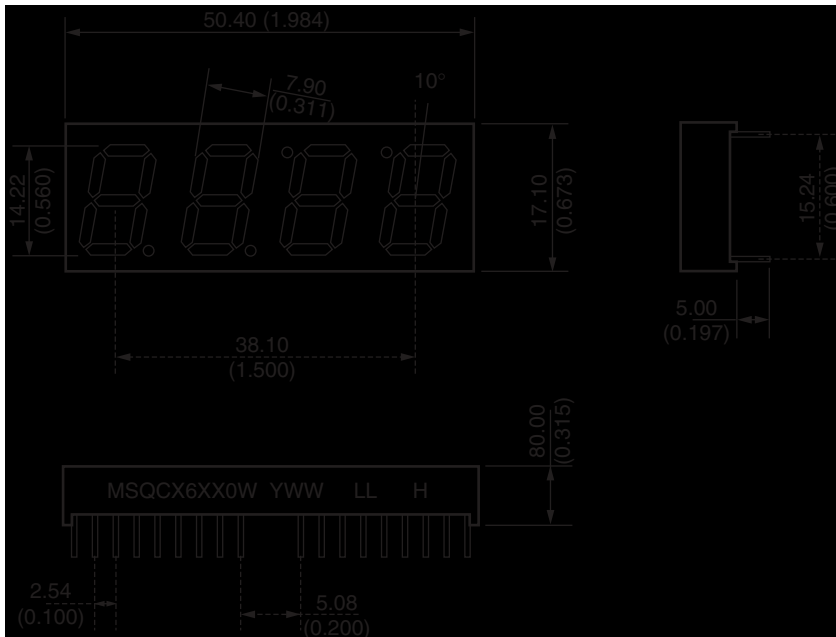


# 14mm (0.56 inch) Four Digit CLOCK STICK DISPLAY

**Bright Red MSQC6110W, MSQC6140W**  
**High Efficiency Red MSQC6910W, MSQC6940W**  
**Green MSQC6410W, MSQC6440W**

## PACKAGE DIMENSIONS



### Notes:

- Dimensions are in mm (inches)
- All pins 0.5mm (0.020") diameter
- Tolerances are  $\pm 0.25\text{mm}$  (0.010") unless otherwise stated

## Features

- Bright Bold Segments
- Common Anode/Cathode
- Low Power Consumption
- Low Current Capability
- Epoxy Encapsulated PCB
- High Performance
- High Reliability

## Applications

- Appliances
- Automotive
- Instrumentation
- Process Control

## MODELS AVAILABLE

Part Number	Color	Description
MSQC6110W	Bright Red	Clock Display, Common Anode – gray face, neutral segments
MSQC6140W	Bright Red	Clock Display, Common Cathode – gray face, neutral segments
MSQC6410W	Green	Clock Display, Common Anode – gray face, green segments
MSQC6440W	Green	Clock Display, Common Cathode – gray face, green segments
MSQC6910W	High Efficiency Red	Clock Display, Common Anode – gray face, neutral segments
MSQC6940W	High Efficiency Red	Clock Display, Common Cathode – gray face, neutral segments

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<b>ABSOLUTE MAXIMUM RATINGS<sup>(1)</sup></b> ( $T_A = 25^\circ\text{C}$ , unless otherwise specified)				
Part Number Parameter	MSQC6110W MSQC6140W	MSQC6410W MSQC6440W	MSQC6910W MSQC6940W	Units
<b>Continuous Forward Current</b> (each segment)	15	25	25	mA
<b>Peak Forward Current</b> ( $F = 10\text{KHz}$ , $D/F = 1/10$ )	60	90	90	mA
<b>Power Dissipation (<math>P_D</math>)</b>	40	70	70	mW
<b>*Derate Linearly from <math>25^\circ\text{C}</math></b>	0.17	0.33	0.33	mW
<b>Reverse Voltage per Die</b>	5 Volts			
<b>Operating and Storage Temperature Range</b>	$-40^\circ\text{C}$ to $+85^\circ\text{C}$			
<b>Lead soldering time (1/16 inch from standoffs)</b>	5 seconds @ $230^\circ\text{C}$			

