

# ITS Series Illuminated Tact Switch

## Features/Benefits

- Vertical and right angle SMT models
- Vertical and right angle thru-hole models
- Multiple caps and legends
- Several LED colors and bi-color options
- RoHS compliant /compatible

## Typical Applications

- Consumer electronics
- Server/storage
- Medical devices
- Test/Measurement/Instrumentation
- Audio/Video
- Computers/Peripherals
- Security

NEW  
Right  
Angle  
SMT



B

Tactile Switches

## Specification

FUNCTION: N.O. momentary action  
TERMINALS: SMT & Thru-hole

## Mechanical

OPERATING FORCE: 160 ± 50gf for V1; V2; V3; R1; R2 models  
220 ± 50 gf for R3 model  
OPERATING LIFE: 50,000 cycles (250m Ω max)  
RECOMMENDED OPERATING STROKE: 0.25mm ± 0.1mm

## Electrical

RATING: 50mA @ 12VDC  
CONTACT RESISTANCE: <100m Ω (initial)  
DIELECTRIC WITHSTANDING VOLTAGE:  
>250VAC (50-60 Hz) between terminals - 1 min.Ω  
INSULATION RESISTANCE: >100M Ω  
BOUNCE TIME: <10ms

## Packaging

Thru-hole: 200 pieces per tray  
SMT: tape & reel (see V2 or V3 mounting style drawings)

## Environmental

OPERATING TEMPERATURE: -25°C to +70°C  
STORAGE TEMPERATURE: -25°C to +80°C

## Process

SOLDERABILITY: Thru-hole - wave compatible  
SMT - convection or IR reflow compatible

## Materials

CONTACTS/TERMINALS: Base metal; brass  
Plating; Ag  
DOME: Base metal: Phosphor bronze  
Plating; Ag

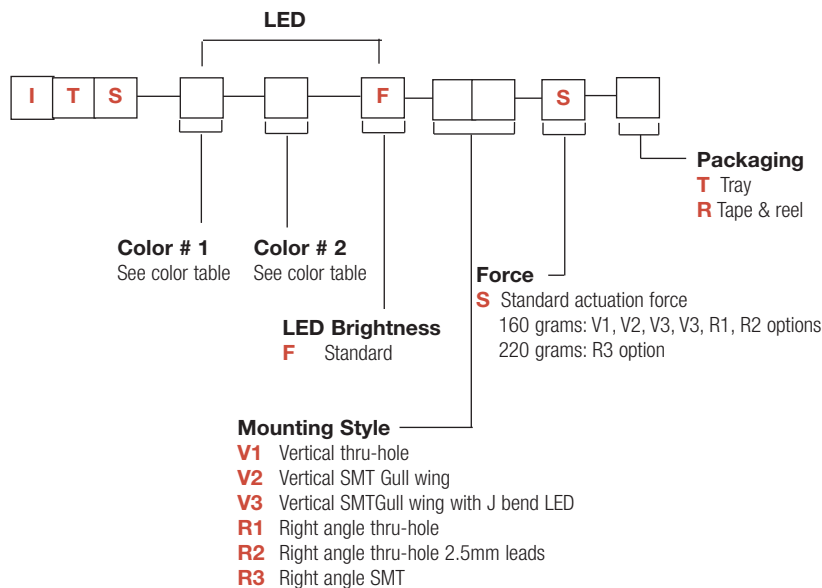
BASE: PA  
ACTUATOR: PA  
COVER: PA

## Caps

Caps are ordered separately and shipped bulk. Thru-hole versions available with caps assembled under custom part number. Contact customer service for details.

## How To Order

Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.



## LED Color

|    |              |
|----|--------------|
| 00 | No light     |
| 10 | Red          |
| 12 | Red/Yellow   |
| 13 | Red/Green    |
| 14 | Red/Blue     |
| 20 | Yellow       |
| 21 | Yellow/Red   |
| 23 | Yellow/Green |
| 30 | Green        |
| 31 | Green/Red    |
| 32 | Green/Yellow |
| 40 | Blue         |
| 41 | Blue/Red     |
| 50 | White        |
| 60 | True green   |

