

# 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

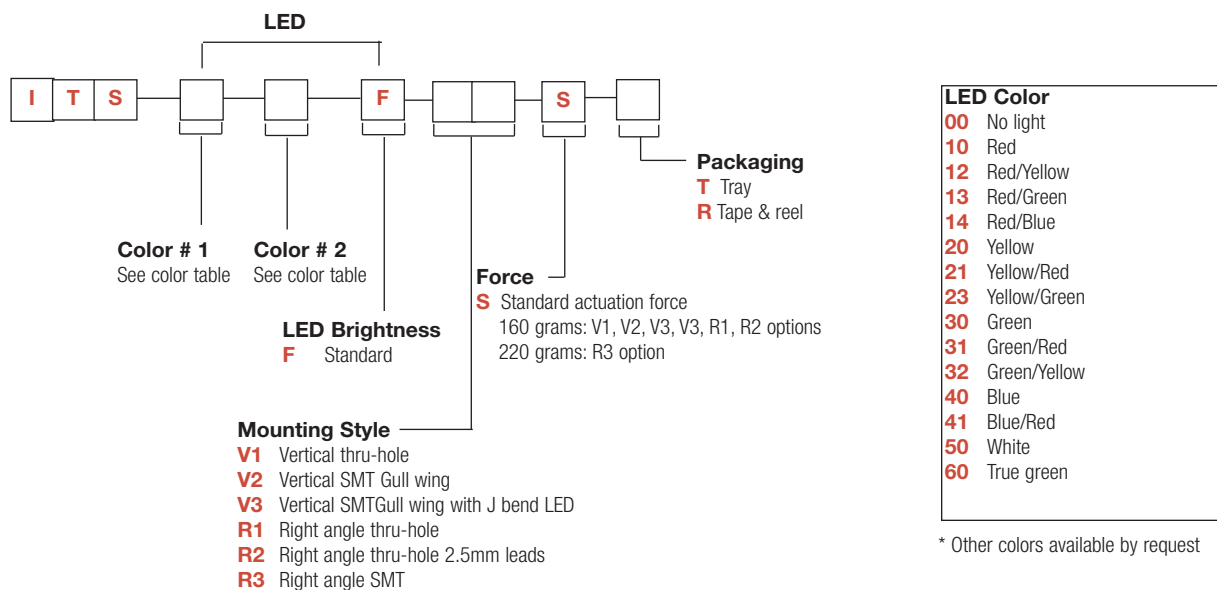
BASE: PA  
ACTUATOR: PA  
COVER: PA

## 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.



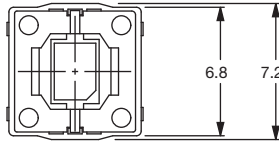
# ITS Series Illuminated Tact Switch

## LED COLOR / BRIGHTNESS

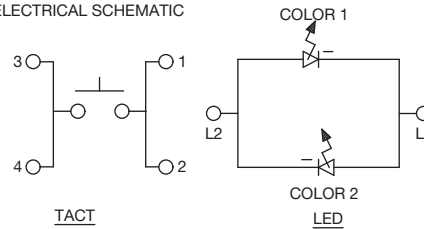
LED Characteristic	units	Standard LED Color Options					
		Red (1)	Yellow (2)	Green (3)	Blue (4)	White (5)	True Green (6)
Recommended Operating	mA @ 5VDC	20mA	20mA	20mA	20mA	20mA	20mA
Forward Current	mA	30 mA	30 mA	30 mA	30 mA	30 mA	30 mA
Peak Pulsing Current (1/8 duty @ 1kHz)	mA	125 mA	125 mA	125 mA	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 X= 0.25 ~ 0.33 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



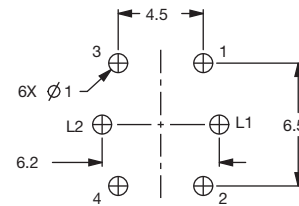
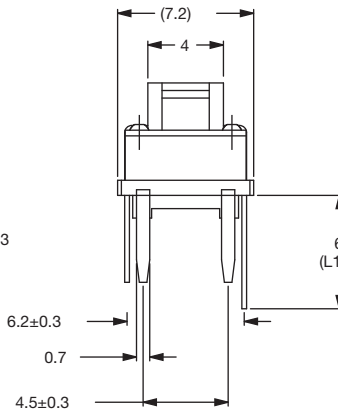
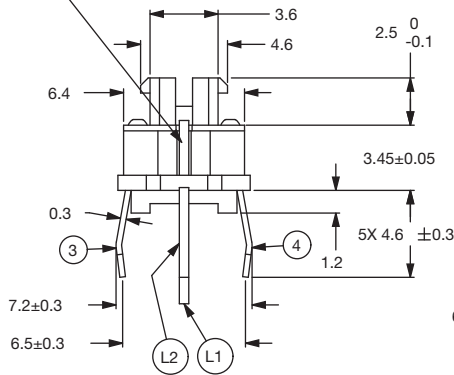
ELECTRICAL SCHEMATIC



