

Change Notice

TL Series

Changes to LED Specifications for TL Toggles with Bright Red (C) or Bright Amber (D)

Type of Change:

- Engineering Part Number
 Product Appearance



LED Specification Revisions for TL Series

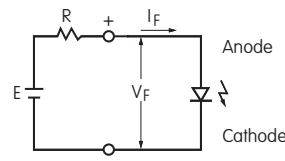
The TL Series Illuminated Toggles will have changes to the LED specifications for Bright Red (code C) and Bright Amber (code D) LEDs. The changes will effect all of the switches, including both actuators lengths, and standard and custom devices. The specification revisions are outlined below, followed by effected standard part numbers.

BRIGHT LED COLOR CODES & SPECIFICATIONS

| | | Before Change | | After Change | | |
|--|--|---------------|---------------|-----------------|---------------|-----------------|
| Electrical specifications are determined at a basic temperature of 25°C. Lamp circuit is independent of switch operation. | LED Factory Assembled Not Available Separately | Color | 5C Red | 5D Amber | 5C Red | 5D Amber |
| | Maximum Forward Current | I_{FM} | 30mA | 30mA | 30mA | 30mA |
| | Typical Forward Current | I_F | 20mA | 20mA | 20mA | 20mA |
| | Forward Voltage | V_F | 2.0V | 2.1V | 2.05V | 2.05V |
| | Maximum Reverse Voltage | V_{RM} | 4V | 4V | 10V | 10V |
| | Current Reduction Rate Above 25°C | ΔI_F | 0.32mA/°C | 0.32mA/°C | 0.40mA/°C | 0.40mA/°C |
| | Ambient Temperature Range | | -10°C ~ +55°C | | -10°C ~ +55°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)

TL Toggles Standard Part Numbers

| .689" (17.5mm) Toggle | .433" (11.0mm) Toggle |
|-----------------------|-----------------------|
| TL22DCAW015C | TL22SCAG015C |
| TL22DDAW015D | TL22SDAG015D |

Effective Date

Changes to TL Illuminated Toggles with bright Red or Amber LEDs will be effective December 2017.

NKK
SWITCHES

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