# Changes to LED Specifications for JF Series Spot Illuminated Tactiles 

Type of Change:

- Engineering

$\square$ Part Number

『 Product 『 Appearance

1. The LED specifications for JF Series spot illuminated tactile switches will be undergoing changes. This will result in revisions to the electrical values, and will apply to red, yellow and green LEDs for standard or custom switches. Following is the comparison between the specifications before and after the changes. Effected standard part numbers are on page 2.


JF Series spot illuminated tactiles will have LED revisions.

| CHANGES TO LED SPECIFICATIONS FOR JF SERIES SPOT ILLUMINATED TACTILES |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LEDs are an integral part of the switch and are not available separately. Electrical specifications are determined at a basic temperature of $25^{\circ} \mathrm{C}$. | Before Change |  |  | After Change |  |  |
|  |  |  | F <br> Green | C <br> Red |  | Green |
| Maximum Forward Current $\quad \mathrm{I}_{\mathrm{FM}}$ | 40 mA | 40 mA | 40 mA | 30 mA | 30 mA | 30 mA |
| Typical Forward Current $\mathrm{I}_{\mathrm{F}}$ | 30 mA | 30 mA | 30 mA | 20 mA | 20 mA | 20 mA |
|  | 1.7 V | 2.2 V | 2.2 V | 2.0 V | 1.9 V | 2.0 V |
| Forward Voltage | $\mathrm{I}_{\mathrm{F}}=30 \mathrm{~mA}$ | $\mathrm{I}_{\mathrm{F}}=30 \mathrm{~mA}$ | $\mathrm{I}_{\mathrm{F}}=30 \mathrm{~mA}$ | $\mathrm{I}_{\mathrm{F}}=20 \mathrm{~mA}$ | $\mathrm{I}_{\mathrm{F}}=20 \mathrm{~mA}$ | $\mathrm{I}_{\mathrm{F}}=20 \mathrm{~mA}$ |
| Maximum Reverse Voltage $\quad \mathrm{V}_{\mathrm{RM}}$ | 4 V | 4 V | 4 V | 5 V | 5 V | 5 V |
| Current Reduction Rate Above $25^{\circ} \mathrm{C} \quad \Delta \mathrm{l}_{\mathrm{F}}$ | $0.67 \mathrm{~mA} /{ }^{\circ} \mathrm{C}$ | $0.67 \mathrm{~mA} /{ }^{\circ} \mathrm{C}$ | $0.67 \mathrm{~mA} /{ }^{\circ} \mathrm{C}$ | $0.40 \mathrm{~mA} /{ }^{\circ} \mathrm{C}$ | $0.40 \mathrm{~mA} /{ }^{\circ} \mathrm{C}$ | $0.40 \mathrm{~mA} /{ }^{\circ} \mathrm{C}$ |
| Ambient Temperature Range | $-25^{\circ} \mathrm{C} \sim+70^{\circ} \mathrm{C}$ |  |  | $-25^{\circ} \mathrm{C} \sim+70^{\circ} \mathrm{C}$ |  |  |

## Notes

- The LED circuit is isolated and requires an external power source.
- If the source voltage is greater than the LED's rated voltage, a ballast resistor must be connected in series with the LED. The resistor value can be calculated by using the formula shown here.
- There are no changes to the switches' external dimensions.


| $R$ | $=\frac{E-V_{F}}{I_{F}}$ |
| ---: | :--- |
| Where: | $R=$ Resistor Value (Ohms) |
| $E$ | $=$ Source Voltage $(\mathrm{V})$ |
| $V_{F}$ | $=$ Forward Voltage $(V)$ |
| $I_{F}$ | $=$ Forward Current $(A)$ |

- Contact information is below if more details are needed.


## Effective Date

Changes to LED specifications for JF Series Spot Illuminated Tactiles will be effective April 2021.

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## Change Notice

## Change to Dimension of JF Series Spot Illuminated Lens

Type of Change:
$\square$ Engineering $\square$ Part Number
$\square$ Appearance
V Product
2. The JF Series spot illuminated switches will be having a change to the dimension of the lens for the spot illumination. The height of the lens will be changing from $2.2 \mathrm{~mm} / .087^{\prime \prime}$ to $2.5 \mathrm{~mm} / .098$ ". This revision applies to all actuators with spot illumination: round, square and sculptured, and for both standard or custom switches. See the table below for effected standard part numbers.


| Effected Standard Part Numbers |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| JF15RP1CC | JF15RP1GC | JF15RP2DC | JF15RP2HC | JF15RP3FC |  |
| JF15RP1CE | JF15RP1GE | JF15RP2DE | JF15RP2HE | JF15RP3FE |  |
| JF15RP1CF | JF15RP1GF | JF15RP2DF | JF15RP2HF | JF15RP3FF |  |
| JF15RP1DC | JF15RP1HC | JF15RP2FC | JF15RP3CC | JF15RP3GC |  |
| JF15RP1DE | JF15RP1HE | JF15RP2FE | JF15RP3CE | JF15RP3GE |  |
| JF15RP1DF | JF15RP1HF | JF15RP2FF | JF15RP3CF | JF15RP3GF |  |
| JF15RP1FC | JF15RP2CC | JF15RP2GC | JF15RP3DC | JF15RP3HC |  |
| JF15RP1FE | JF15RP2CE | JF15RP2GE | JF15RP3DE | JF15RP3HE |  |
| JF15RP1FF | JF15RP2CF | JF15RP2GF | JF15RP3DF | JF15RP3HF |  |

## Effective Date

Change to the dimension of the JF Series spot illuminated lens will be effective April 2021.


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