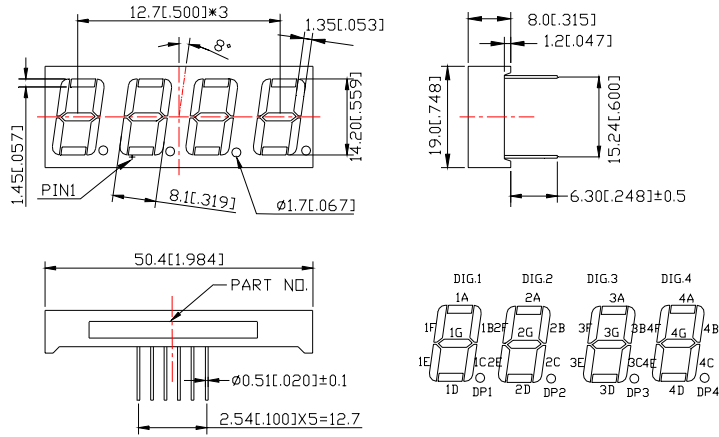
**PACKAGE DIMENSIONS**

C. WCN3-XX56XX-A1XR/C1XR

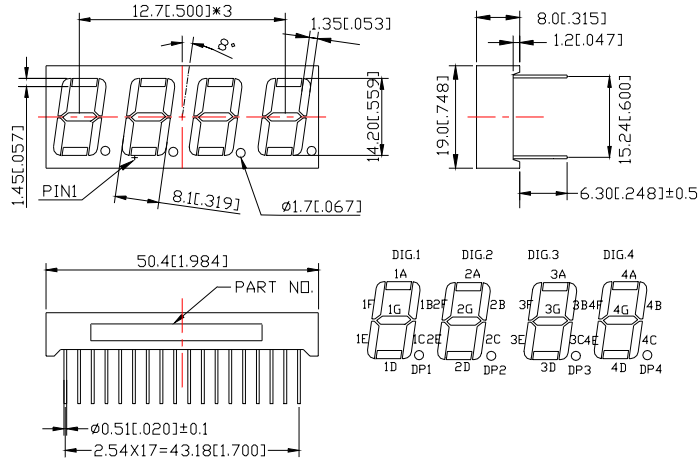
D. WCN3-XX56XX-A2XR/C2XR



E. WCN4-XX56XX-A1XR/C1XR



F. WCN4-XX56XX-A2XR/C2XR

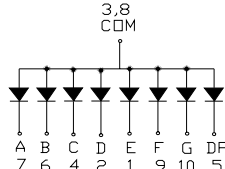


NOTES: All dimensions are in millimeters (inches) tolerance are ± 0.25mm(0.010) unless otherwise noted.

