



0.3 Inch (7.62mm) COMPACT NUMERIC FRAME DISPLAY

AllnGaP Red (630nm) MAN3H10, MAN3H40

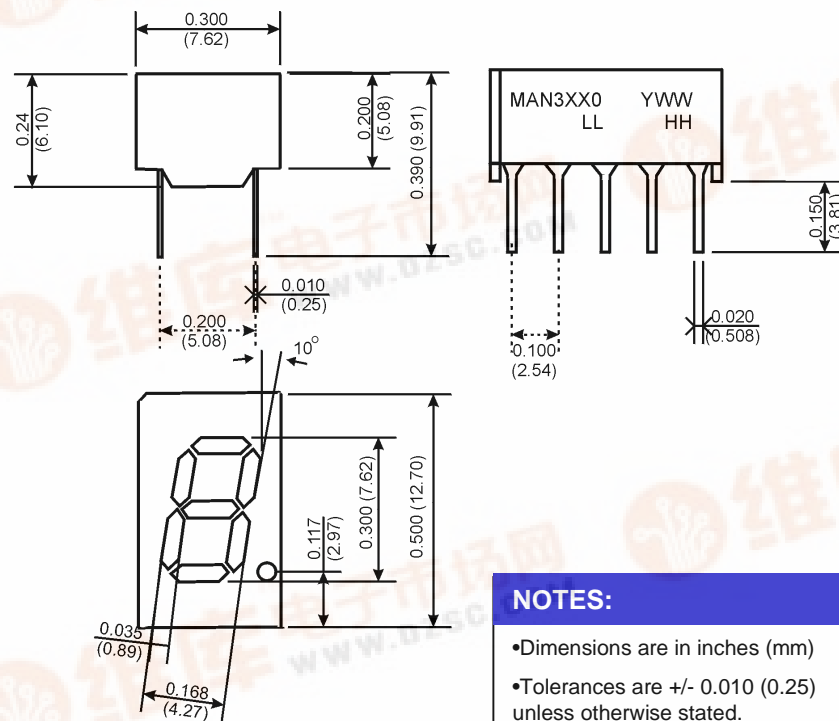
AllnGaP Red (642nm) MAN3R10, MAN3R40

AllnGaP Yellow MAN3Y10, MAN3Y40

GaP Green MAN3G10, MAN3G40

TR/QTS/030100-001

PACKAGE DIMENSIONS



FEATURES

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

APPLICATIONS

- Appliances
- Automotive
- Instrumentation
- Process Control

MODELS AVAILABLE

Part Number	Colour	Description	Special
MAN3H10	AllnGaP 630nm	Single Digit, RHDP, Common Anode	Low Current Capability
MAN3H40	AllnGaP 630nm	Single Digit, RHDP, Common Cathode	Low Current Capability
MAN3R10	AllnGaP 642nm	Single Digit, RHDP, Common Anode	Low Current Capability
MAN3R40	AllnGaP 642nm	Single Digit, RHDP, Common Cathode	Low Current Capability
MAN3Y10	AllnGaP Yellow	Single Digit, RHDP, Common Anode	Low Current Capability
MAN3Y40	AllnGaP Yellow	Single Digit, RHDP, Common Cathode	Low Current Capability
MAN3G10	GaP Green	Single Digit, RHDP, Common Anode	Low Current Capability
MAN3G40	GaP Green	Single Digit, RHDP, Common Cathode	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	MAN3H10	MAN3R10	MAN3Y10	MAN3G10	
Parameter	MAN3H40	MAN3R40	MAN3Y40	MAN3G40	Units
Continuous Forward Current (each segment)	25	25	25	25	mA
Peak Forward Current (F = 10KHz, D/F = 1/10)	100	100	100	100	mA
Power Dissipation (P_D)	60	60	60	60	mW
*Derate Linearly from 25°C	0.36	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	MAN3H10	MAN3R10	MAN3Y10	MAN3G10		
Parameter	MAN3H40	MAN3R40	MAN3Y40	MAN3G40	Units	Test Condition
Luminous intensity⁽²⁾ (I_V)						
Minimum (Standard Current)	6000	4000	8000	1500	ucd	I _F = 10mA
Typical (Standard Current)	7800	5800	12800	2500	ucd	I _F = 10mA
Minimum (Low Current)	510	510	510	510	ucd	I _F = 2mA
Typical (Low Current)	1000	1000	1000	1000	ucd	I _F = 2mA
Forward Voltage (V_F)						
Typical (Standard Current)	2.05	2.05	2.05	2.05	Volts	I _F = 10mA
Maximum (Standard Current)	2.45	2.45	2.45	2.45	Volts	I _F = 10mA
Typical (Low Current)	1.80	1.80	1.80	1.80	Volts	I _F = 2mA
Maximum (Low Current)	2.20	2.20	2.20	2.20	Volts	I _F = 2mA
Peak Wavelength	632	639	591	565	nm	I _F = 10mA
Dominant Wavelength	624	631	585	570	nm	I _F = 10mA
Spectral Line 1/2 Width	20	20	20	20	nm	I _F = 10mA
Reverse B⁽³⁾. Voltage (V_R)	5	5	5	5	Volts	I _R = 100uA

