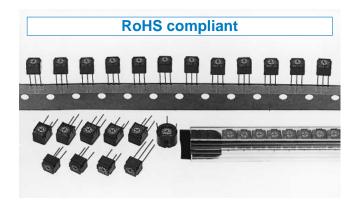


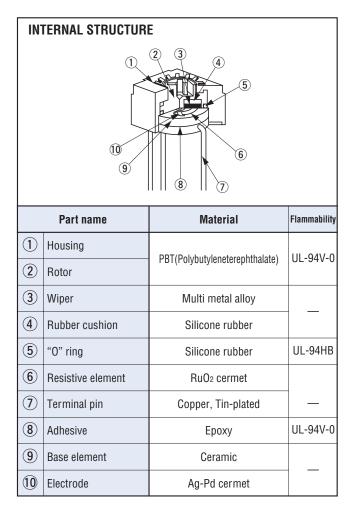
### **SINGLE TURN CERMET TRIMMERS**

# **CT-6**



### **FEATURES**

- RoHS compliant
- Various configurations to choose from
- Wide variety (14 types)
- "O" ring sealed and washable



#### **PART NUMBER DESIGNATION**

 $5 k \Omega$ Series name Resistance code Terminal pin Resistance value E: Sn (Lead-free) Product shape P: Top adjustment S: Side adjustment W: Top adjustment X: Side adjustment Form of packaging R: Top adjustment H: Side adjustment T: Taping (Ammo pack type) V: Top adjustment N: Side adjustment M: Magazine (stick) F: Rear adjustment Blank: Bulk in plastic bag

**\*\*Please refer to the LIST OF PART NUMBERS when placing orders.** 





### **LIST OF PART NUMBERS**

Adjustment position	Shape of terminal (Top view)	Form of packaging			Remarks
position		Taping	Magazine (stick)	Plastic bag	nemans
	0 0	CT-6ETP Ammo pack type	CT-6EMP	CT-6EP	The pin length of CT-6ETP & CT-6EMP is different from CT-6EP.
Top adjustment	® °			CT-6EW	_
	①			€ CT-6ER	_
	0 0	CT-6ETV Ammo pack type		CT-6EV	_
	© 0 0 +		CT-6EMS	CT-6ES	The pin length of CT-6EMS is different from CT-6ES.
Side adjustment ( † Adjustment	③			CT-6EX	_
direction)	① ○ ○ ③ <b>†</b>	CT-6ETH Ammo pack type		CT-6EH	The pin length of CT-6ETH is different from CT-6EH.
	①			CT-6EN	_
Rear adjustment	10003			€ CT-6EF	_
Pieces in package		1000 pcs./taping	75 pcs./stick	50 pcs./pack	_

 $\square$ : Not manufactured

The products indicated by  $\ensuremath{\ensuremath{\,\widehat{\oplus}}}$  mark are manufactured upon receipt of order basis.

#### **⟨Nominal resistance values⟩**

Fig. 1

3 10 Ω	→ 20 Ω	50 Ω	100 Ω	200 Ω	500 Ω
1 kΩ	2 kΩ	5 kΩ	10 kΩ	20 kΩ	50 kΩ
100 kΩ	200 kΩ	500 kΩ	1 ΜΩ	2 MΩ	

The above part numbers are all available with the respective combination of <Nominal resistance values> (Fig. 1).

<sup>%</sup> Verify the above part numbers when placing orders.

<sup>\*\*</sup>Taping and magazine specifications are not sold separately and must be purchased in taping or stick units.