\* Other colors available by request



# ITS Series

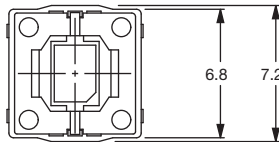
## Illuminated Tact Switch

### LED COLOR / BRIGHTNESS

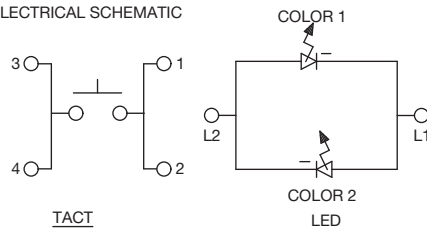
| LED Characteristic                     | units     | Standard LED Color Options |                 |                 |                 |                                                     |                 |
|----------------------------------------|-----------|----------------------------|-----------------|-----------------|-----------------|-----------------------------------------------------|-----------------|
|                                        |           | Red (1)                    | Yellow (2)      | Green (3)       | Blue (4)        | White (5)                                           | True Green (6)  |
| Recommended Operating                  | mA @ 5VDC | 20mA                       | 20mA            | 20mA            | 20mA            | 20mA                                                | 20mA            |
| Forward Current                        | mA        | 30 mA                      | 30 mA           | 30 mA           | 30 mA           | 30 mA                                               | 30 mA           |
| Peak Pulsing Current (1/8 duty @ 1kHz) | mA        | 125 mA                     | 125 mA          | 125 mA          | 125 mA          | 125 mA                                              | 125 mA          |
| Power Dissipation                      | mW        | 75 mW                      | 75 mW           | 75 mW           | 108 mW          | 108 mW                                              | 108 mW          |
| Forward Voltage @ 20mA                 | Volts     | 2.5 Volts Max.             | 2.5 Volts Max.  | 2.5 Volts Max.  | 3.6 Volts Max.  | 3.6 Volts Max.                                      | 3.6 Volts Max.  |
| Dominant Wavelength @ 20mA             | nm        | 637nm (Typical)            | 590nm (Typical) | 570nm (Typical) | 465nm (Typical) | CIE Coordinates<br>X= 0.25 ~ 0.33<br>Y= 0.24 ~ 0.34 | 522nm (Typical) |
| Wavelength at Peak Emission @ 20mA     | nm        | 645nm (Typical)            | 590nm (Typical) | 573nm (Typical) | 460nm (Typical) |                                                     | 515nm (Typical) |
| Spectral Half Bandwidth @ 20mA         | nm        | 20nm (Typical)             | 20nm (Typical)  | 17nm (Typical)  | 25nm (Typical)  |                                                     | 33nm (Typical)  |
| Luminous Intensity @ 20mA              | mcd       | 50mcd Minimum              | 125mcd Minimum  | 40mcd Minimum   | 100mcd Minimum  | 250mcd Minimum                                      | 500mcd Minimum  |
| Viewing Angle at 50% LV (@10mA)        | degrees   | 150° Typical               | 120° Typical    | 120° Typical    | 120° Typical    | 150° Typical                                        | 120° Typical    |

### MOUNTING STYLES

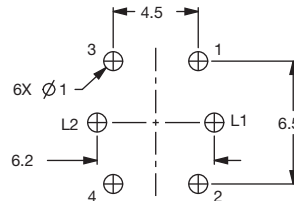
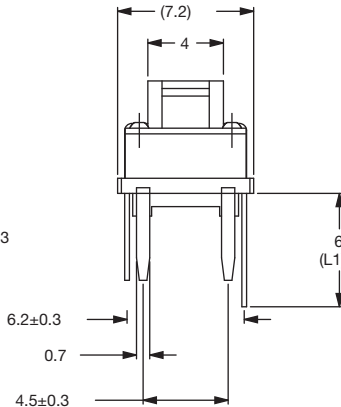
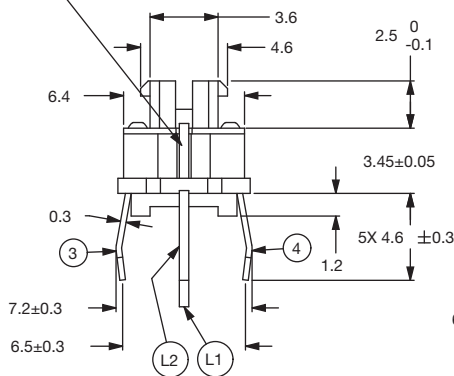
#### V1 - Vertical Thru-hole



