**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

---

**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)

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**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;

**BASE:** Ag

**ACTUATOR:** PA

**COVER:** R3 option: Stainless steel  
V2 & V3 options - PPA  
Other options - 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.

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**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**

<table>
<thead>
<tr>
<th>Color #</th>
<th>LED Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>No light</td>
</tr>
<tr>
<td>10</td>
<td>Red</td>
</tr>
<tr>
<td>12</td>
<td>Red/Yellow</td>
</tr>
<tr>
<td>13</td>
<td>Red/Green</td>
</tr>
<tr>
<td>14</td>
<td>Red/Blue</td>
</tr>
<tr>
<td>20</td>
<td>Yellow</td>
</tr>
<tr>
<td>21</td>
<td>Yellow/Red</td>
</tr>
<tr>
<td>23</td>
<td>Yellow/Green</td>
</tr>
<tr>
<td>30</td>
<td>Green</td>
</tr>
<tr>
<td>31</td>
<td>Green/Red</td>
</tr>
<tr>
<td>32</td>
<td>Green/Yellow</td>
</tr>
<tr>
<td>40</td>
<td>Blue</td>
</tr>
<tr>
<td>41</td>
<td>Blue/Red</td>
</tr>
<tr>
<td>50</td>
<td>White</td>
</tr>
<tr>
<td>60</td>
<td>True green</td>
</tr>
</tbody>
</table>

* Other colors available by request
ITS Series
Illuminated Tact Switch

LED COLOR / BRIGHTNESS

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

Standard LED Color Options

- Red (1)
- Yellow (2)
- Green (3)
- Blue (4)
- White (5)
- True Green (6)

V1 - Vertical Thru-hole

Electrical Schematic

Color 1

Color 2

TACT

LED

P.C.B. LAYOUT

TRAY PACKAGING: 200 PIECES

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
V2 - Vertical SMT; Gullwing

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

ELECTRICAL SCHEMATIC

COLOR 1

COLOR 2

LED

L1

L2

TAPE & REEL: 500 PIECES

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

SECTION A-A

A

A

16 TYP

1.5 TYP HOLE

11.25

24

8.6

25

100

2.2

3.3

2.3

8.1

6.1

3.6

2 TYP

4 TYP

A

4X 0.7

2X 0.5

6.8

7.5

6.8

7.5

4X 0.8

2X 0.8

10.8

10.8

6

6

4X 1

80X 45

CHAMFER

0.4 X 45

0.3 TYP

0.1

4.8

7.1 ± 0.5

4.5

2X 0.5

1

2

3

4

L1

L2

COLOR 1

COLOR 2

TACT LED

P.C.B. LAYOUT

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

L1

L2

4

2

1

3

V2 - Vertical SMT; Gullwing
ITS Series
Illuminated Tact Switch

MOUNTING STYLES

V3 - Vertical SMT; Gull wing with J bend LED

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

ELECTRICAL SCHEMATIC

COLOR 1

COLOR 2

TACT

P.C.B. LAYOUT

TAPE & REEL: 500 PIECES

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

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
MOUNTING STYLES

R1 - Right Angle; Thru-hole

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

R2 - Right Angle; Thru-hole 2.5mm leads

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

TRAY PACKAGING: 200 PIECES

Specifications and dimensions subject to change

www.ckswitches.com
ITS Series
Illuminated Tact Switch

MOUNTING STYLES

R3 - Right Angle, SMT

ELECTRICAL SCHEMATIC

COLOR 1

TACT

COLOR 2

LED

TAPE & REEL: 500 PIECES

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
**FORCE**

<table>
<thead>
<tr>
<th>OPTION CODE</th>
<th>FORCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Standard</td>
</tr>
<tr>
<td></td>
<td>160 gf - V1, V2, V3, R1, R2 options</td>
</tr>
<tr>
<td></td>
<td>220 gf - R3 option</td>
</tr>
</tbody>
</table>

**CAPS**

Use the individual ordering code for each cap

399EA0000
Round cap, clear

Material
A Polycarbonate - Natural/Clear

Marking
00 No marking

Marking Color
0 No marking

Paint Color
0 No paint

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
## ITS Series
### Illuminated Tact Switch

### CAPS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>400EA0000</td>
<td>Natural/clear</td>
</tr>
<tr>
<td>400EB0000</td>
<td>Translucent white, flat edge</td>
</tr>
<tr>
<td>400ECA01E</td>
<td>Matte silver paint laser etch, flat edge</td>
</tr>
</tbody>
</table>

### 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

### Materials

- **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

- **E**: Laser etch (painted caps only)

### Material Compatibility

- **ITSXXFR1ST & 400ECA01E cap**

### Dimensions

- **400ECA01E SHOWN**

### Notes

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

---

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
### ITS Series
#### Illuminated Tact Switch

**CAPS**

<table>
<thead>
<tr>
<th>Material</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Natural/clear - polycarbonate</td>
</tr>
<tr>
<td>B</td>
<td>Translucent white - polycarbonate</td>
</tr>
<tr>
<td>C</td>
<td>Paint laser etch - polycarbonate</td>
</tr>
</tbody>
</table>

**Paint Color**

- 0: No paint
- A: Matte silver

**Laser Etch**

- 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)

---

401ECA06E Matte silver paint, laser etch, tall oval

---

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

---

Dimensions are shown: mm
Specifications and dimensions subject to change