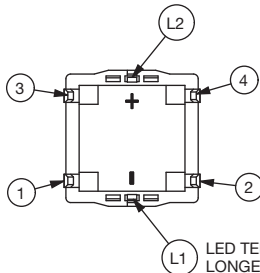
TACT

COLOR 2  
LED

DOT SHOWING LED COLOR IS MARKED FOR MINUS POLE SEE SCHEMATIC



P.C.B. LAYOUT



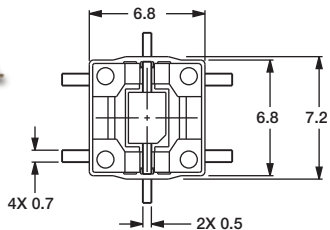
LED TERMINAL L1 IS TRIMMED LONGER THAN TERMINAL L2

TRAY PACKAGING: 200 PIECES

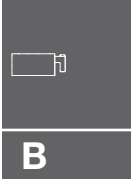
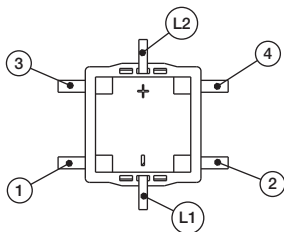
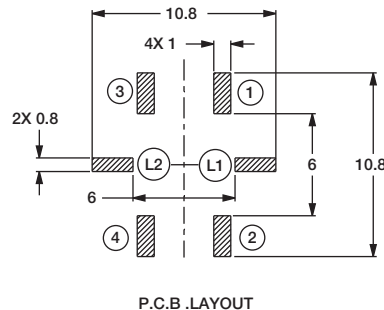
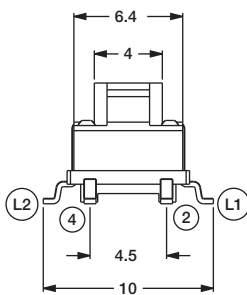
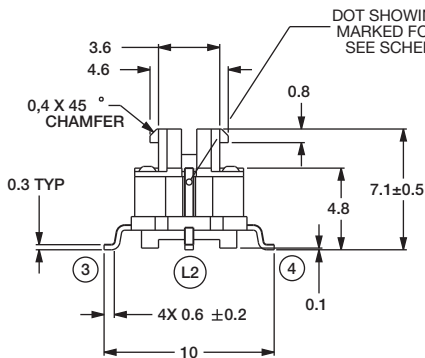
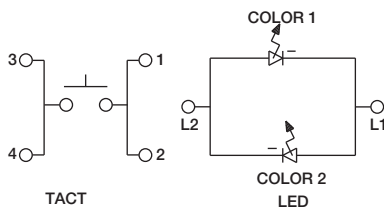
# ITS Series Illuminated Tact Switch

## MOUNTING STYLES

### V2 - Vertical SMT; Gullwing

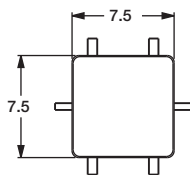


ELECTRICAL SCHEMATIC

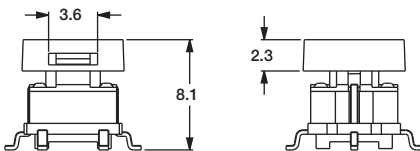


B

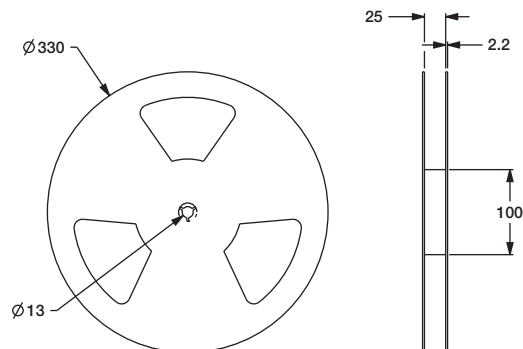
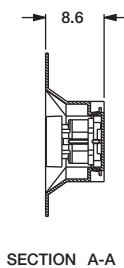
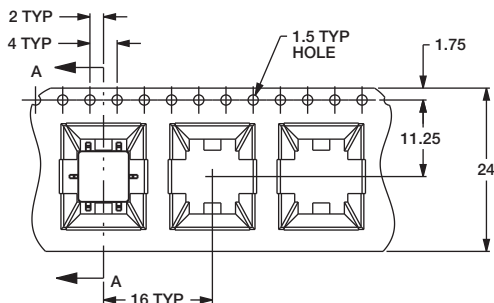
Tactile Switches