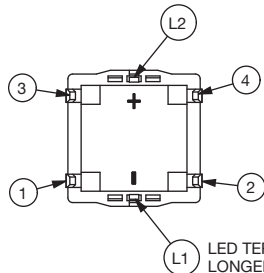
ELECTRICAL SCHEMATIC



DOT SHOWING LED COLOR IS MARKED FOR MINUS POLE SEE SCHEMATIC



P.C.B. LAYOUT

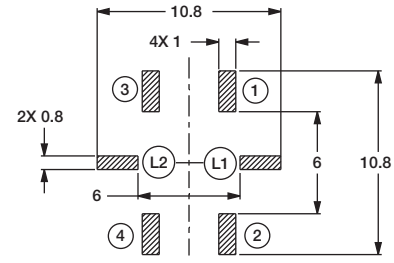
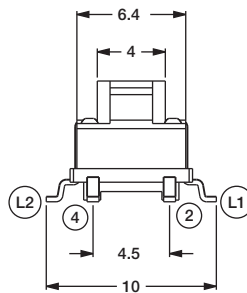
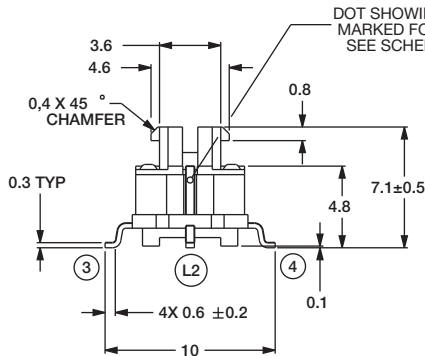
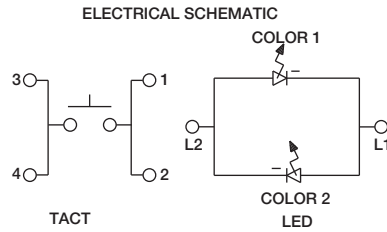
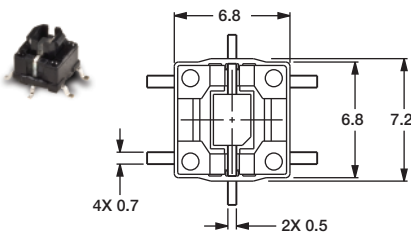


TRAY PACKAGING: 200 PIECES

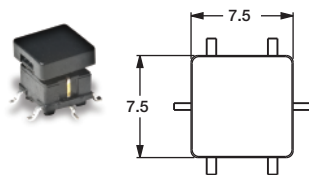
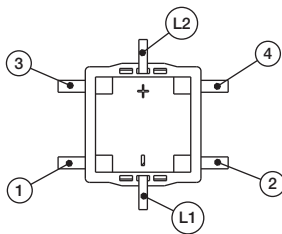
# ITS Series Illuminated Tact Switch

## MOUNTING STYLES

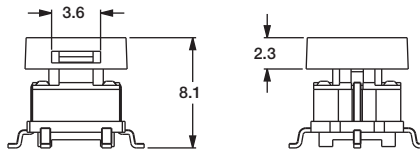
### V2 - Vertical SMT; Gullwing



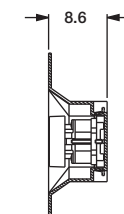
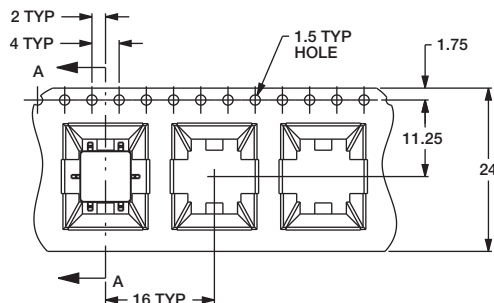
P.C.B. LAYOUT



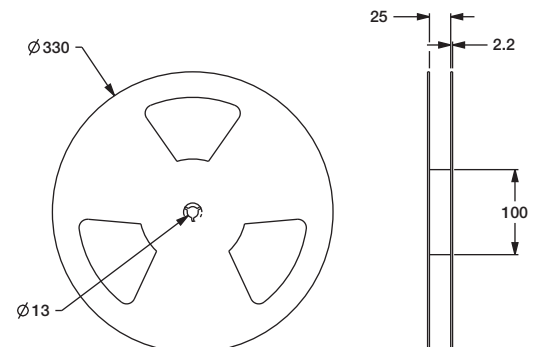
TAPE & REEL: 500 PIECES



NOTES:  
1. SWITCH WITH TEMPORARY PICK AND PLACE CAP.