<b>ELECTRO-OPTICAL CHARACTERISTICS<sup>(1)</sup></b> ( $T_A = 25^\circ\text{C}$ , unless otherwise specified)					
Part Number Parameter	MSQC6110W MSQC6140W	MSQC6410W MSQC6440W	MSQC6910W MSQC6910W	Units	Test Condition
<b>Luminous intensity<sup>(2)</sup> (<math>I_V</math>)</b>					
Minimum (Standard Current)	300	800	800	$\mu\text{cd}$	$I_F = 10\text{mA}$
Typical (Standard Current)	700	2400	2000	$\mu\text{cd}$	$I_F = 10\text{mA}$
Minimum (Low Current)	Not Available				
Typical (Low Current)	Not Available				
<b>Forward Voltage (<math>V_F</math>)</b>					
Typical (Standard Current)	2.10	2.10	2.00	V	$I_F = 20\text{mA}$
Maximum (Standard Current)	2.80	2.80	2.80	V	$I_F = 20\text{mA}$
Typical (Low Current)	Not Available				
Maximum (Low Current)	Not Available				
<b>Peak Wavelength</b>	695	570	635	nm	$I_F = 20\text{mA}$
<b>Dominant Wavelength</b>	Not Available				
<b>Spectral Line 1/2 Width</b>	90	30	45	nm	$I_F = 10\text{mA}$
<b>Reverse B<sup>(3)</sup>. Voltage (<math>V_R</math>)</b>	5	5	5	V	$I_R = 100\mu\text{A}$