TAPE & REEL: 500 PIECES



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



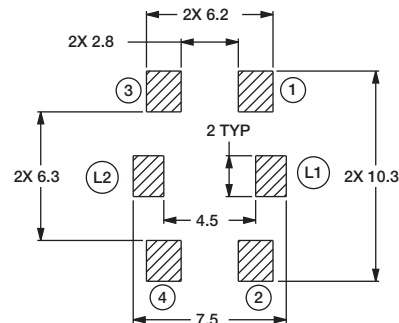
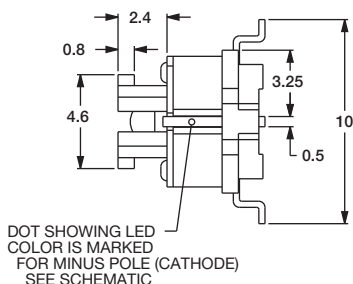
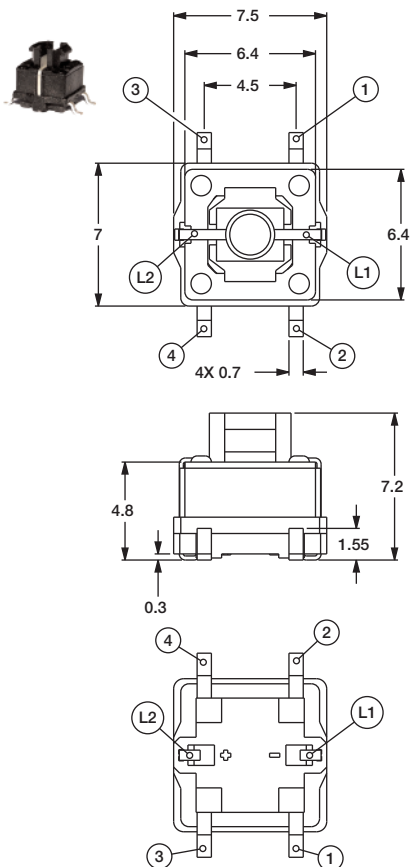
Dimensions are shown: mm  
Specifications and dimensions subject to change