SECTION A-A



# ITS Series Illuminated Tact Switch

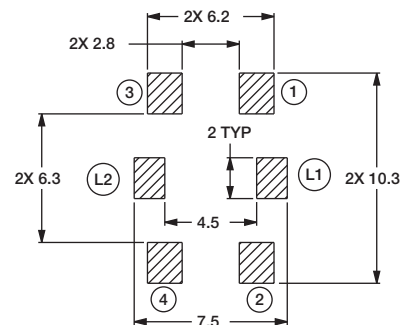
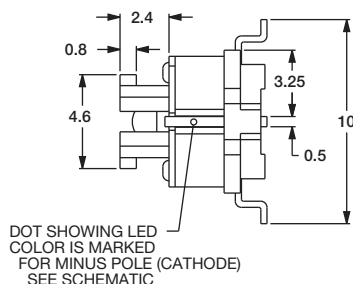
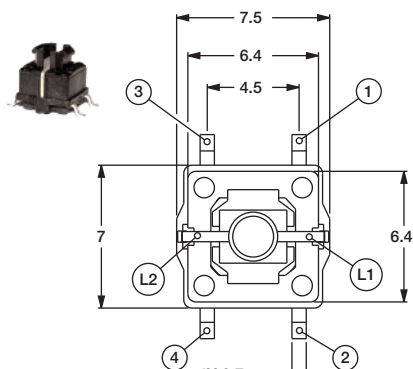
## MOUNTING STYLES

### V3 - Vertical SMT; Gull wing with J bend LED

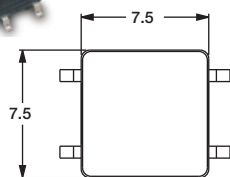
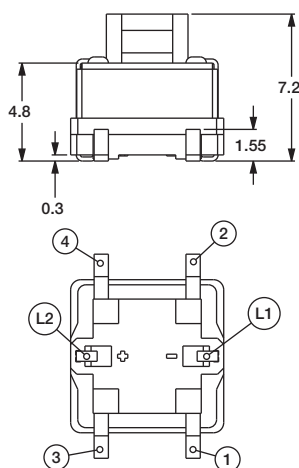
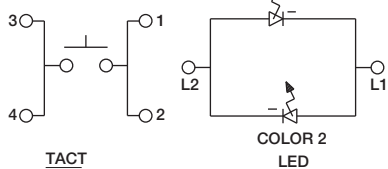


B

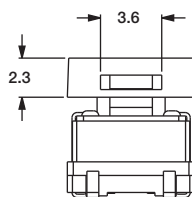
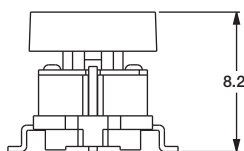
Tactile Switches



ELECTRICAL SCHEMATIC

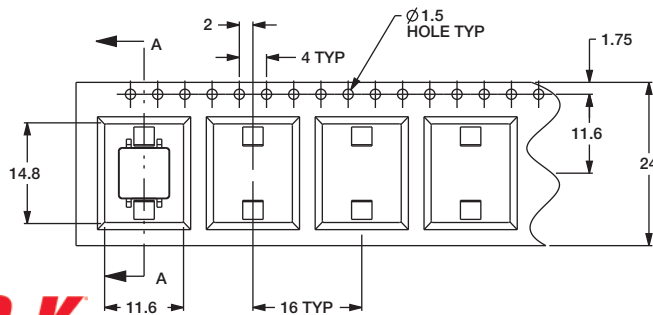


SCALE 3:1

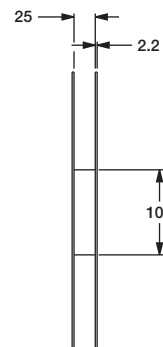
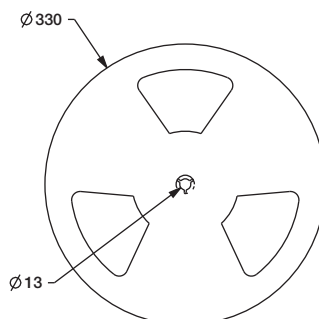
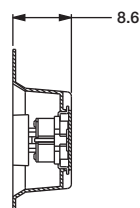


TAPE & REEL: 500 PIECES

NOTES:  
1. SWITCH WITH TEMPORARY PICK AND PLACE CAP.



