



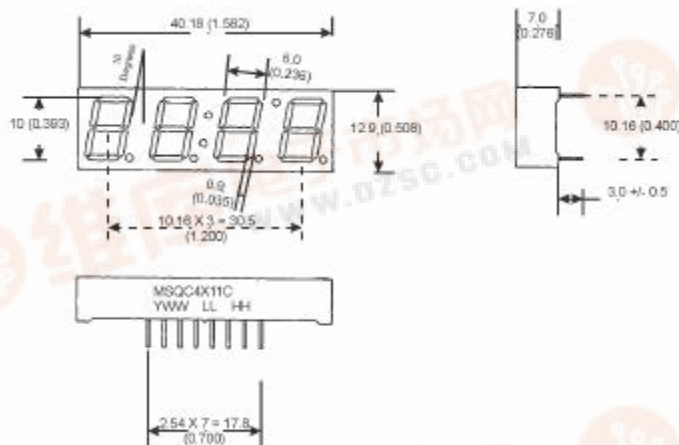
0.4 Inch (10.2mm) 4 Digit CLOCK STICK DISPLAY

AllnGaP Red (630nm) MSQC4H11C

AllnGaP Red (642nm) MSQC4R11C

AllnGaP Yellow MSQC4Y11C

PACKAGE DIMENSIONS



NOTES:

- Dimensions are in inches (mm)
- Tolerances are +/- 0.010 (0.25) unless otherwise stated.

FEATURES

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

APPLICATIONS

- Appliances
- Automotive
- Instrumentation
- Process Control

MODELS AVAILABLE

Part Number	Colour	Description	Special
MSQC4H11C	AllnGaP	630nm Clock, RHDP, Common Anode	Low Current Capability
MSQC4R11C	AllnGaP	642nm Clock, RHDP, Common Anode	Low Current Capability
MSQC4Y11C	AllnGaP	Yellow Clock, RHDP, Common Anode	Low Current Capability

(For other colour options, contact your local area Sales Manager)



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ABSOLUTE MAXIMUM RATINGS⁽¹⁾ (T_A = 25°C, unless otherwise specified)

Part Number	MSQC4H11C	MSQC4R11C	MSQC4Y11C	Units
Parameter				
Continuous Forward Current (each segment)	25	25	25	mA
Peak Forward Current (F = 10KHz, D/F = 1/10)	100	100	100	mA
Power Dissipation (P_D)	60	60	60	mW
*Derate Linearly from 25°C	0.36	0.36	0.36	mW
Reverse Voltage per Die	5 Volts			
Operating and Storage Temperature Range	-40°C to +85°C			
Lead soldering time (1/16 inch from standoffs)	5 seconds @ 230°C			

ELECTRO-OPTICAL CHARACTERISTICS⁽¹⁾ (T_A = 25°C, unless otherwise specified)

Part Number	MSQC4H11C	MSQC4R11C	MSQC4Y11C	Units	Test Condition
Parameter					
Luminous intensity⁽²⁾ (I_V)					
Minimum (Standard Current)	6000	4000	8000	ucd	I _F = 10mA
Typical (Standard Current)	7800	5800	12800	ucd	I _F = 10mA
Minimum (Low Current)	510	510	510	ucd	I _F = 2mA
Typical (Low Current)	1000	1000	1000	ucd	I _F = 2mA
Forward Voltage (V_F)					
Typical (Standard Current)	2.05	2.05	2.05	Volts	I _F = 10mA
Maximum (Standard Current)	2.40	2.40	2.40	Volts	I _F = 10mA
Typical (Low Current)	1.80	1.80	1.80	Volts	I _F = 2mA
Maximum (Low Current)	2.20	2.20	2.20	Volts	I _F = 2mA
Peak Wavelength	632	639	591	nm	I _F = 10mA
Dominant Wavelength	624	631	585	nm	I _F = 10mA
Spectral Line 1/2 Width	20	20	20	nm	I _F = 10mA
Reverse B⁽³⁾.Voltage (V_R)	5	5	5	Volts	I _R = 100uA