# ITS Series Illuminated Tact Switch

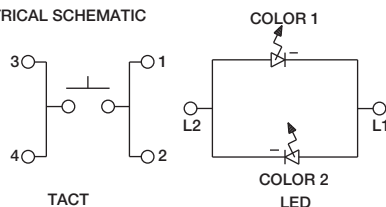
## MOUNTING STYLES

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

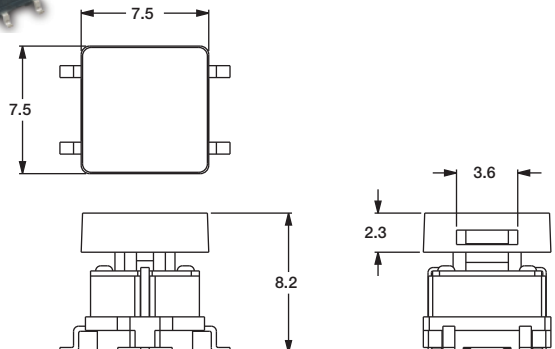
Tactile Switches



ELECTRICAL SCHEMATIC



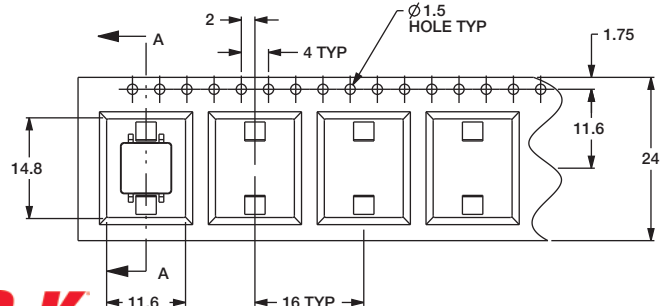
P.C.B. LAYOUT



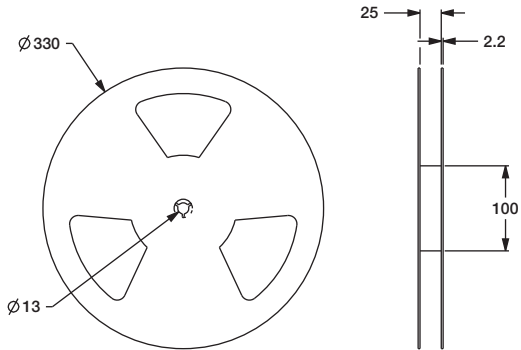
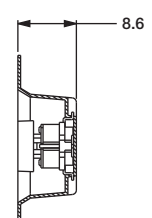
SCALE 3:1

TAPE & REEL: 500 PIECES

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



SECTION A-A



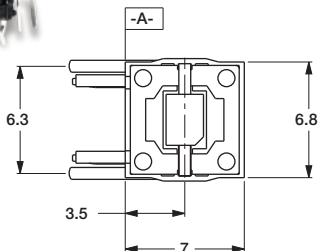
Dimensions are shown: mm  
Specifications and dimensions subject to change



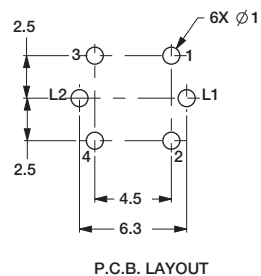
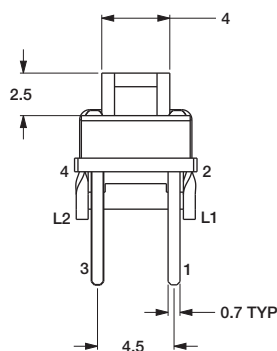
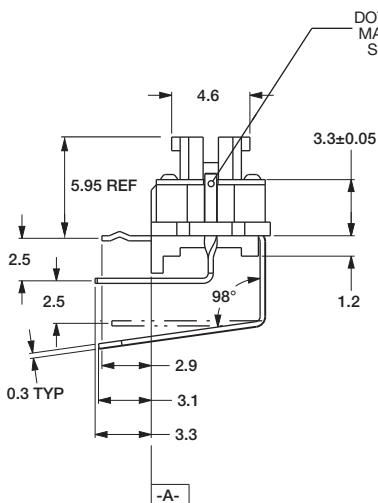
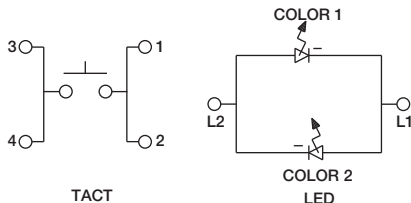
# ITS Series Illuminated Tact Switch

## MOUNTING STYLES

### R1 - Right Angle; Thru-hole

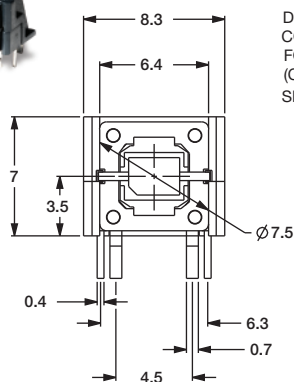


ELECTRICAL SCHEMATIC

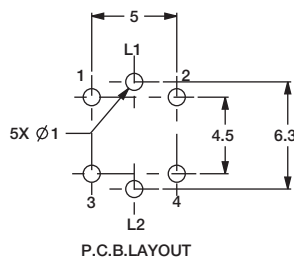
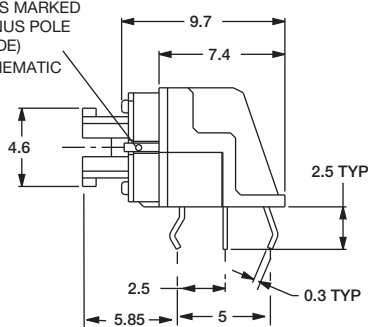


TRAY PACKAGING: 200 PIECES

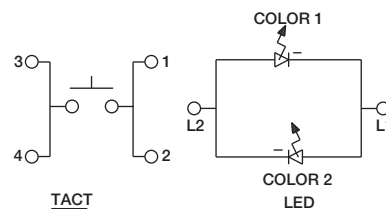
### R2 - Right Angle; Thru-hole 2.5mm leads