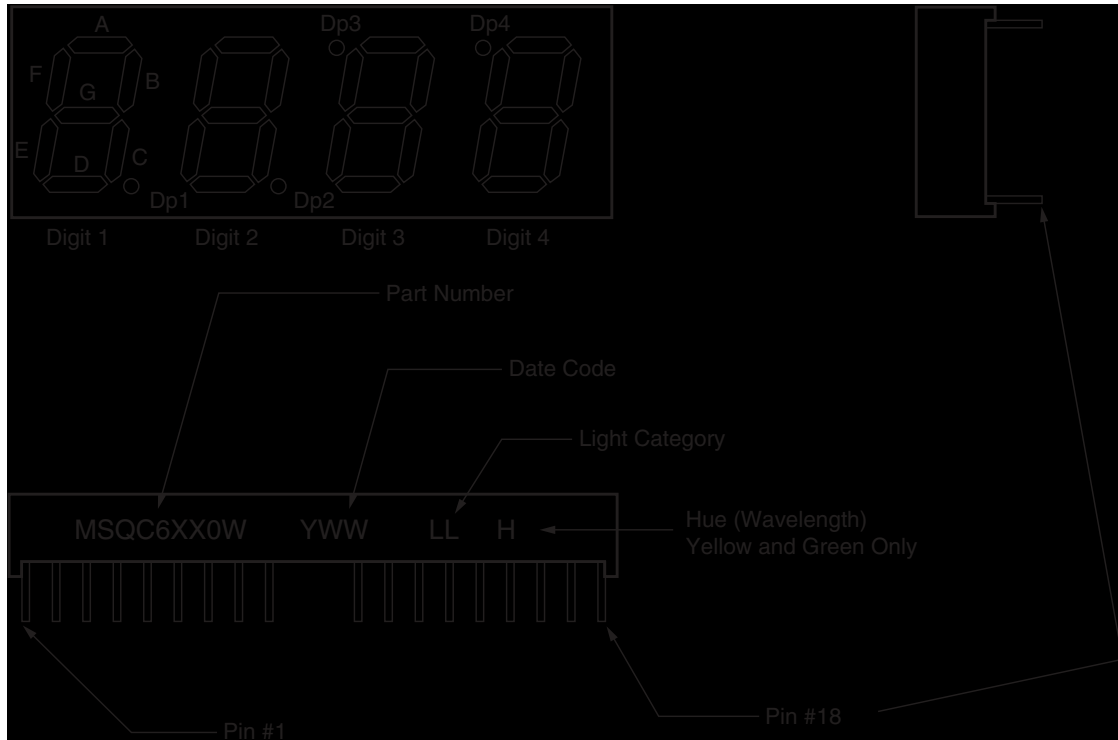
**NOTES:**

- (1) Data per individual LED element
- (2) Luminous intensity ( $\mu\text{cd}$ ) = average light output per segment
- (3) B = breakdown

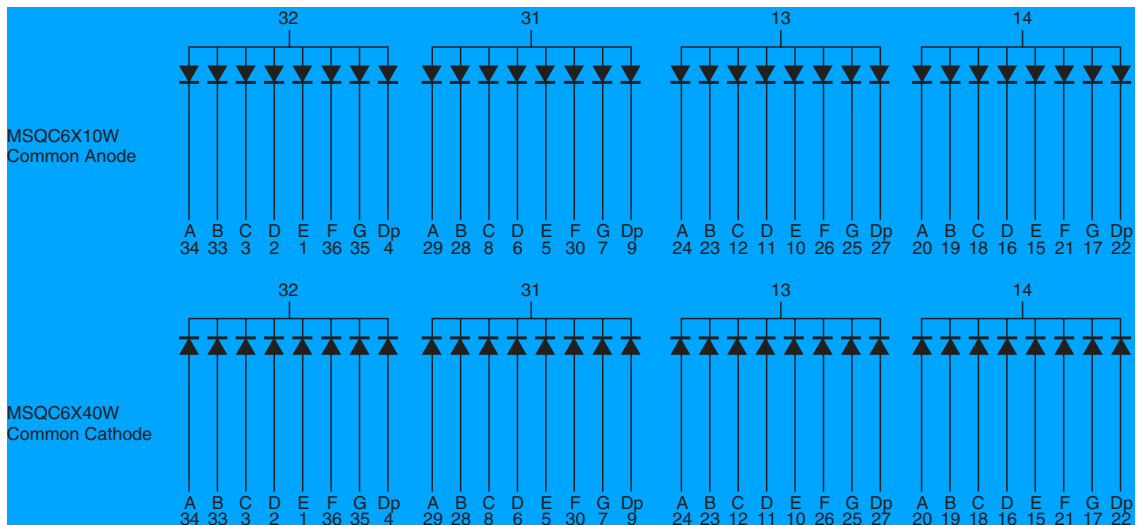
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## PIN ORIENTATION, SEGMENT IDENTIFICATION, AND PRODUCT MARKING



