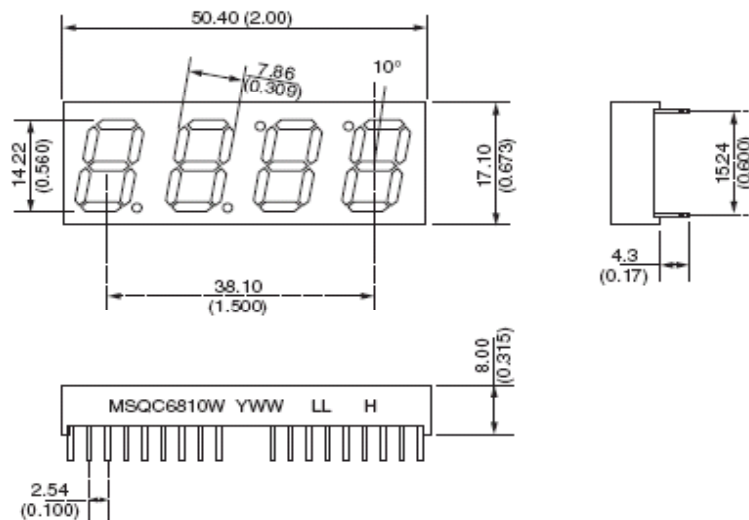


14mm (0.56 inch) Four Digit CLOCK STICK DISPLAY

MSQC6810W

PACKAGE DIMENSIONS



Notes:

- Dimensions are in mm (inches)
- Tolerances are $\pm 0.25\text{mm}$ (0.010") unless otherwise stated.

Features

- Bright Bold Segments
- Common Anode
- Low Power Consumption
- Low Current Capability
- Neutral Segments
- Grey Face
- Epoxy Encapsulated PCB
- High Performance
- High Reliability

Applications

- Appliances
- Automotive
- Instrumentation
- Process Control



14mm (0.56 inch) Four Digit CLOCK STICK DISPLAY

MSQC6810W

ABSOLUTE MAXIMUM RATINGS⁽¹⁾ ($T_A = 25^\circ\text{C}$, unless otherwise specified)

Part Number Parameter	MSQC6810W	Units
Continuous Forward Current (each segment)	20	mA
Peak Forward Current ($F = 10\text{KHz}$, $D/F = 1/10$)	80	mA
Power Dissipation (P_D)*	70	mW
*Derate Linearly from 25°C	0.25	mW
Reverse Voltage per Die	5 Volts	
Operating and Storage Temperature Range	-40°C to $+85^\circ\text{C}$	
Lead soldering time (1/16 inch from standoffs)	5 seconds @ 230°C	

ELECTRO-OPTICAL CHARACTERISTICS⁽¹⁾ ($T_A = 25^\circ\text{C}$, unless otherwise specified)

Part Number Parameter	MSQC6810W	Units	Test Condition
Luminous intensity ⁽²⁾ (I_V)			
Cat G	1310 – 2358	μcd	$I_F = 10\text{mA}$
Cat H	2100 – 3780	μcd	$I_F = 10\text{mA}$
Forward Voltage (V_F)			
Typical (Standard Current)	2.10	V	$I_F = 20\text{mA}$
Maximum (Standard Current)	2.80	V	$I_F = 20\text{mA}$
Peak Wavelength Typ	589	nm	$I_F = 10\text{mA}$
Dominant Wavelength	586 – 594	nm	$I_F = 10\text{mA}$
Reverse Breakdown Voltage (V_R)	5	V	$I_R = 100\mu\text{A}$
Spectral Line 1/2 Width	40	nm	$I_F = 10\text{mA}$

NOTES:

(1) Data per individual LED element

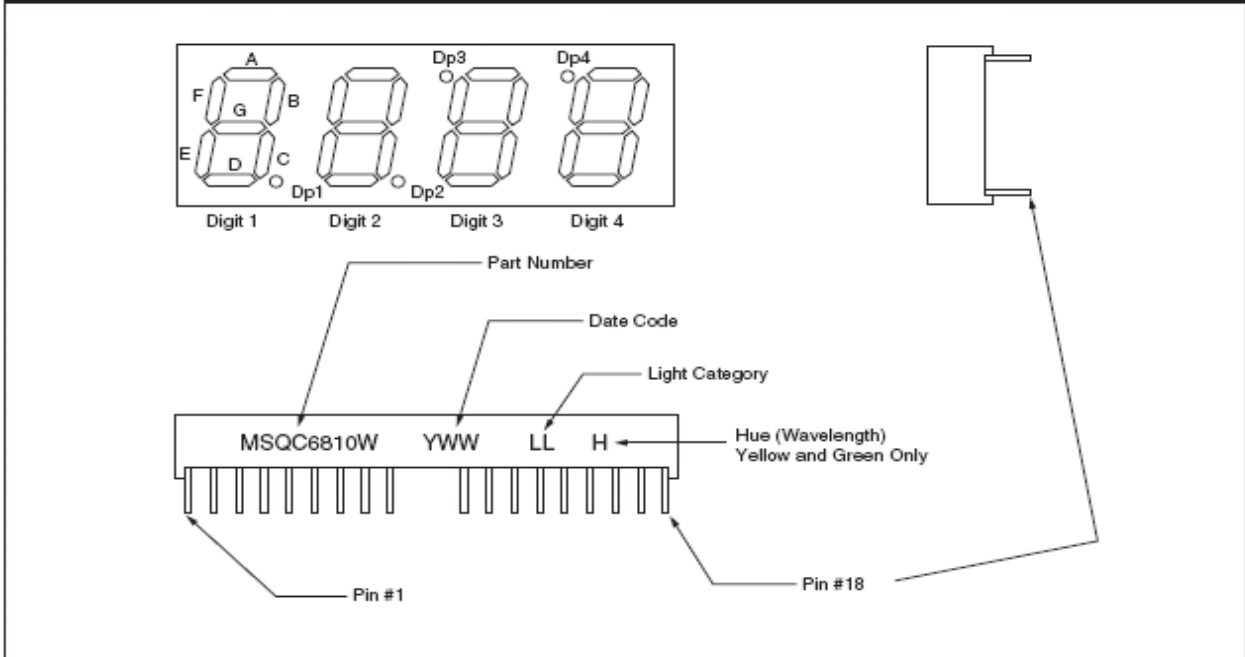
(2) Luminous intensity (μcd) = average light output per segment



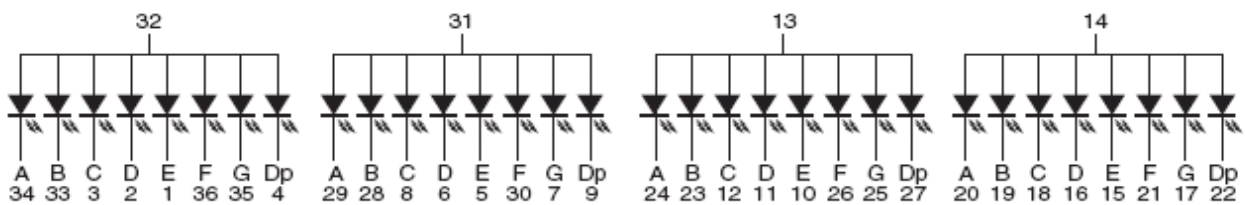
14mm (0.56 inch) Four Digit CLOCK STICK DISPLAY

MSQC6810W

PIN ORIENTATION, SEGMENT IDENTIFICATION, AND PRODUCT MARKING



SCHEMATIC





14mm (0.56 inch) Four Digit CLOCK STICK DISPLAY

MSQC6810W

GRAPHICAL DATA Bright Red ($T_A = 25^\circ\text{C}$, unless otherwise specified)