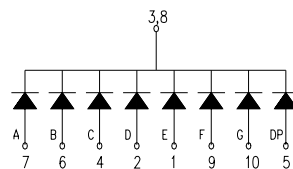
2-48

INTERNAL CIRCUIT DIAGRAM

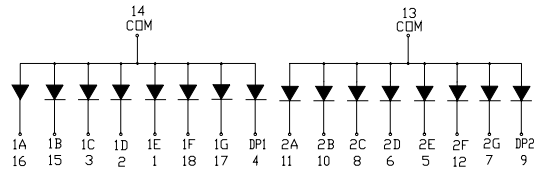
A. WCN1-XX56XX-A1XR



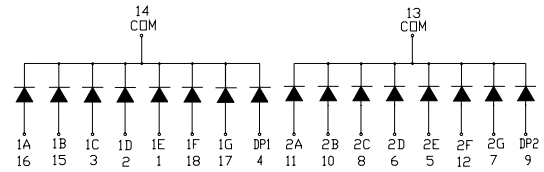
B. WCN1-XX56XX-C1XR



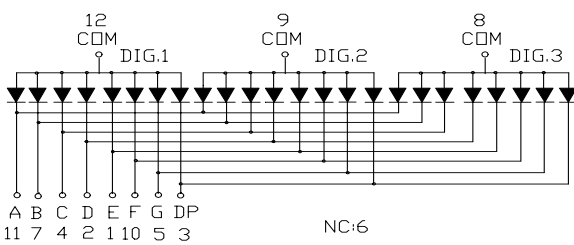
C. WCN2-XX56XX-A1XR



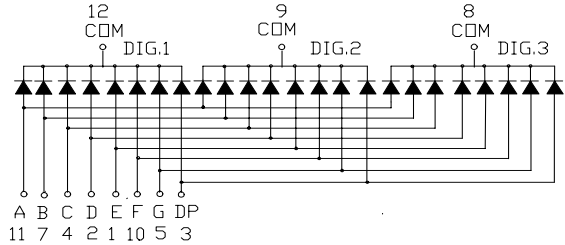
D. WCN2-XX56XX-C1XR



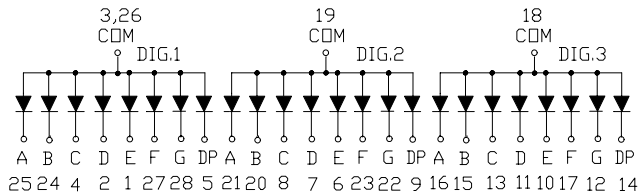
E. WCN3-XX56XX-A1XR



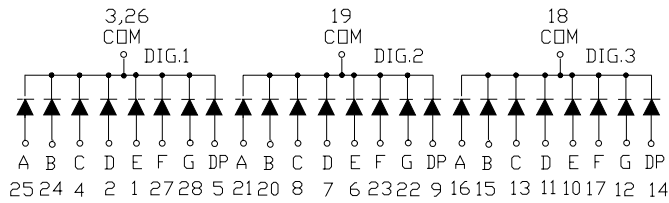
F. WCN3-XX56XX-C1XR



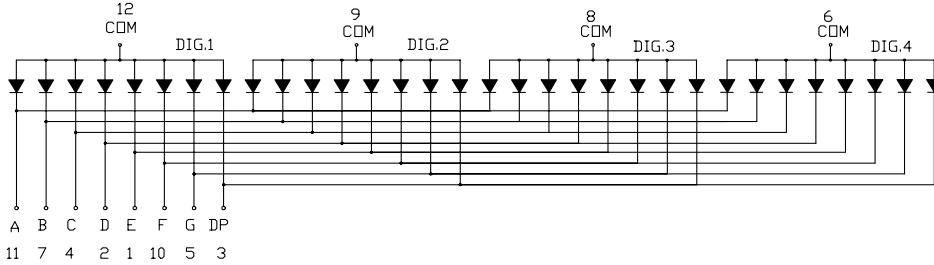
G. WCN3-XX56XX-A2XR



H. WCN3-XX56XX-C2XR



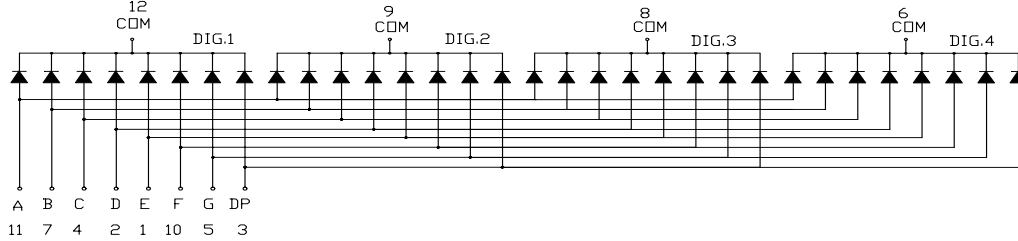
I. WCN4-XX56XX-A1XR



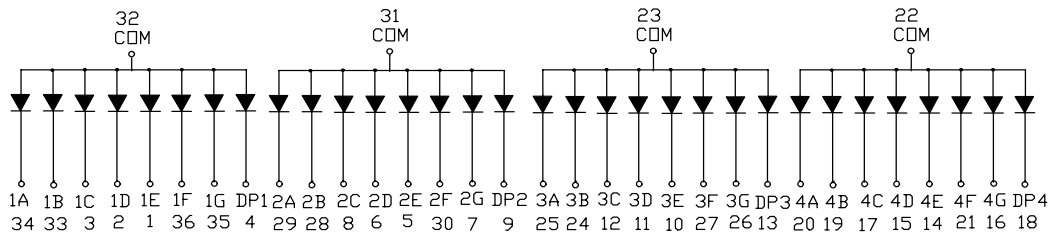
2-49

**INTERNAL CIRCUIT DIAGRAM**

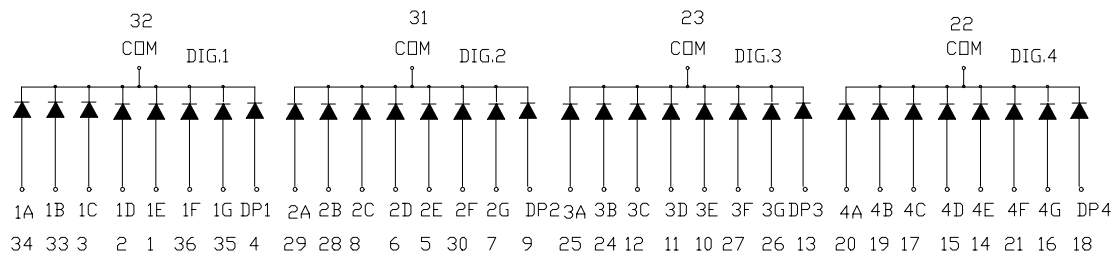
J. WCN4-XX56XX-C1XR



K. WCN4-XX56XX-A2XR



L. WCN4-XX56XX-C2XR



**ABSOLUTE MAXIMUM RATINGS AT T<sub>a</sub>=25°C**

PARAMETER	SH.RED	ORANGE	BRIGHT GREEN	UNIT
Power Dissipation Per Segment	50	65	65	mW
Peak Forward Current Per Segment (1/10duty cycle 0.1ms pulse width)	100	100	100	mA
Continuous Forward Current Per Segment	25	25	25	mA
Derating Linear From 25°C Per Segment	0.30	0.20	0.33	mA/°C
Reverse Voltage Per Segment	5	5	5	V
Operating Temperature Range	-35°C to + 85°C			
Storage Temperature Range	-35°C to + 85°C			
Solder Temperature 1/16 inch below seating plane for 3 seconds at 260°C				

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**ELECTRICAL/OPTICAL CHARACTERISTICS AT T<sub>a</sub>=25°C**

**WCN1-0056SR-A11R/C11R;WCN2-0056SR-A11R/C11R;WCN3-0056SR-A11R/C11R/A21R/C21R  
WCN4-0056SR-A11R/C11R/A21R/C21R**

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Luminous Intensity	I <sub>V</sub>	3.0	6.0	—	mcd	I <sub>F</sub> =10mA
Dominant Wavelength	λ <sub>D</sub>	—	643	—	nm	I <sub>F</sub> =20mA
