



- Surface mount gull-wing terminal and standard through hole configurations
- Compatible with IR reflow, and manual soldering
- Single color display during illumination
- Variety of LED color options
- Variety of cap styles, colors, and laser etching options



→ Sense

RoHS



### **Ordering Information**

Note: Caps supplied in bulk for surface mount terminal constructions and must be installed after IR reflow soldering.

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# Series 228D

Tactile Switch

## **Cap Style**

Code	Spec.
А	Cylinder on 3/4 circle

# **Cap Color**

Code	Spec.
MS	Misty Silver
W	White
BB	Bright Black
R	Red
MB	Misty Black
А	Orange
N	Natural

### Cap Etching

Code	Style
А	
В	0
С	$\bullet$

# **Cap Style Details**

Style A: Cylinder on 3/4 round



# **Electrical Specifications**

Parameter	Conditions & Remarks	Min	Max	Unit
Contact Resistance			100	milliohms
Insulation Resistance	Between insulated terminals	100		megohms
Dielectric Strength	1 minute between adjacent switches		250	VAC
Nonswitching Rating			50	mA
Nonswitching Rating			or	or
			12	VDC

### **Mechanical and Environmental**

Soldering	Maximum reflow temperature, 260°C for 5 seconds Maximum manual temperature, 350°C for 3 seconds
RoHS	Lead-Free. Fully compliant to RoHS Directive 2011/65/EU and 2015/863/EU
Operating Force	220±50 gf
Actuation Life	100,000 cycles
Actuator Strength	2 Kgf maximum
Travel	0.25±0.1mm
Packaging	Standard tape and reel packaging for surface mount gull wing terminal Tray packaging for standard though hole
Operating Temperature Range	-25°C to +70°C
Storage Temperature Range	-30°C to +80°C

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Tactile Switch

#### **Soldering Profile**



Color	Reversed Voltage	Forward Current	Recommended Operating	Forward Voltage	
			Current	Nor	Max
Red	5 Vdc	20 mA	20 mA	1.7V	2.4V
Green	5 Vdc	20 mA	20 mA	1.9V	2.4V
Yellow	5 Vdc	20 mA	20 mA	1.9V	2.4V
Blue	5 Vdc	20 mA	20 mA	3.0V	3.6V
White	5 Vdc	20 mA	20 mA	3.0V	3.6V

**LED Specifications** 

### **Mechanical Specifications**

# Figure 1 – 228DD1S1..., Standard Though Hole, Terminal Length 2.1mm, Side Actuation, Height: 3.5mm from cap center to PCB



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### Series 228D Tactile Switch

### Figure 2 – 228DMS, Surface Mount Gull Wing, Vertical Actuation



### **Packing: Tape and Reel**

Surface Mount Gull Wing, Actuator Height 7.0mm

The packing specifications:

1. Structure and materials:



- 2. Packing quantity: 500 pcs/reel
- 3. More than 15 empty pockets should remain at each end of the carrier tape for each reel.
- 4. Shortage of less than 10 pcs a reel is acceptable but no more than 3 consecutive empty pockets are allowed.
- 5. Stripping strength of cover tape is between 10 gf to 130 gf and stripping angle should be within 165°~180°.
- 6. The product in the pocket of carrier tape should be placed in a specified correct position.
- 7. Tape and reel per EIA-481.
- 8. Dimensions:

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