

Change Notice HB Series Illuminated Pushbuttons

LED Specification Changes for AT633

Type of Change:

- Engineering Part Number
- Product Appearance

The HB Series Illuminated Pushbuttons and Indicators will have changes to the bright LEDs. These changes will effect the illumination of all models, both standard and custom. Differences in the LED specification values are outlined in the following table, in addition to a change of dimensions for AT633 LED.



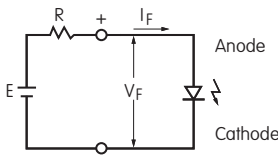
BRIGHT LED CODES & SPECIFICATIONS

Electrical specifications are determined at a basic temperature of 25°C.	Before Change			After Change			
	Color	5C Red	5D Amber	5F Green	5C Red	5D Amber	5F Green
Maximum Forward Current	I_{FM}	30mA	30mA	25mA	30mA	30mA	30mA
Typical Forward Current	I_F	20mA	20mA	20mA	20mA	20mA	20mA
Forward Voltage	V_F	1.85V	2.0V	2.2V	1.95V	2.0V	2.1V
		($I_F = 20$)mA	($I_F = 20$)mA	($I_F = 20$)mA	($I_F = 20$)mA	($I_F = 20$)mA	($I_F = 20$)mA
Maximum Reverse Voltage	V_{RM}	5V	5V	5V	5V	5V	5V
Current Reduction Rate Above 25°C	ΔI_F	0.40mA/°C	0.42mA/°C	0.38mA/°C	0.42mA/°C	0.42mA/°C	0.42mA/°C
Ambient Temperature Range		-25°C ~ +50°C			-25°C ~ +50°C		
Bright LED AT633 Change to Dimensions Orientation mark black dot changing to D flat							

The LED circuit is isolated and requires an external power source. If the source voltage exceeds rated voltage, a ballast resistor is required. The resistor value can be calculated by using the formula shown here.

Notes:

The color of the potting material for the Green LED is changing from transparent to green, but it is not visible externally on the switch. There are no changes to external dimensions of switches or indicators. Contact 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 AT633 LEDs will be effective February 2015.



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Change Notice **HB Series Illuminated Pushbuttons**

The AT633 LEDs will have changes that will effect illumination for Red, Amber and Green. These changes will alter all models, both standard and custom, of HB illuminated pushbuttons and indicators. Standard part numbers effected by these changes are listed in the following table.



AT633 LED

BRIGHT LED for HB ILLUMINATED PUSHBUTTONS & INDICATORS		
AT633C Red	AT633D Amber	AT633F Green

HB SERIES PUSHBUTTONS with BRIGHT LED		
HB15CKW01-5C	HB15CKW01-5D	HB15CKW01-5F
HB15SKW01-5C	HB15SKW01-5D	HB15SKW01-5F
HB16CKW01-5C	HB16CKW01-5D	HB16CKW01-5F
HB16SKW01-5C	HB16SKW01-5D	HB16SKW01-5F

HB SERIES INDICATORS with BRIGHT LED		
HB01W01-5C	HB01W01-5D	HB01W01-5F
HB02W01-5C	HB02W01-5D	HB02W01-5F