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

Specifications and dimensions subject to change

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

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

**Electrical**
**RATING:**
- 50mA @ 12VDC
**CONTACT RESISTANCE:**
- <100mΩ (initial)
**DIELECTRIC WITHSTANDING VOLTAGE:**
- >250VAC (50-60 Hz) between terminals - 1 minΩ
**INSULATION RESISTANCE:**
- >100MΩ
**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:**
- 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.

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 Configuration Diagram]

**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

Dimensions are shown: mm
Specifications and dimensions subject to change

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ITS Series
Illuminated Tact Switch

LED COLOR / BRIGHTNESS

<table>
<thead>
<tr>
<th>LED Characteristic</th>
<th>Standard LED Color Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended Operating</td>
<td>Red (1)</td>
</tr>
<tr>
<td>mA @ 5V DC</td>
<td>20mA</td>
</tr>
<tr>
<td>Forward Current</td>
<td>30 mA</td>
</tr>
<tr>
<td>Peak Pulsing Current (1/8 duty @ 1kHz)</td>
<td>125 mA</td>
</tr>
<tr>
<td>Power Dissipation</td>
<td>75 mW</td>
</tr>
<tr>
<td>Forward Voltage @ 20mA</td>
<td>2.5 Volts Max.</td>
</tr>
<tr>
<td>Dominant Wavelength @ 20mA</td>
<td>637nm (Typical)</td>
</tr>
<tr>
<td>Wavelength at Peak Emission @ 20mA</td>
<td>645nm (Typical)</td>
</tr>
<tr>
<td>Spectral Half Bandwidth @ 20mA</td>
<td>20nm (Typical)</td>
</tr>
<tr>
<td>Luminous Intensity @ 20mA</td>
<td>50mcd Minimum</td>
</tr>
<tr>
<td>Viewing Angle at 50% LV (Ω10mA)</td>
<td>150° Typical</td>
</tr>
</tbody>
</table>

MOUNTING STYLES

V1 - Vertical Thru-hole

TRAY PACKAGING: 200 PIECES
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MOUNTING STYLES

V2 - Vertical SMT; Gullwing

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

ELECTRICAL SCHEMATIC

COLOR 1

COLOR 2

LED

TACT

P.C.B. LAYOUT

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

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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

LED

P.C.B. LAYOUT

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

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
ITS Series
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MOUNTING STYLES

R3 - Right Angle, SMT

Dimensions are shown: mm
Specifications and dimensions subject to change

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ITS Series
Illuminated Tact Switch

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

Paint Color
0 No paint

Marking Color
0 No marking

Dimensions are shown: mm
Specifications and dimensions subject to change
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).

Dimensions are shown: mm
Specifications and dimensions subject to change

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### 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>

<table>
<thead>
<tr>
<th>Laser Etch</th>
<th>Marking</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>No marking</td>
</tr>
<tr>
<td>06</td>
<td>Arrow up</td>
</tr>
<tr>
<td>07</td>
<td>Arrow down</td>
</tr>
<tr>
<td>33</td>
<td>Arrow up (fill)</td>
</tr>
<tr>
<td>34</td>
<td>Arrow down (fill)</td>
</tr>
</tbody>
</table>

**Paint Color**

- A: Matte silver
- B: Laser etch (painted caps only)

**Marking Color**

- O: 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).**

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Dimensions are shown: mm
Specifications and dimensions subject to change

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