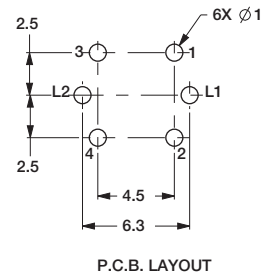
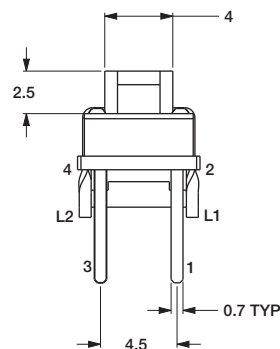
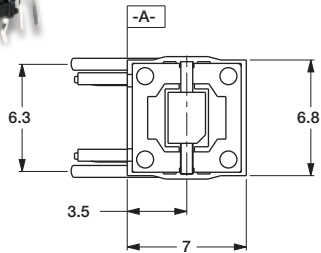
SECTION A-A



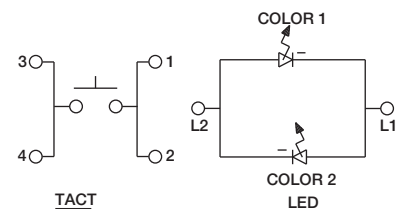
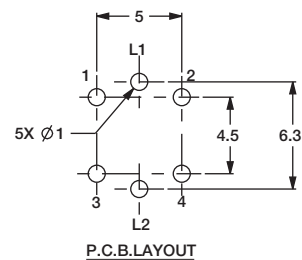
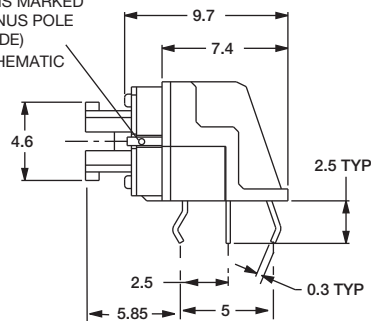
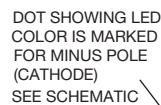
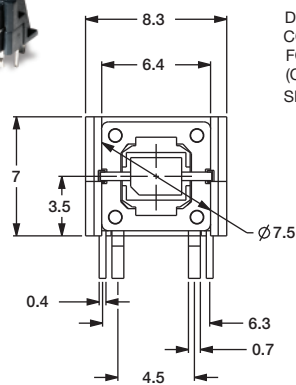
**C&K**

## Tactile Switches

**R1 - Right Angle; Thru-hole**



TRAY PACKAGING: 200 PIECES



TRAY PACKAGING: 200 PIECES

# ITS Series Illuminated Tact Switch

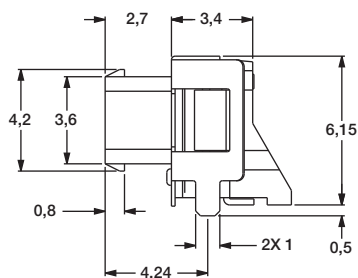
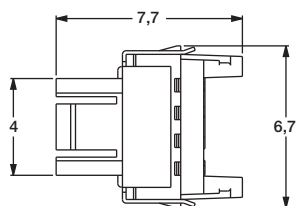
## MOUNTING STYLES

### R3 - Right Angle, SMT

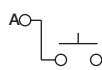


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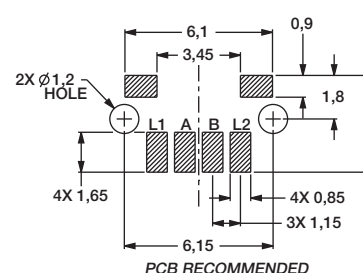
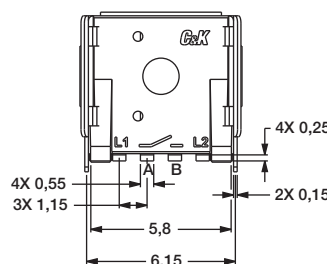
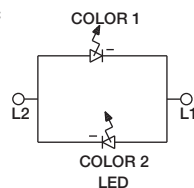
Tactile Switches



