# **Change Notice**

### G Toggle, GW Paddle Series

## **Change of G Toggles & GW Paddles LED Specifications**

Type of Change:

☑ Engineering □ Part Number ☑ Product ☑ Appearance

The G Series Illuminated Toggles and the GW Series Illuminated Paddles will have changes to the LEDs. These changes will affect the illumination of all models, both standard and custom. Differences in the LED specification values are outlined in the table below.





**G** Toggle

**GW Paddle** 

#### **LED COLORS & SPECIFICATIONS**

The electrical specifications shown are determined at a basic temperature of 25°C. Lamp circuit is independent of switch operation.

21	(5) O (4) Red (5) O (6) Green		Before Change			After Change		
(5) 0 (6)			Single Color		Bicolor	Single Color		Bicolor
Single Color	Bicolor		D	F	CF	D	F	CF
		Colors	Amber	Green	Red/Green	Amber	Green	Red/Green
Forward Peak Current $I_{\rm FM}$		25mA	25mA	25mA/25mA	30mA	25mA	30mA/25mA	
Continuous Forward Current I <sub>F</sub>		20mA	20mA	20mA/20mA	20mA	20mA	20mA/20mA	
Forward Voltage $V_{_{\rm F}}$		2.1V	2.1V	2.0V/2.1V	2.0V	2.1V	2.0V/2.1V	
Reverse Peak Voltage V <sub>RM</sub>		4V	4V	4V/4V	5V	5V	5V/5V	
Current Reduction Rate Above 25°C ΔI <sub>F</sub>		0.33mA/°C			0 – No current Reduction Rate within Ambient Temperature Range			
Ambient Temperature Range			−25° ~ +55°C			−25° ~ +55°C		

#### Notes

- LEDs are an integral part of the switch and are not available separately.
- The LED circuit is isolated and requires an external power source.
- If the source voltage exceeds the rated voltage, a ballast resistor is required. The resistor value can be calculated by using the formula shown here.
- Anode Cathode

Where: R = Resistor Value (Ohms) E = Source Voltage (V)  $V_{r} = Forward Voltage (V)$ 

= Forward Current (A)

• The changes to G and GW LEDs do not affect any external dimensions of the switches.

Contact the factory if further details are needed.

#### **Effective Date**

Changes will be effective with August 2013 production.



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7850 East Gelding Drive • Scottsdale, AZ 85260 • Telephone 480.991.0942 • Fax 480.998.1435