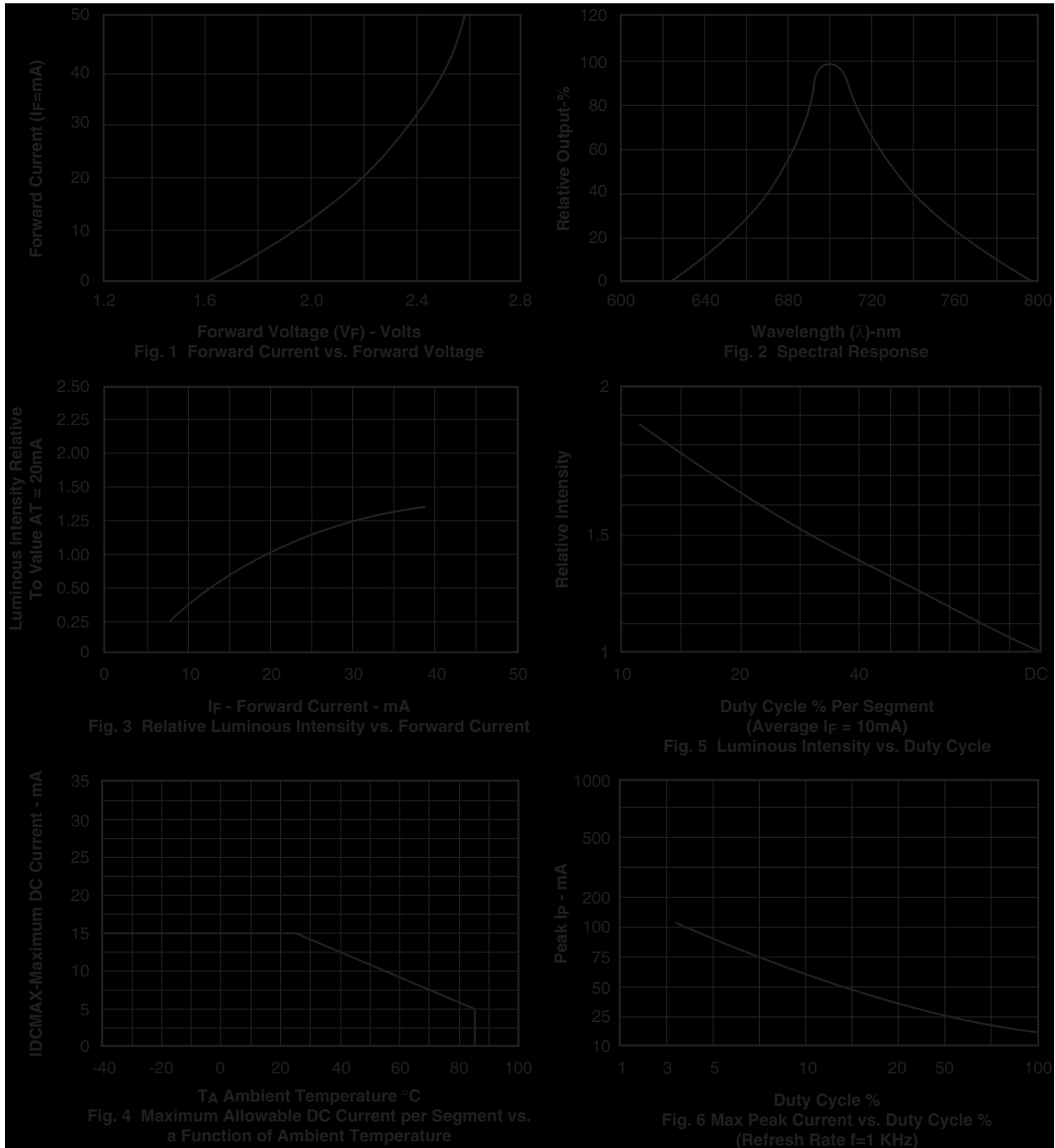
## SCHEMATICS



# 14mm (0.56 inch) Four Digit CLOCK STICK DISPLAY

**Bright Red MSQC6110W, MSQC6140W**  
