

# Change Notice

# YB Series

## Changes to LED Specifications for Spot Illuminated Red/Green YB Series Pushbuttons

Type of Change:

- Engineering     Part Number  
 Product         Appearance

The LEDs for YB Series spot illuminated red/green bicolor pushbuttons will be changing for the 2-volt with no resistor (code 02) and 12-volt with resistor (code 12). Electrical specifications will be effected for the 2-volt, as shown on the following table. However, the LED change will not effect the electrical specifications for the 12-volt with resistor model.

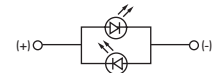
Standard and custom YB switches with spot illumination and red/green LEDs are included in the change, and part numbers for effected standard models are shown on page 2.



Some spot illuminated red/green models of YB Series will have LED specification changes.

### CHANGES TO SPECIFICATIONS FOR RED/GREEN BICOLOR LED

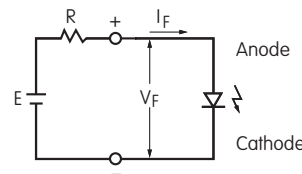
		Before Change	02	After Change	02	Bicolor LED is translucent white in OFF state.
The electrical specifications shown are determined at a basic temperature of 25°C. The LED is an integral part of the switch and not available separately.						
Maximum Forward Current	$I_{FM}$		20mA		20mA	
Typical Forward Current	$I_F$		15mA		15mA	
Forward Voltage	$V_F$		2.0V/2.1V		1.9V/2.1V	Without Resistor 2-volt
			$I_F = 15mA$		$I_F = 15mA$	
Maximum Reverse Voltage	$V_{RM}$		5V		5V	
Current Reduction Rate Above 25°C	$\Delta I_F$		0.27mA/°C		0.27mA/°C	
Ambient Temperature Range			-25°C ~ +50°C		-25°C ~ +50°C	



Bicolor

#### Notes

- The LED circuit is isolated and requires an external power source.
- For best results and safe use of LEDs, the supply voltage should be more than the LED forward voltage. Also, an appropriately valued ballast resistor should be used. Without the ballast resistor, the LED will be damaged or destroyed. The resistor value can be calculated by using the formula shown here.
- There are no changes to the switches' external dimensions.
- Contact information is below if more 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 for the YB Series spot illuminated red/green bicolor LEDs will be effective April 2022.

**NKK**  
SWITCHES

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## Changes to LED Specifications for Spot Illuminated Red/Green YB Series Pushbuttons

EFFECTED STANDARD PART NUMBERS		
PART NUMBER	TYPE	CAP SHAPE
AT3010CF02JA	Without Resistor	Square
AT3010CF02JB	Without Resistor	Square
AT3010CF02JC	Without Resistor	Square
AT3010CF02JE	Without Resistor	Square
AT3010CF02JF	Without Resistor	Square
AT3011CF02JA	Without Resistor	Round
AT3011CF02JB	Without Resistor	Round
AT3011CF02JC	Without Resistor	Round
AT3011CF02JE	Without Resistor	Round
AT3011CF02JF	Without Resistor	Round
AT3012CF02JA	Without Resistor	Rectangular
AT3012CF02JB	Without Resistor	Rectangular
AT3012CF02JC	Without Resistor	Rectangular
AT3012CF02JE	Without Resistor	Rectangular
AT3012CF02JF	Without Resistor	Rectangular
AT3010CF12JA	12-Volt LED	Square
AT3010CF12JB	12-Volt LED	Square
AT3010CF12JC	12-Volt LED	Square
AT3010CF12JE	12-Volt LED	Square
AT3010CF12JF	12-Volt LED	Square
AT3011CF12JA	12-Volt LED	Round
AT3011CF12JB	12-Volt LED	Round
AT3011CF12JC	12-Volt LED	Round
AT3011CF12JE	12-Volt LED	Round
AT3011CF12JF	12-Volt LED	Round
AT3012CF12JA	12-Volt LED	Rectangular
AT3012CF12JB	12-Volt LED	Rectangular
AT3012CF12JC	12-Volt LED	Rectangular
AT3012CF12JE	12-Volt LED	Rectangular
AT3012CF12JF	12-Volt LED	Rectangular

### Note

Above part numbers are YB Series spot illuminated caps with built-in LEDs.



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