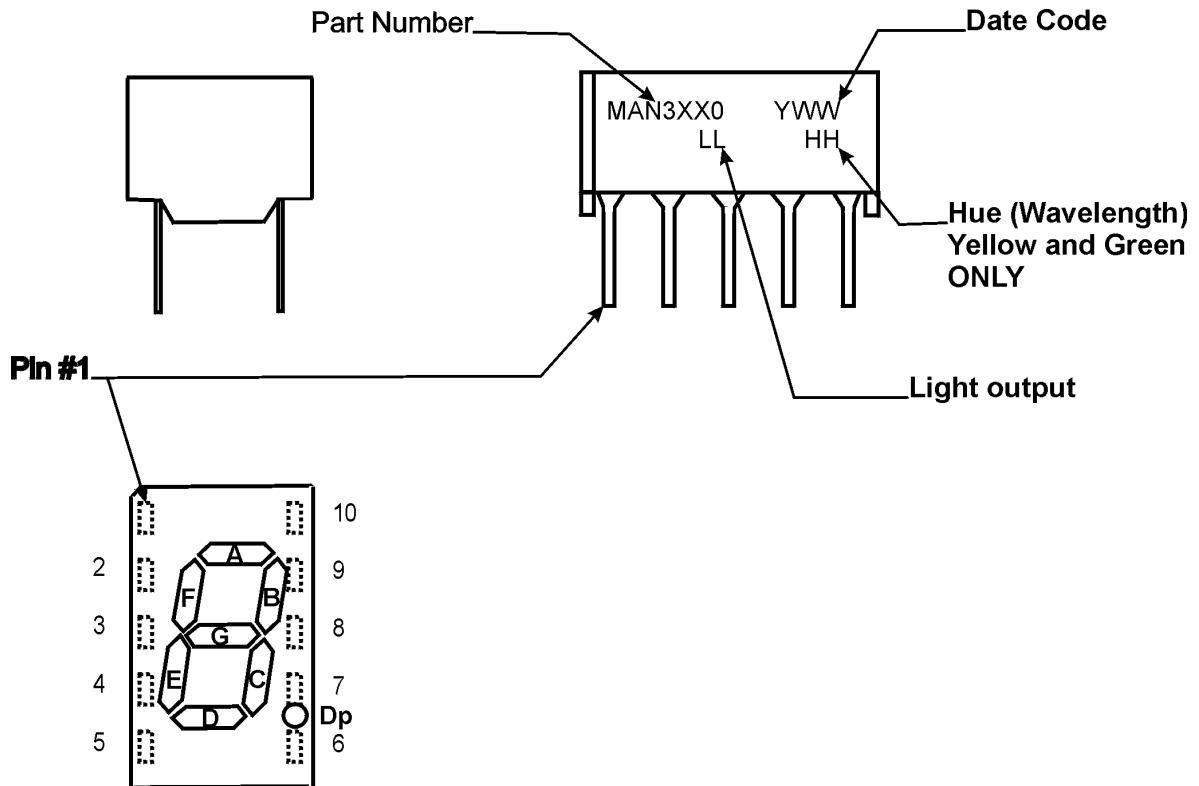
NOTES:

(1) Data per individual LED element

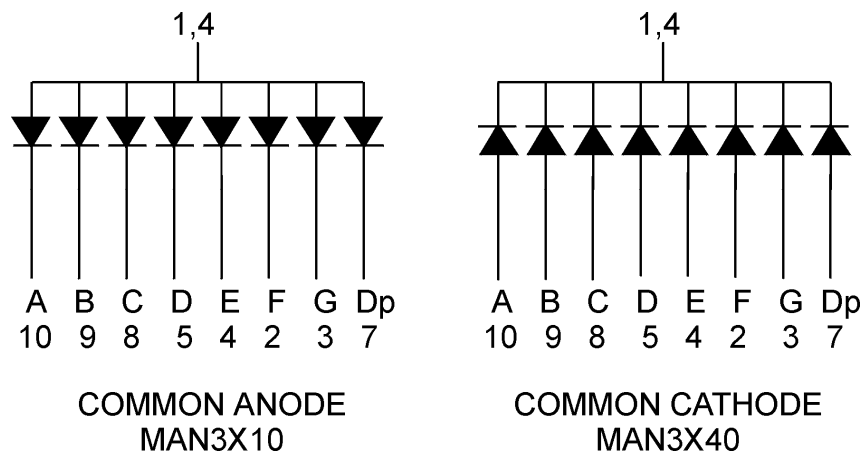
(2) Luminous intensity (ucd) = average light output per segment

(3) B = breakdown

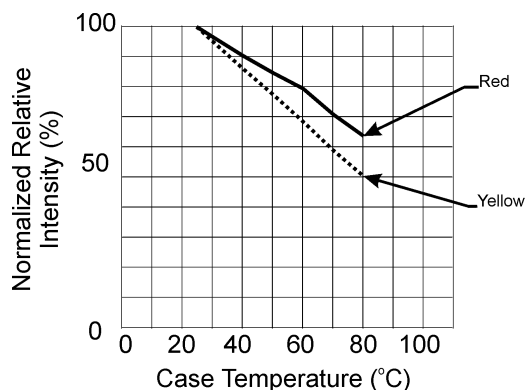
PIN ORIENTATION, SEGMENT IDENTIFICATION, AND PRODUCT MARKING



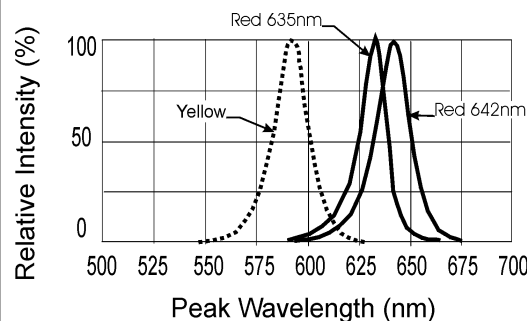
SCHEMATICS



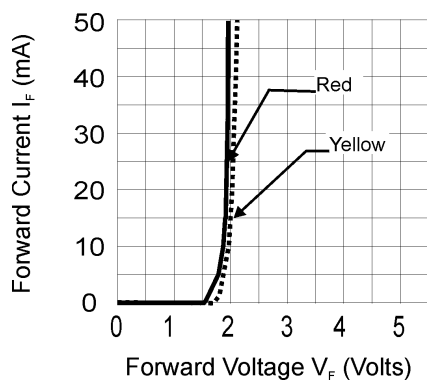
GRAPHICAL DATA AlInGaP 630nm ($T_A = 25^\circ\text{C}$, unless otherwise specified)



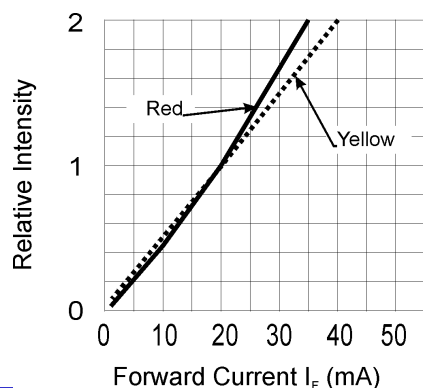
Relative Intensity vs Case Temp.



