

# SMT TL series

Surface mount subminiature  
washable toggle switches



## DISTINCTIVE FEATURES

Tape and reel packaging

Reflow solderable

Available with positioning pins

Protected against electrostatic discharges (ESD) up to 10 KV

Washable



## ENVIRONMENTAL SPECIFICATIONS

- Operating temperature : -40 °C to +85 °C (-40 °F to +185 °F)
- Moisture resistance : 21 days per IEC 512-6 test 11c
- Vibration resistance : 10-500 Hz / 10 g per IEC 512-4 test 6d
- Shock resistance : 50 g per IEC 512-4 test 6c



## ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load :  
0.4 VA 20 V max. AC or DC
- Minimum load : 10 mA 50 mV or 10  $\mu$ A 5 VDC
- Initial contact resistance : 20 m $\Omega$  max
- Insulation resistance : 1,000 M $\Omega$  min. at 500 VDC
- Dielectric strength : 1,000 Vrms. 50 Hz min. between terminals and frame / 500 Vrms. 50 Hz min. between terminals
- Electrical life at full load :
  - 2 position switches : 60,000 cycles
  - 3 position switches : 30,000 cycles
- Static resistance : 10 KV (Schaffner equipment)

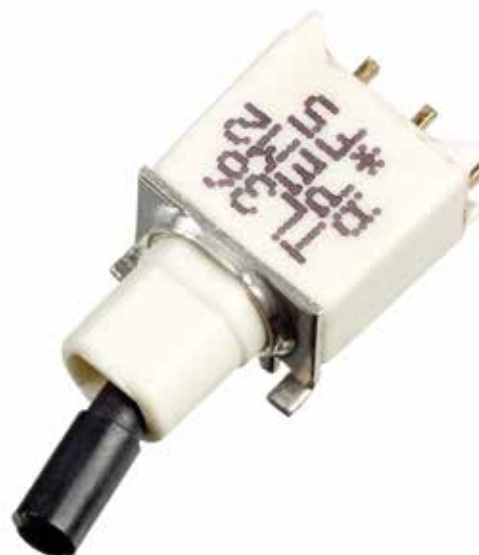


## MATERIALS

- Case : high temperature plastic material UL94-V0
- Actuator : brass, nickel plated, with high temperature UL94-V0 plastic cap
- Ground plate and positioning pins : steel, tin plated
- Contacts : brass, gold plated
- Terminals : brass, with pure tin plating over nickel barrier

APEM products may be recycled at end-of-life for the re-claiming of valuable metal components.

The company reserves the right to change specifications without notice.



# SMT TL series

Surface mount subminiature washable toggle switches

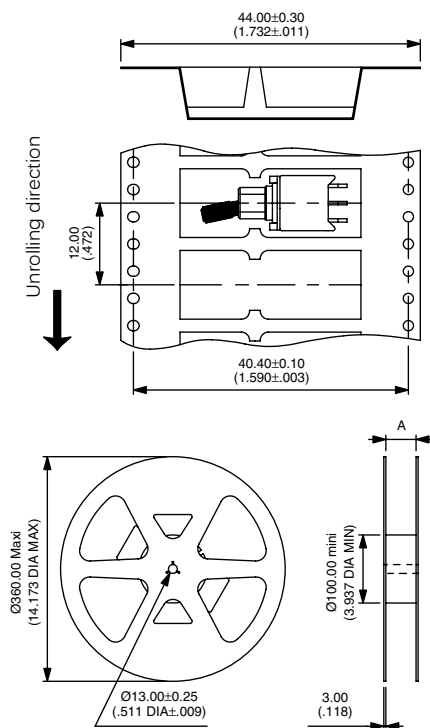


## SOLDERING AND CLEANING

- Reflow soldering : infrared, vapor phase or infrared convection
- Washable per IEA-RS448-2 :
  - water + detergent - preferred
  - solvents
- Further information on reflow soldering : see "Technical information" on website.



## PACKAGING

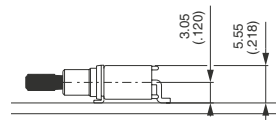


Tape width	24.00 (.944)	44.00 (1.732)
Reel (dimension A)	24.40 +2.00/0.00 (.960 +.078/.000)	44.40 +2.00/0.00 (1.748 +.078/.000)

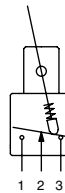
Standard packaging unit : 700 pieces  
 Tape meeting international standard IEC - Publication 286-3 (EIA481A)  
 Start leader : 400 mm min.



## MOUNTING



## ELECTRICAL FUNCTIONS



# SMT TL series

Surface mount subminiature washable toggle switches

## WITHOUT POSITIONING PINS



TL36WS84000
TL39WS84000
TL37WS84000
TL38WS84000
TL32WS84000

	III	II	I
TL36WS84000	ON	-	ON
TL39WS84000	ON	OFF	ON
TL37WS84000	MOM	OFF	MOM
TL38WS84000	ON	OFF	MOM
TL32WS84000	ON	-	ON

Also available for vertical mounting.

## WITH POSITIONING PINS



TL36WS84065
TL39WS84065
TL37WS84065
TL38WS84065
TL32WS84065

	III	II	I
TL36WS84065	ON	-	ON
TL39WS84065	ON	OFF	ON
TL37WS84065	MOM	OFF	MOM
TL38WS84065	ON	OFF	MOM
TL32WS84065	ON	-	MOM

Also available for vertical mounting.

