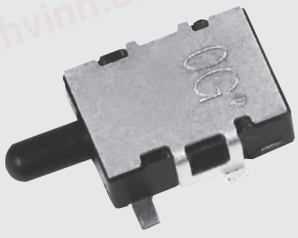
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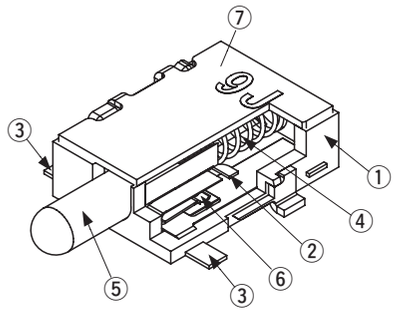
DETECT SWITCHES

CL-DA

RoHS compliant



INTERNAL STRUCTURE



Part name		Material	Flammability
①	Housing	Polyamide	UL94V-0
②	Fixed contact	Copper alloy, Gold-plated	—
③	Terminal pin		
④	Spring	Stainless steel(SUS 304)	—
⑤	Knob	Polyamide	UL94V-0
⑥	Slider contact	Copper alloy, Gold-plated	—
⑦	Cover	Nickel silver, Silver-plated	—

FEATURES

- High reliability by Gold contact
- RoHS compliant
- For detection of operation from side direction
- Automatic mounting possible
- Low profile design of 2mm

APPLICATIONS

- Detection of Communication devices, Audio-visual equipment, Industrial instrument, Security devices, etc.

PART NUMBER DESIGNATION

CL - DA - 1 C B 4 - A 2 T

Series name

No. of bits
1 : 1 極　1 bit

Switching function
B:ON — (OFF)
C:OFF — (ON)

Shape of terminal
B4 : Gull wing

Shape of actuator
A : Standard

Contact material
2 : Gold

Form of packaging
T : aping (Reel)

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DETECT SWITCHES

STANDARD SPECIFICATIONS

Operating temp. range	— 40 ~ 85 °C
Storage temp. range	
Sealing	Non-washable
Net weight	0.093 g

ELECTRICAL CHARACTERISTICS

Contact rating Switching Minimum	DC12 V, 100 mA DC20 mV, 1 μ A
Contact resistance	100 m Ω maximum
Insulation resistance	100 M Ω (DC100 V) minimum
Dielectric strength	AC250 V, 60s

MECHANICAL CHARACTERISTICS

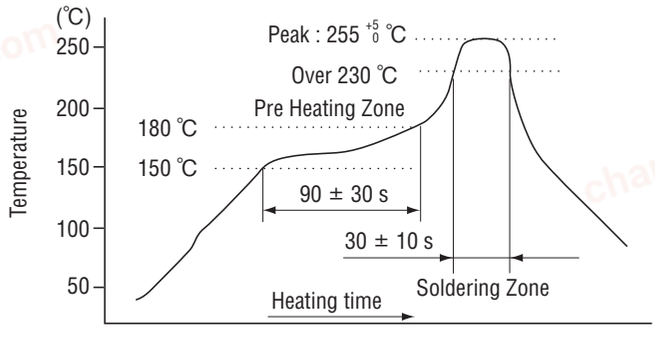
Switching function	OFF — (ON) / ON — (OFF)
Stroke	Pre-travel: 0.35mm Over-travel: 2.0mm total: 2.35mm
Operating force	0.75 N {0.075 kgf}
Stop strength	5 N {0.51 kgf}, 60 s
Solderability	245 ± 3 °C, 2 ~ 3 s
Soldering heat	Reflow : 260 °C (Peak temperature) (Please refer to the profile below)
Shear (Adhesion)	5 N {0.51 kgf} 10 s
Substrate bending	Width 90 mm, bend 3 mm, 5 s, 1 time
Pull-off strength	5 N {0.51 kgf} 10 s

{ } : Reference only

ENVIRONMENTAL CHARACTERISTICS

Vibration	(Amplitude) 1.5 mmor (Acceleration) 98 m/s², 10-500 Hz, 3 directions for 10 cycles each
Shock	490 m/s², 11 ms 6 directions for 3 times each
Load life	Continuous load 50,000cycles DC12 V, 100 mA
Humidity	— 10 ~ 65 °C, Relative humidity 0 ~ 96 %, 24 h for 10 cycles
High temp. exposure	85 °C, 96 h
Low temp. exposure	— 40 °C, 96 h
Thermal shock	— 40 (0.5 h) ~ 85 °C (0.5 h), 5 cycles