NOTES:

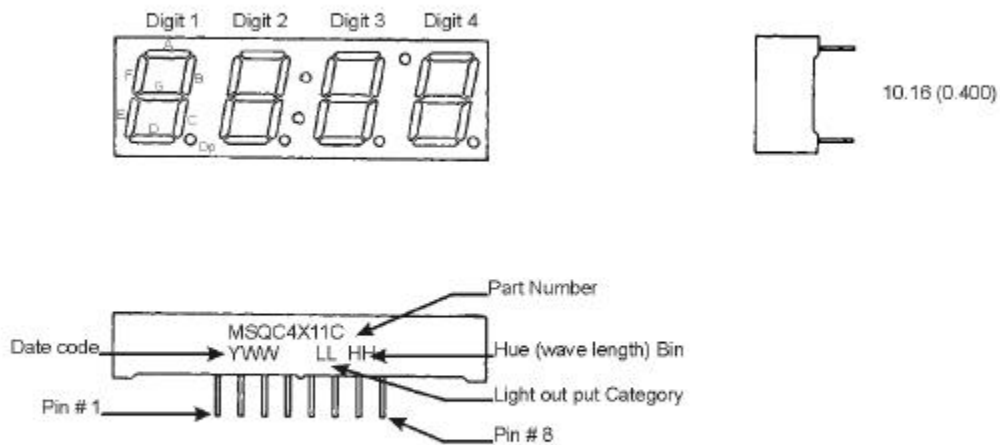
(1) Data per individual LED element

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

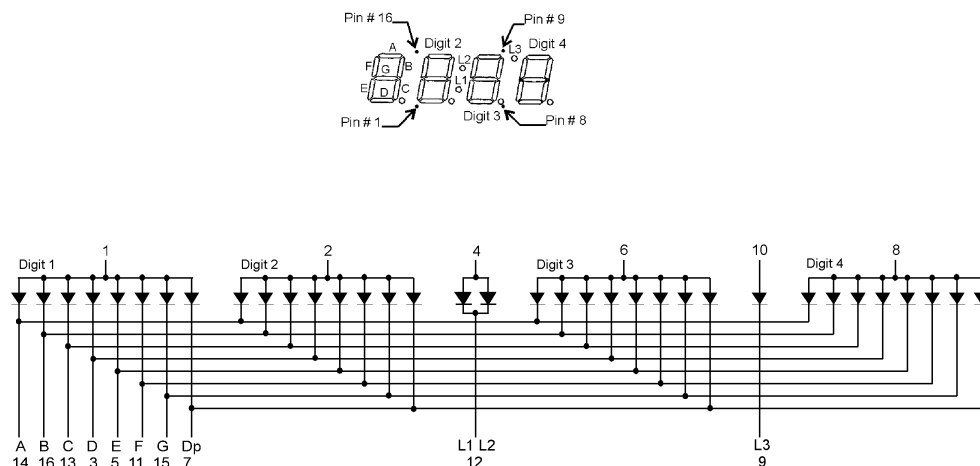
(3) B = breakdown

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PIN ORIENTATION, SEGMENT IDENTIFICATION, AND PRODUCT MARKING

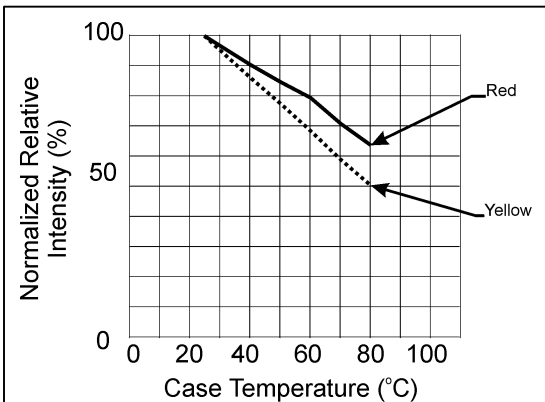


SCHEMATICS

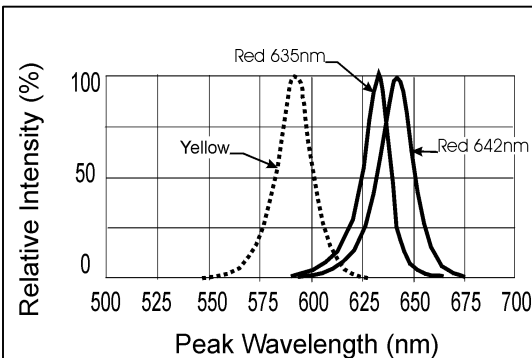


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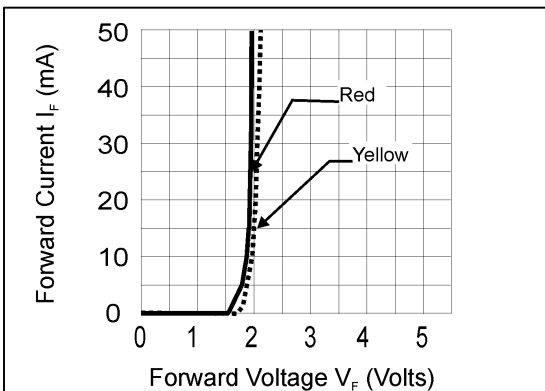