Peak Emission Wavelength	λ <sub>P</sub>	—	660	—	nm	I <sub>F</sub> =20mA
Spectral Line Half-Width	Δλ	—	20	—	nm	I <sub>F</sub> =20mA
Forward Voltage Per Segment	V <sub>F</sub>	—	1.8	2.0	V	I <sub>F</sub> =20mA
Reverse Current Per Segment	I <sub>R</sub>	—	—	100	μA	V <sub>R</sub> =5V
Luminous Intensity Matching Ratio (Segment To Segment)	I <sub>V-m</sub>			2:1		I <sub>F</sub> =10mA

**WCN1-0056HO-A11R/C11R;WCN2-0056HO-A11R/C11R;WCN3-0056HO-A11R/C11R/A21R/C21R  
WCN4-0056HO-A11R/C11R/A21R/C21R**

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Luminous Intensity	I <sub>V</sub>	1.25	3.5	—	mcd	I <sub>F</sub> =10mA
Dominant Wavelength	λ <sub>D</sub>	—	622	—	nm	I <sub>F</sub> =20mA
Peak Emission Wavelength	λ <sub>P</sub>	—	632	—	nm	I <sub>F</sub> =20mA
Spectral Line Half-Width	Δλ	—	35	—	nm	I <sub>F</sub> =20mA
Forward Voltage Per Segment	V <sub>F</sub>	—	2.05	2.6	V	I <sub>F</sub> =20mA
Reverse Current Per Segment	I <sub>R</sub>	—	—	100	μA	V <sub>R</sub> =5V
Luminous Intensity Matching Ratio (Segment To Segment)	I <sub>V-m</sub>			2:1		I <sub>F</sub> =10mA

WCN1-0056GU-A11R/C11R;WCN2-0056GU-A11R/C11R;WCN3-0056GU-A11R/C11R/A21R/C21R

WCN4-0056GU-A11R/C11R/A21R/C21R

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Luminous Intensity	$I_V$	2.0	4.5	—	mcd	$I_F=10\text{mA}$
Dominant Wavelength	$\lambda_D$	—	573	—	nm	$I_F=20\text{mA}$
Peak Emission Wavelength	$\lambda_P$	—	568	—	nm	$I_F=20\text{mA}$
Spectral Line Half-Width	$\Delta\lambda$	—	30	—	nm	$I_F=20\text{mA}$
Forward Voltage Per Segment	$V_F$	—	2.25	2.6	V	$I_F=20\text{mA}$
Reverse Current Per Segment	$I_R$	—	—	100	$\mu\text{A}$	$V_R=5\text{V}$
Luminous Intensity Matching Ratio (Segment To Segment)	$I_{V-m}$			2:1		$I_F=10\text{mA}$