DOT SHOWING LED COLOR IS MARKED FOR MINUS POLE (CATHODE) SEE SCHEMATIC



ELECTRICAL SCHEMATIC



TRAY PACKAGING: 200 PIECES



Dimensions are shown: mm  
Specifications and dimensions subject to change



B

Tactile Switches

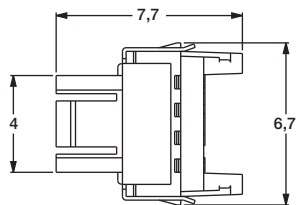
# ITS Series Illuminated Tact Switch

## MOUNTING STYLES

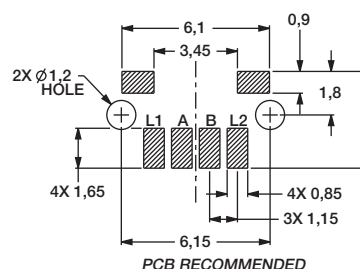
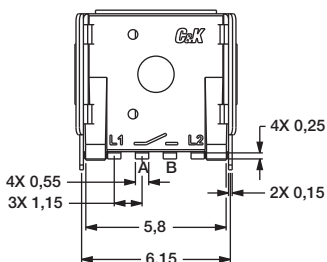
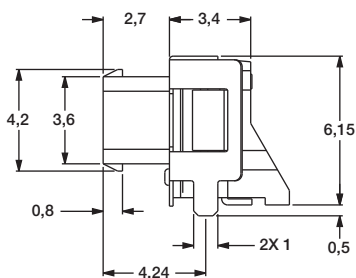
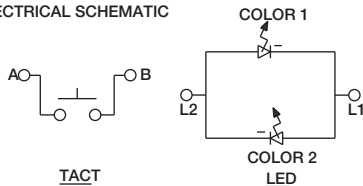
### R3 - Right Angle, SMT

B

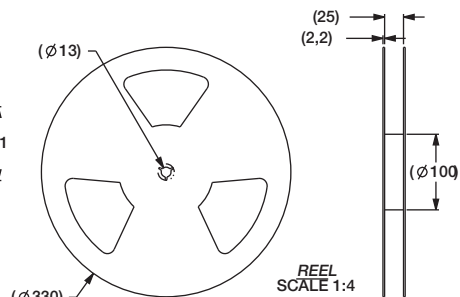
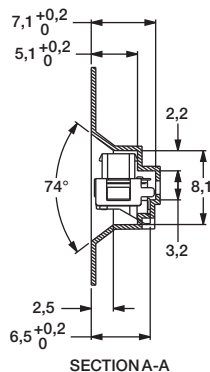
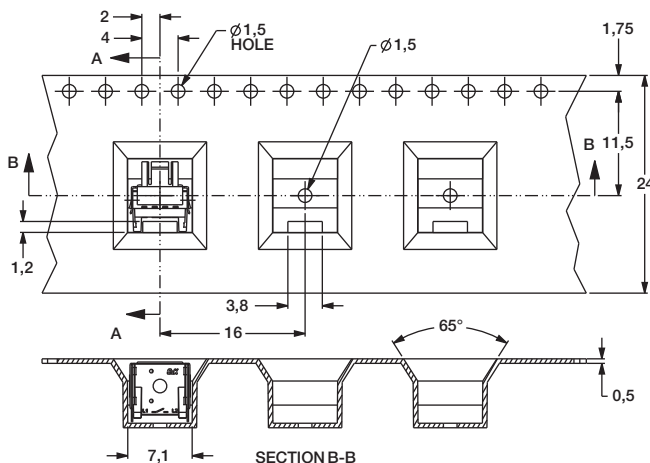
Tactile Switches