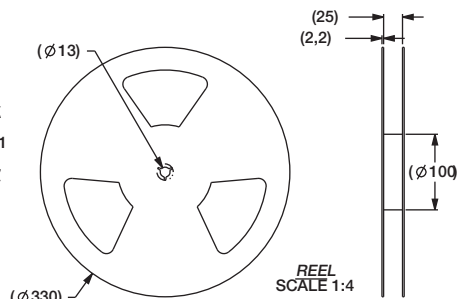
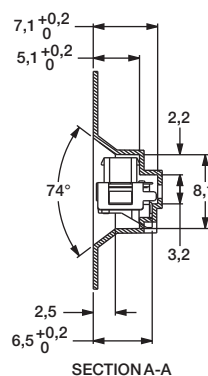
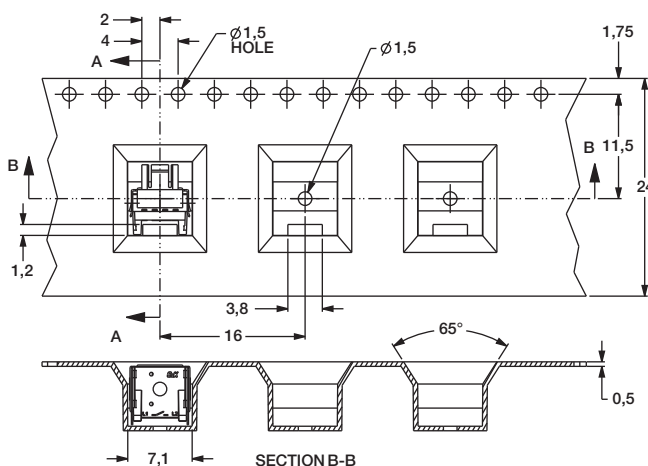
ELECTRICAL SCHEMATIC



TACT



TAPE & REEL: 540 PIECES



ITS Series  
Illuminated Tact Switch

FORCE

| OPTION CODE | FORCE                                                                 |
|-------------|-----------------------------------------------------------------------|
| <b>S</b>    | Standard<br>160 gf - V1, V2, V3, R1, R2 options<br>220 gf - R3 option |

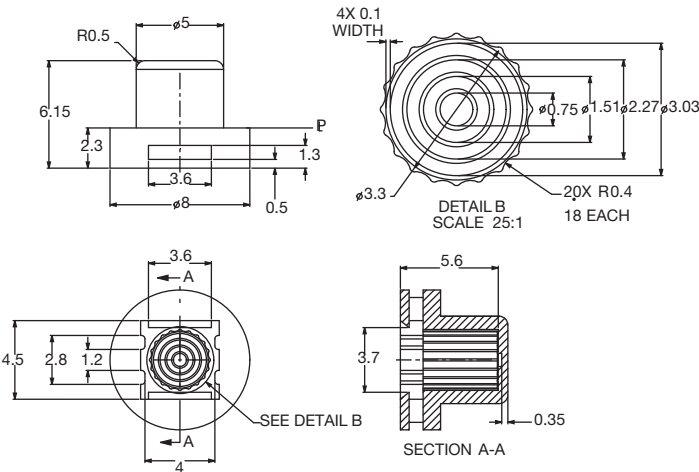
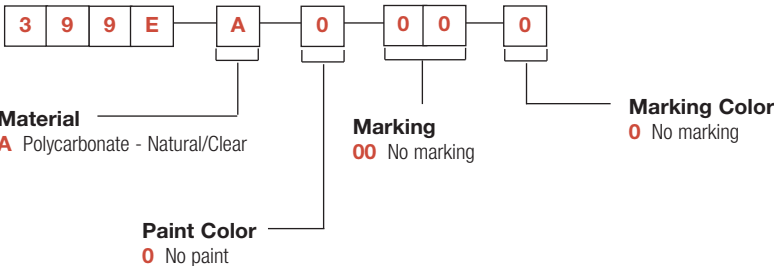
CAPS