GRAPHICAL DATA AlInGaP 630nm ($T_A = 25^\circ\text{C}$, unless otherwise specified)



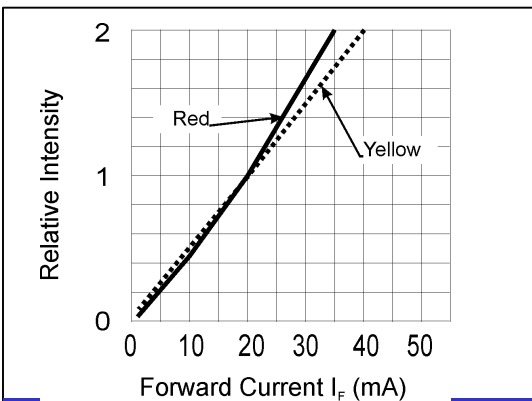
Relative Intensity vs Case Temp.



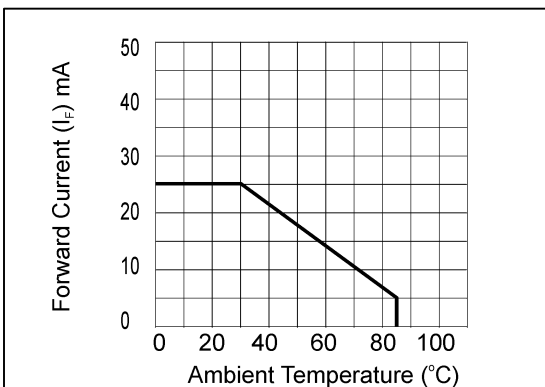
Spectral Response



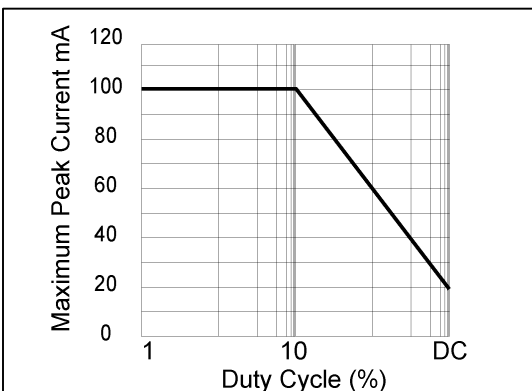
Forward Current vs Forward Voltage



Luminous Intensity vs Duty Cycle



Maximum Forward Current vs Ambient Temperature



Maximum Peak Current vs Duty Cycle