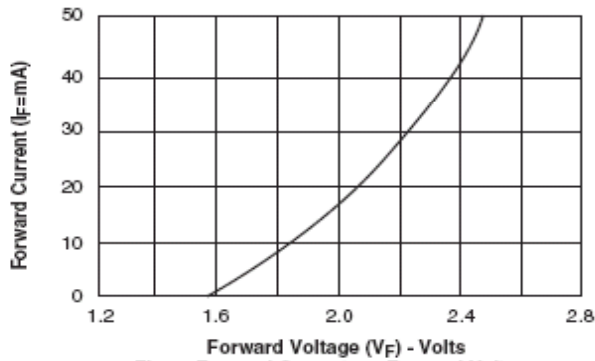


Fig. 1 Forward Current vs. Forward Voltage

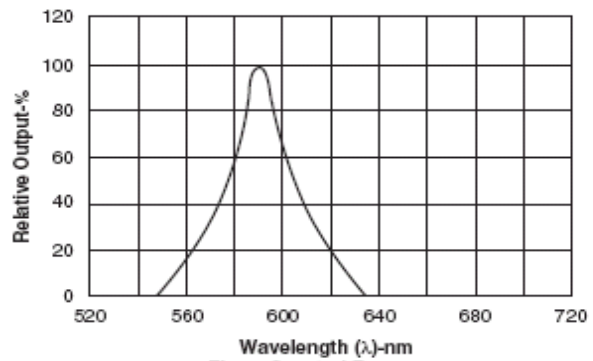


Fig. 2 Spectral Response

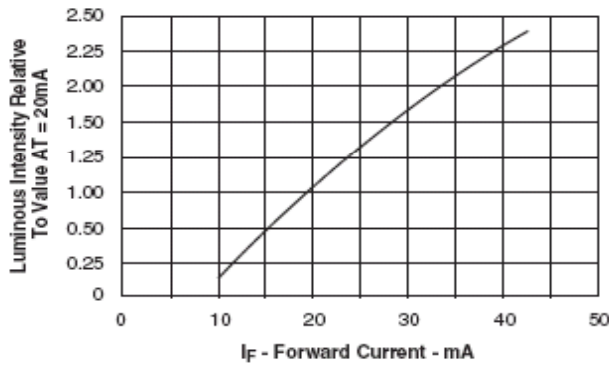


Fig. 3 Relative Luminous Intensity vs. Forward Current

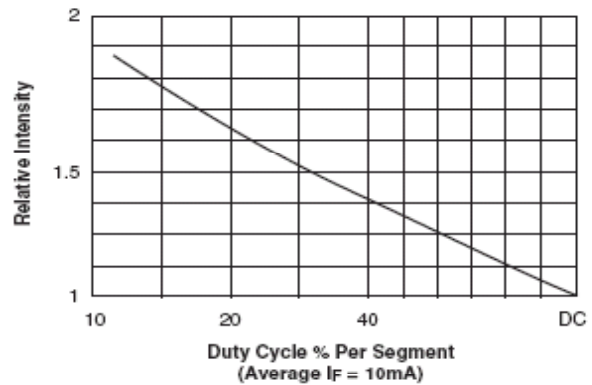


Fig. 4 Luminous Intensity vs. Duty Cycle

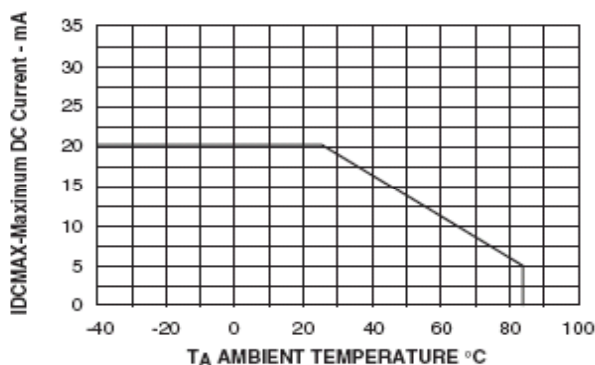


Fig. 5 Maximum Allowable DC Current per Segment vs. a Function of Ambient Temperature

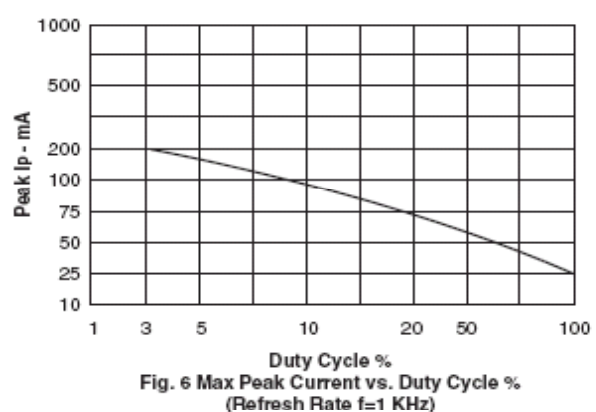


Fig. 6 Max Peak Current vs. Duty Cycle % (Refresh Rate $f=1\text{ KHz}$)



14mm (0.56 inch) Four Digit CLOCK STICK DISPLAY

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Pin #	Connection
1	Cathode E for digit 1
2	Cathode D for digit 1
3	Cathode C for digit 1
4	Cathode DP for digit 1
5	Cathode E for digit 2
6	Cathode D for digit 2
7	Cathode G for digit 2
8	Cathode C for digit 2
9	Cathode DP for digit 2
10	Cathode E for digit 3
11	Cathode D for digit 3
12	Cathode C for digit 3
13	Common Anode for digit 3
14	Common Anode for digit 4
15	Cathode E for digit 4
16	Cathode D for digit 4
17	Cathode G for digit 4
18	Cathode C for digit 4
19	Cathode B for digit 4
20	Cathode A for digit 4
21	Cathode F for digit 4
22	Cathode DP for digit 4
23	Cathode B for digit 3
24	Cathode A for digit 3
25	Cathode G for digit 3
26	Cathode F for digit 3
27	Cathode DP for digit 3
28	Cathode B for digit 2
29	Cathode A for digit 2
30	Cathode F for digit 2
31	Common Anode for digit 2
32	Common Anode for digit 1
33	Cathode B for digit 1
34	Cathode A for digit 1
35	Cathode G for digit 1
36	Cathode F for digit 1



14mm (0.56 inch) Four Digit CLOCK STICK DISPLAY

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