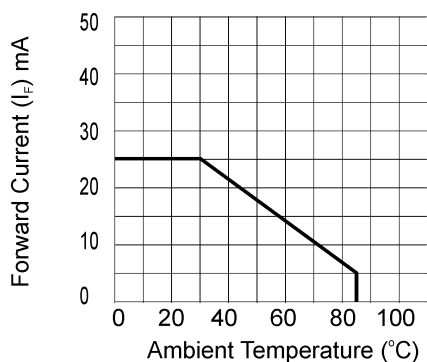
Spectral Response



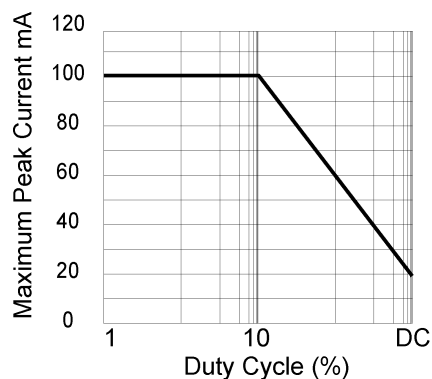
Forward Current vs Forward Voltage



Luminous Intensity vs Duty Cycle

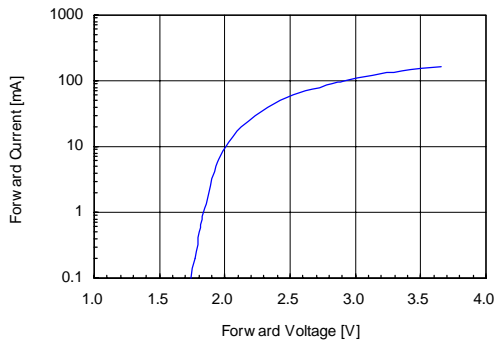


Maximum Forward Current vs Ambient Temperature

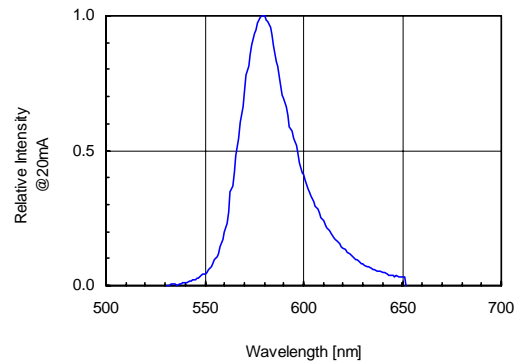


Maximum Peak Current vs Duty Cycle

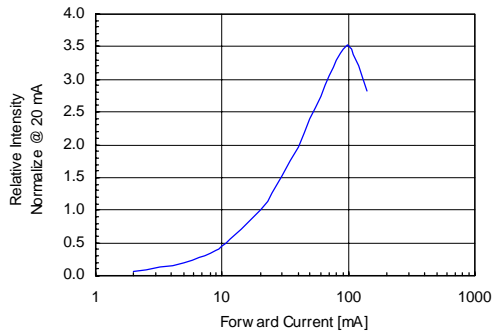
GRAPHICAL DATA GaP Green ($T_A = 25^\circ\text{C}$, unless otherwise specified)



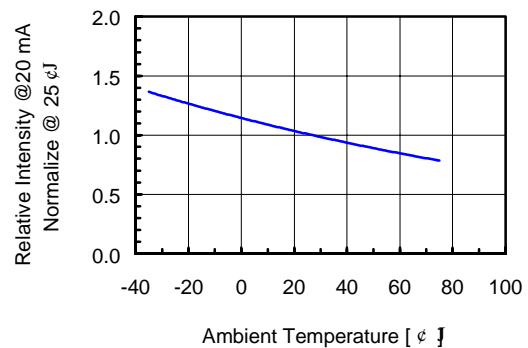
Forward Current vs Forward Voltage



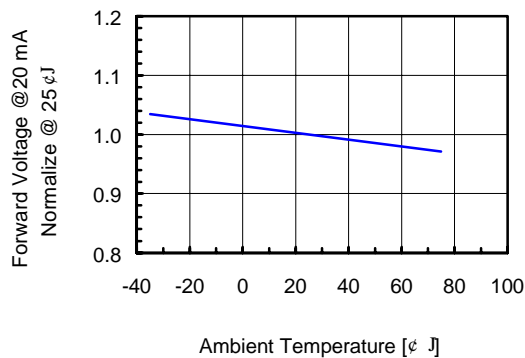
Spectral Response



Relative Intensity vs Forward Current



Relative Intensity vs Ambient Temperature



Forward Voltage vs Ambient Temperature



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