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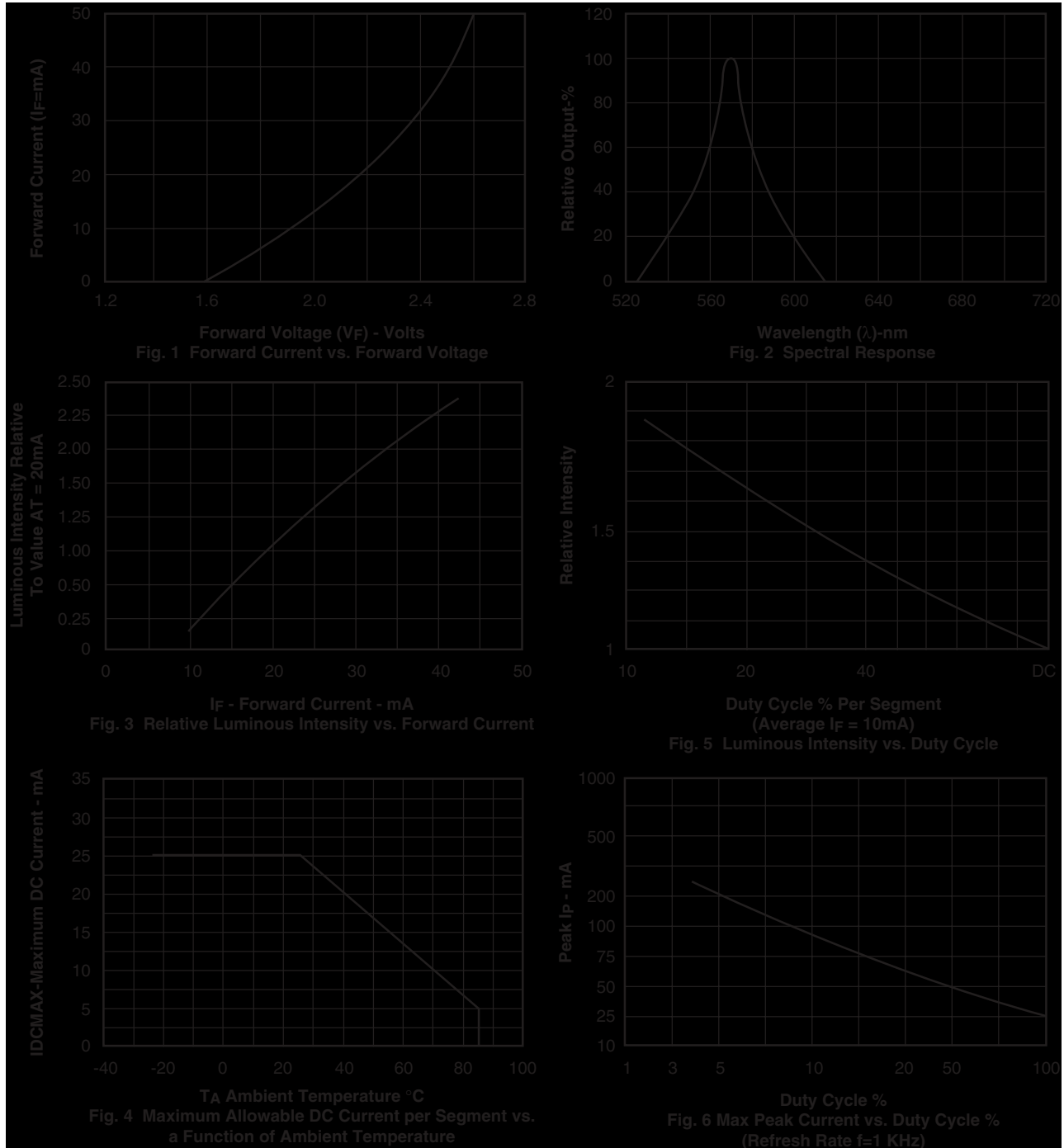
## GRAPHICAL DATA Bright Red ( $T_A = 25^\circ\text{C}$ , unless otherwise specified)