〈Reflow profile for soldering heat evaluation〉



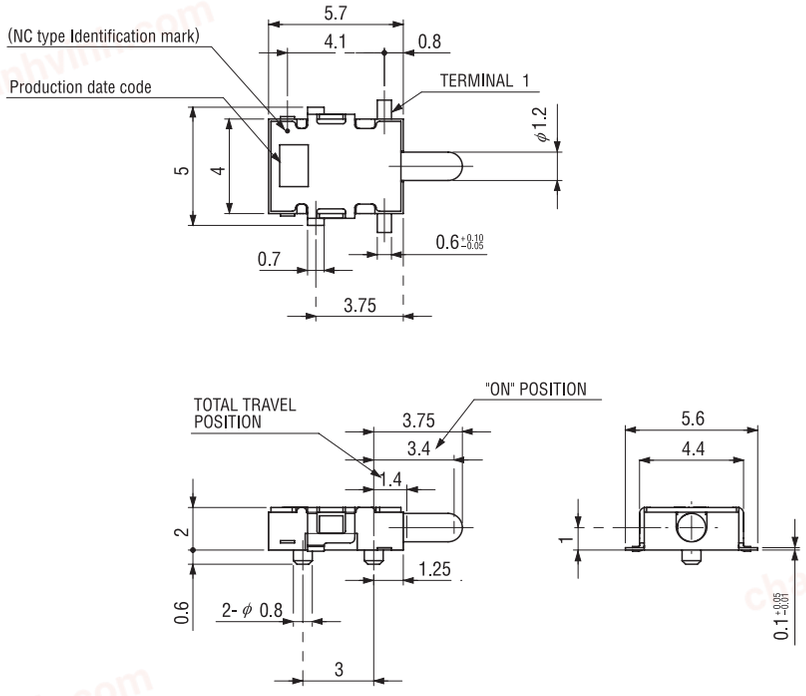
Reflow : two times maximum

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CL-DA
DETECT SWITCHES

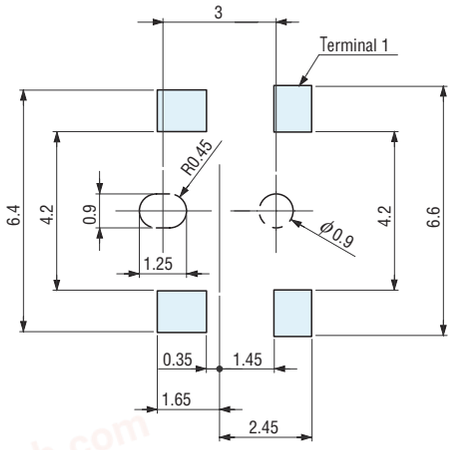
OUTLINE DIMENSIONS

Unless otherwise specified, tolerance : ± 0.3 (Unit : mm)

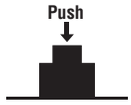
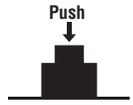
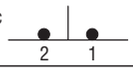
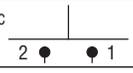


RECOMMENDED P.C.B. PAD DIMENSIONS

(Unit : mm)



LIST OF PART NUMBERS / SWITCHING FUNCTION

Part number	CL-DA-1BB4-A2T		CL-DA-1CB4-A2T	
Switching function				
	ON	(OFF)	OFF	(ON)
	Schematic 		Schematic 	

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DETECT SWITCHES

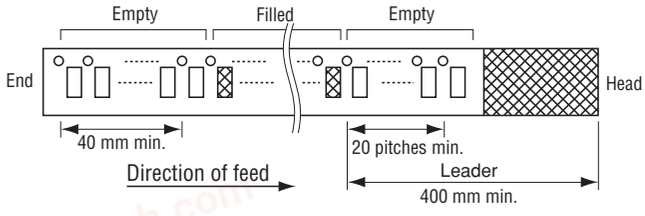
■ PACKAGING SPECIFICATIONS

<Taping packaging specifications>

● Taping version is packaged in 1000 pcs. per reel. Orders will be accepted for units of 1000 pcs.

Maximum number of consecutive missing pieces=2
Leader length and reel dimension are shown in the diagrams below:

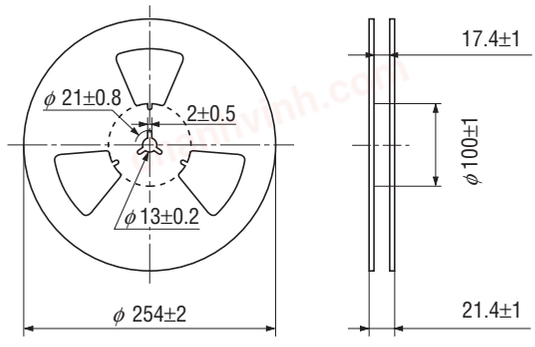
● Embossed tape dimensions



● Reel dimensions

(Unit: mm)

(Conforms to JIS C 0806-3)
(In accordance with EIAJ ET-7200A)



● 1 bits

(Unit : mm)