ELECTRICAL SCHEMATIC



TAPE & REEL: 500 PIECES



# ITS Series Illuminated Tact Switch

## FORCE

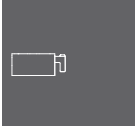
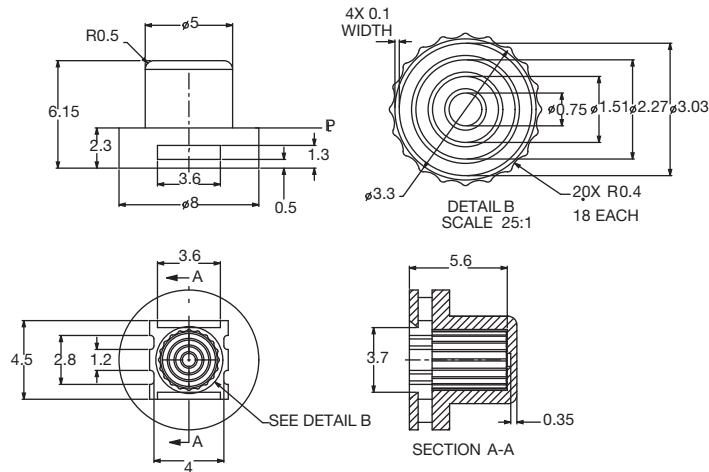
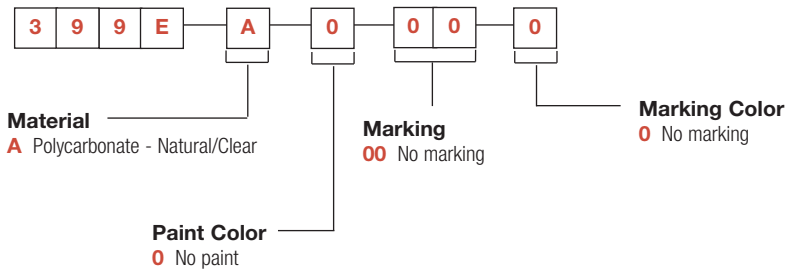
OPTION CODE	FORCE
<b>S</b>	Standard 160 gf - V1, V2, V3, R1, R2 options 220 gf - R3 option

## CAPS

Use the individual ordering code for each cap



**399EA0000**  
Round cap, clear



**B**

Tactile Switches

# ITS Series Illuminated Tact Switch

## CAPS



**400EA0000**

Natural/clear



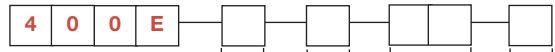
**400EB0000**

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**

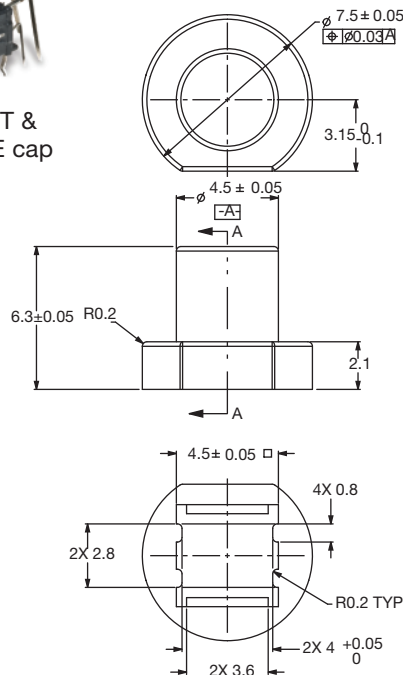
- 0** No marking
- E** Laser etch (painted caps only)

Tactile Switches

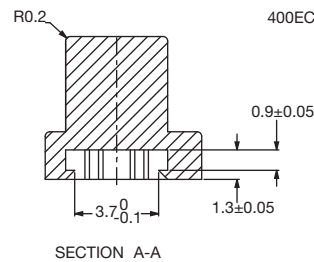
**B**



ITSXXFR1ST &  
400ECA01E cap



400ECA01E SHOWN



**400E cap dimensions shown are "as molded" (no paint).**



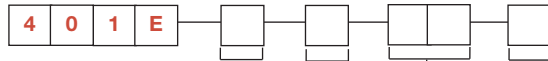
# ITS Series Illuminated Tact Switch

## 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)

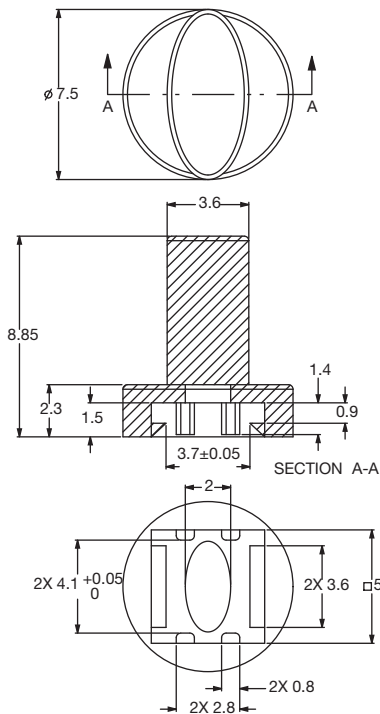
**Marking Color**

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



**B**

Tactile Switches



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