

# Change Notice

# YB Series

## Changes to LEDs for YB Spot Illuminated Pushbuttons

Type of Change:

- Engineering     Part Number  
 Product         Appearance


The manufacturer that furnishes LEDs for YB spot illuminated pushbutton caps is changing. The replacement LEDs will include 2-volt (without resistor) for Red or Amber; 5-volt for Red, Amber or Green; 12-volt for Amber; 24-volt for Green or Red/Green bicolor.

Electrical specifications for 2-volt (without resistor) for Red (C) and Amber (D) will be the only LEDs with changes in values, outlined in the table below. Effected standard part numbers are on page 2.

The revisions will effect all YB spot illuminated switches with these LEDs, both standard and custom.

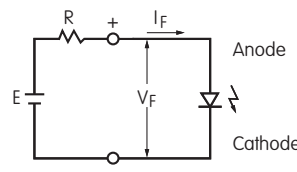


**YB Pushbutton with Spot Illumination**

<div style="border: 1px solid black; padding: 2px; display: inline-block;">02</div> 2-volt Without Resistor    Single Color 	Before Change		After Change		
	Color	Red <span style="border: 1px solid black; padding: 2px;">1C</span>	Amber <span style="border: 1px solid black; padding: 2px;">1D</span>	Red <span style="border: 1px solid black; padding: 2px;">1C</span>	Amber <span style="border: 1px solid black; padding: 2px;">1D</span>
Maximum Forward Current	$I_{FM}$	20mA	20mA	20mA	20mA
Typical Forward Current	$I_F$	15mA	15mA	15mA	15mA
Forward Voltage at Forward Current	$V_F$	2.0V	2.0V	1.9V	1.9V
Maximum Reverse Voltage	$V_{RM}$	5V	5V	5V	5V
Current Reduction Rate Above 25°C	$\Delta I_F$	0.27 mA/°C	0.27 mA/°C	0.27 mA/°C	0.27 mA/°C
Ambient Temperature Range		-25 ~ +50°C		-25 ~ +50°C	

### Notes

- 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.
- There are no changes to any other specifications or external dimensions.
- Contact the factory if further details are needed.



$$R = \frac{E - V_F}{I_F}$$

Where: R = Resistor Value (Ohms)  
 E = Source Voltage (V)  
 $V_F$  = Forward Voltage (V)  
 $I_F$  = Forward Current (A)

### Effective Date

Changes to LEDs for YB Spot Illuminated Pushbuttons will be effective March 2017.

**NKK**  
SWITCHES

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## YB Spot Illuminated Caps Effected by LED Change

### 2-volt Without Resistor Red (C)

AT3010C02JA	AT3010C02JB	AT3010C02JC	AT3010C02JE	AT3010C02JF
AT3011C02JA	AT3011C02JB	AT3012C02JC	AT3011C02JE	AT3011C02JF
AT3012C02JA	AT3012C02JB	AT3011C02JC	AT3012C02JE	AT3012C02JF

### 2-volt Without Resistor Amber (D)

AT3010D02JA	AT3010D02JB	AT3010D02JC	AT3010D02JE	AT3010D02JF
AT3011D02JA	AT3011D02JB	AT3011D02JC	AT3011D02JE	AT3011D02JF
AT3012D02JA	AT3012D02JB	AT3012D02JC	AT3012D02JE	AT3012D02JF

### 5-volt Green (F)

AT3010F05JA	AT3010F05JB	AT3010F05JC	AT3010F05JE	AT3010F05JF
AT3011F05JA	AT3011F05JB	AT3011F05JC	AT3011F05JE	AT3011F05JF
AT3012F05JA	AT3012F05JB	AT3012F05JC	AT3012F05JE	AT3012F05JF

### 5-volt Red (C)

AT3010C05JA	AT3010C05JB	AT3010C05JC	AT3010C05JE	AT3010C05JF
AT3011C05JA	AT3011C05JB	AT3011C05JC	AT3011C05JE	AT3011C05JF
AT3012C05JA	AT3012C05JB	AT3012C05JC	AT3012C05JE	AT3012C05JF

### 5-volt Amber (D)

AT3010D05JA	AT3010D05JB	AT3010D05JC	AT3010D05JE	AT3010D05JF
AT3011D05JA	AT3011D05JB	AT3011D05JC	AT3011D05JE	AT3011D05JF
AT3012D05JA	AT3012D05JB	AT3012D05JC	AT3012D05JE	AT3012D05JF

### 12-volt Amber (D)

AT3010D12JA	AT3010D12JB	AT3010D12JC	AT3010D12JE	AT3010D12JF
AT3011D12JA	AT3011D12JB	AT3011D12JC	AT3011D12JE	AT3011D12JF
AT3012D12JA	AT3012D12JB	AT3012D12JC	AT3012D12JE	AT3012D12JF

### 24-volt Green (F)

AT3010F24JA	AT3010F24JB	AT3010F24JC	AT3010F24JE	AT3010F24JF
AT3011F24JA	AT3011F24JB	AT3011F24JC	AT3011F24JE	AT3011F24JF
AT3012F24JA	AT3012F24JB	AT3012F24JC	AT3012F24JE	AT3012F24JF

### 24-volt Red/Green (CF)

AT3010CF24JA	AT3010CF24JB	AT3010CF24JC	AT3010CF24JE	AT3010CF24JF
AT3011CF24JA	AT3011CF24JB	AT3011CF24JC	AT3011CF24JE	AT3011CF24JF
AT3012CF24JA	AT3012CF24JB	AT3012CF24JC	AT3012CF24JE	AT3012CF24JF



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