Use the individual ordering code for each cap



399EA0000

Round cap, clear



Tactile Switches

# ITS Series Illuminated Tact Switch

## CAPS



400EA0000

Natural/clear



400EB0000

Translucent white, flat edge



400ECA01E

Matte silver paint laser etch, flat edge



### Material

- A Natural/Clear - polycarbonate
- B Translucent white - polycarbonate
- C Silver paint laser etch - polycarbonate

### Paint Color

- 0 No paint
- A Matte silver

### Laser Etch Marking

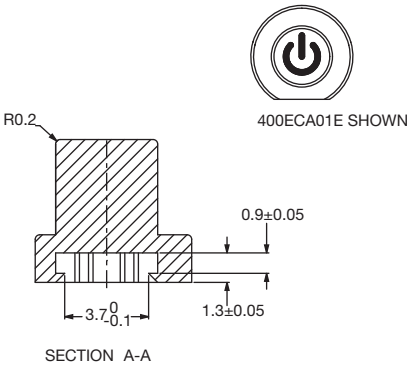
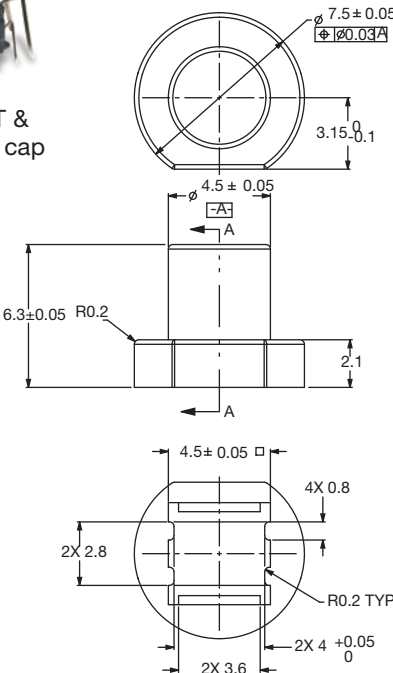
- 00 No marking
- 01 Power On/Off
- 04 Arrow right
- 05 Arrow left
- 06 Arrow up
- 07 Arrow down
- 09 Power
- 33 Arrow up (fill)
- 34 Arrow down (fill)
- 97 I/O

### Marking Color

- 0 No marking
- E Laser etch (painted caps only)



ITSXXFR1ST &  
400ECA01E cap



400E cap dimensions shown are “as molded” (no paint).

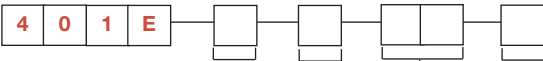
# ITS Series Illuminated Tact Switch

## CAPS



**401ECA06E**

Matte silver paint, laser etch,  
tall oval



### Material

- A** Natural/clear - polycarbonate
- B** Translucent white - polycarbonate
- C** Paint laser etch - polycarbonate

### Paint Color

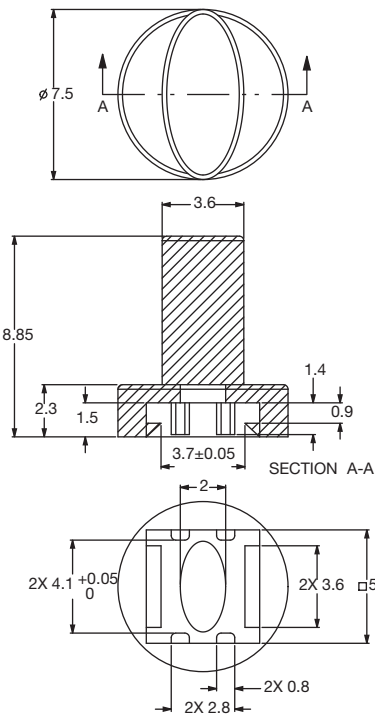
- 0** No paint
- A** Matte silver

### Laser Etch Marking

- 00** No marking
- 06** Arrow up
- 07** Arrow down
- 33** Arrow up (fill)
- 34** Arrow down (fill)

### Marking Color

- 0** No marking
- E** Laser etch (painted caps only)



401E cap dimensions shown are "as molded" (no paint).



**B**

Tactile Switches