



# CD4-XX30XX-XXX SERIES

## 0.30" FOUR DIGIT CLOCK FREQUENCY LED DISPLAYS

### FEATURES

- 0.30 inch(7.62mm) digit height.
- Continuous uniform segment.
- Choice of two colors: SH. Red/Bright Green.
- Low power requirement.
- I. C. compatible.
- Easy assembly.

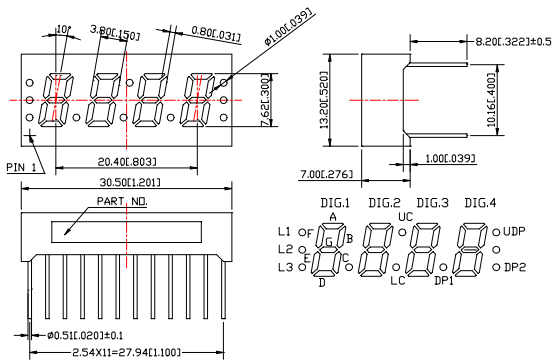
### DESCRIPTION

The CD4-XX30XX-XXX series are 0.30 inch (7.62mm) height four digit displays. SH. Red displays have black face or gray face and white segment or red segment. Orange displays have black face or gray face and white segment or red segment. Bright Green displays have black face or gray face and white segment or green segment

### DEVICES

SH.RED	ORANGE	BRIGHT GREEN	DESCRIPTION	INTERNAL CIRCUIT DIAGRAM
CD4-BW30SR-A11	CD4-BW30HO-A11	CD4-BW30GU-A11	Common Anode Rt. Hand Decimal	A
CD4-BW30SR-C11	CD4-BW30HO-C11	CD4-BW30GU-C11	Common Cathode Rt. Hand Decimal	B

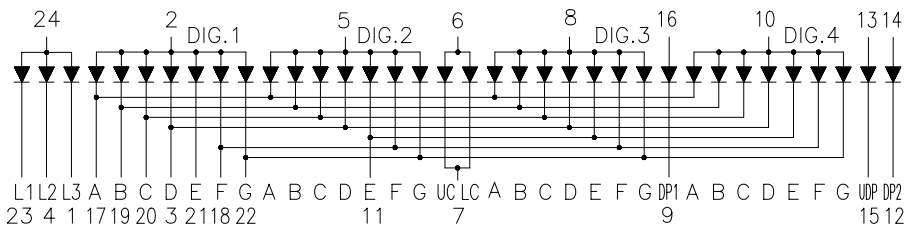
### PACKAGE DIMENSIONS



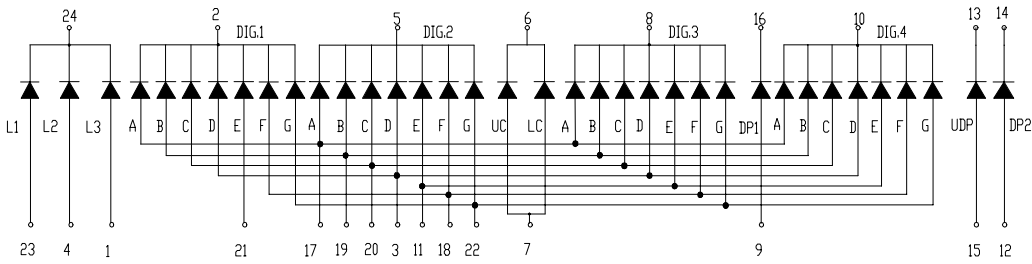
NOTES: All dimensions are in millimeters (inches) tolerance are  $\pm 0.25\text{mm}(0.010)$  unless otherwise noted.

## INTERNAL CIRCUIT DIAGRAM

### A. CD4-XX30XX-A1X



### B. CD4-XX30XX-C1X



## PIN CONNECTION

PIN NO.	CONNECTION	PIN NO.	CONNECTION
1	L3	13	Anode/Cathode UDP
2	Common Anode/Cathode DIG.1	14	Anode/Cathode DP2
3	D	15	Cathode/Anode UDP
4	L2	16	Anode/Cathode DP1
5	Common Anode/Cathode DIG.2	17	A
6	Anode/Cathode UC,LC	18	F
7	Cathode/Anode UC,LC	19	B
8	Common Anode/Cathode DIG.3	20	C
9	Cathode/Anode DP1	21	1E
10	Common Anode/Cathode DIG.4	22	G
11	2E,3E,4E	23	L1
12	Cathode/Anode DP2	24	Common Anode/Cathode L1,L2,L3

**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 (1/10 duty 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				

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

CD4-BW30SR-A11/C11

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Luminous Intensity	I <sub>V</sub>	2.0	3.0	—	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	μ A	V <sub>R</sub> =5V
Luminous Intensity Matching Ratio (Segment To Segment)	I <sub>V-m</sub>			2:1		I <sub>F</sub> =10mA

CD4-BW30HO-A11/C11

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Luminous Intensity Per Segment	I <sub>V</sub>	0.8	1.2	—	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	μ A	V <sub>R</sub> =5V
Luminous Intensity Matching Ratio (Segment To Segment)	I <sub>V-m</sub>			2:1		I <sub>F</sub> =10mA

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Luminous Intensity Per Segment	$I_V$	1.0	2.0	—	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	$V_F$	1.8	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		$I_F=10\text{mA}$