# 14mm (0.56 inch) Four Digit CLOCK STICK DISPLAY

Bright Red MSQC6110W, MSQC6140W  
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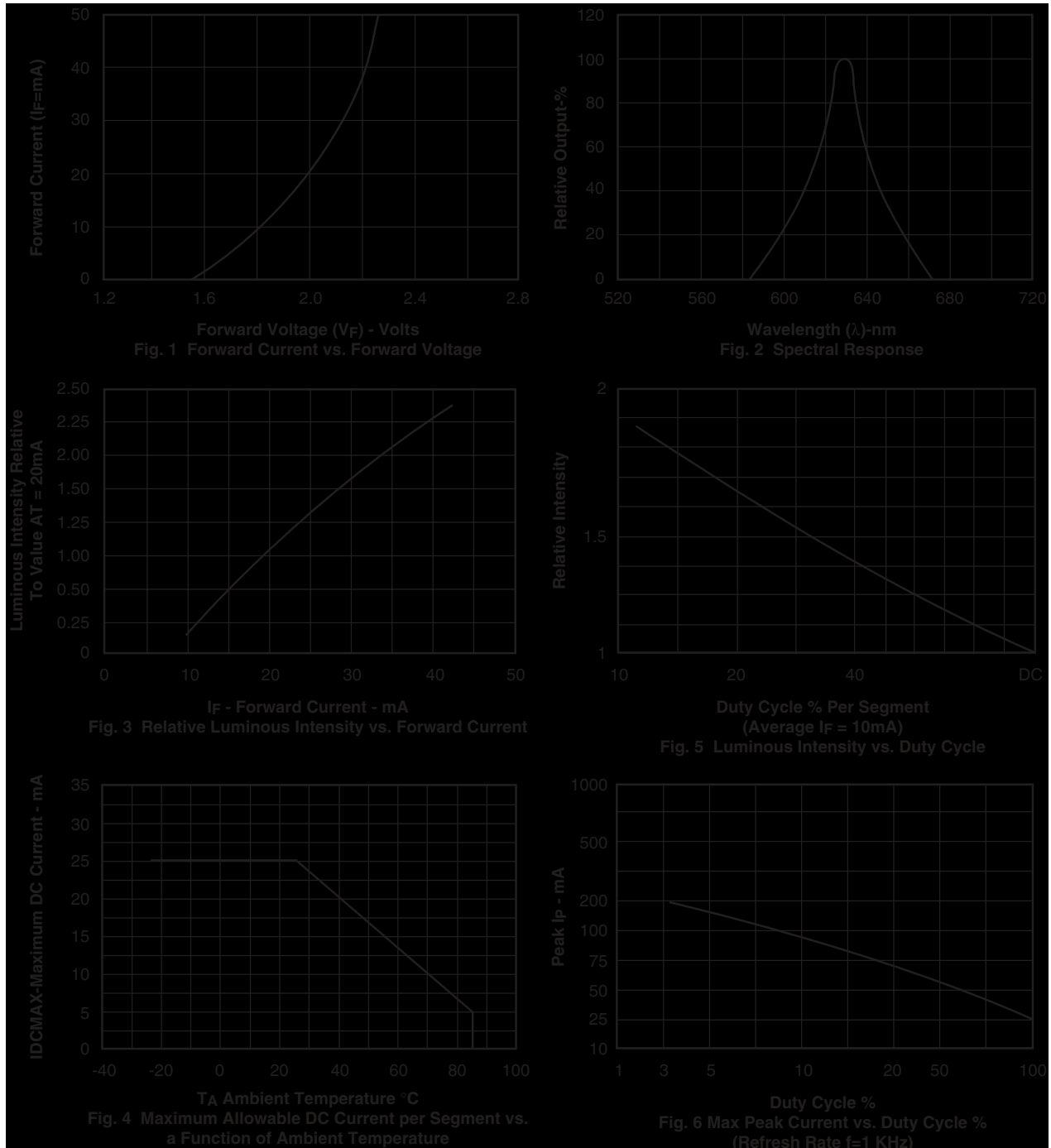
## GRAPHICAL DATA Green ( $T_A = 25^\circ\text{C}$ , unless otherwise specified)



# 14mm (0.56 inch) Four Digit CLOCK STICK DISPLAY

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Green MSQC6410W, MSQC6440W

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





# 14mm (0.56 inch) Four Digit CLOCK STICK DISPLAY

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**Bright Red MSQC6110W, MSQC6140W  
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2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.