### **ELECTRICAL CHARACTERISTICS**

Nominal resistance range	10 Ω ~ 2 MΩ	
Resistance tolerance	± 10 %	
Power ratings	0.5 W (70 °C) 0 W (120 °C)	
Resistance law	Linear law	
Maximum input voltage	DC200 V or power rating, whichever is smaller	
Maximum wiper current	100 mA or power rating, whichever is smaller	
Effective electrical angle	220° (1 turn)	
End resistance	1 % or 2 $\Omega$ , whichever is greater	
C.R.V.	1 % or 3 $\Omega$ , whichever is greater	
Operating temp. range	−55 ~ 120 °C	
Temp. coefficient	10 $\Omega$ ~ 20 $\Omega$ : $\pm$ 250 10 <sup>-6</sup> /°C maximum 50 $\Omega$ ~ 2 M $\Omega$ : $\pm$ 100 10 <sup>-6</sup> /°C maximum	
Insulation resistance	1000 MΩ minimum (DC500 V)	
Dielectric strength	AC900 V, 60 s	
Net weight	Approx. 0.51 g (CT-6EP, EW, ER, EV) Approx. 0.65 g (CT-6ES, EX, EH, EN) Approx. 0.92 g (CT-6EF)	

### **MECHANICAL CHARACTERISTICS**

Mechanical angle	260 ° (1 turn)	
Operating torque	2 ~ 20 mN·m {20 ~ 204 gf·cm}	
Stop strength	50 mN·m {510 gf·cm} minimum	
Rotational life	200 cycles [ $\Delta$ R/R $\leq$ ± (2 $\Omega$ +3 %)]	
Teminal strength	10 N {1.02 kgf} minimum (Tensile strength)	
Thrust to rotor	10 N {1.02 kgf} minimum	
Solderability	245 ± 3 °C, 2 ~ 3 s	

{ }: Reference only

### **ENVIRONMENTAL CHARACTERISTICS**

Test item	Test conditions	Specifications	
Thermal shock	Thermal shock -65 ~ 125 °C (0.5 h), 5 cycles		
Humidity	-10 ~ 65 °C (80 ~ 98 %), 10 cycles, 240 h	[ ∆ R/R ≤ 2 %]	
Shock	981 m/s², 6 ms 6 directions for 3 times each	[ ∆ R/R ≤ 1 %] [S.S. ≤ 1 %]	
Vibration	Amplitude 1.52 mm or Acceleration 196 m/s², 10 ~ 2000 Hz, 3 directions, 12 times each		
Load life	70 °C, 0.5 W, 1000 h	$\begin{bmatrix} \Delta R/R \leq 3 \% \\ [S.S. \leq 1 \% ] \end{bmatrix}$	
Low temp. operation	−55 °C, 2 h	$\begin{bmatrix} \Delta R/R \leq 2 \% \\ [S.S. \leq 2 \% ] \end{bmatrix}$	
High temp. exposure	120 °C, 250 h	$\begin{bmatrix} \Delta R/R \le 3 \% \\ [S.S. \le 2 \% ] \end{bmatrix}$	
Immersion seal	85 °C, 60 s	No leaks (No continuous bubbles)	
Soldering heat	Flow: 260 $\pm$ 3 °C $_{\sim}$ 5 - 6 s, two times maximum Manual soldering: 380 $\pm$ 10 °C, 3 ~ 4 s	[ ∆ R/R ≦ 1 %]	

 $\Delta$  R/R : Change in total resistance S.S. : Setting stability

lominal resistance values ( $\Omega$ )	Resistance code	Maximum input voltage (V)	Maximum wiper current (mA)
<ul><li>→ 10</li><li>→ 20</li></ul>	100	1.00	100
	200	2.00	100
50	500	5.00	100
100	101	7.07	70.7
200	201	10.0	50.0
500	501	15.8	31.6
1 k	102	22.4	22.4
2 k	202	31.6	15.8
5 k	502	50.0	10.0
10 k	103	70.7	7.07
20 k	203	100	5.00
50 k	503	158	3.16
100 k	104	200	2.00
200 k	204	200	1.00
500 k	504	200	0.40
1 M	105	200	0.20
2 M	205	200	0.10

The products indicated by nark are manufactured upon

**MAXIMUM INPUT RATINGS** 



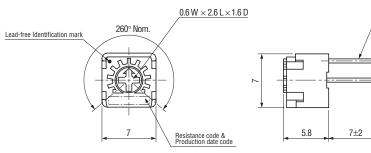
### **OUTLINE DIMENSIONS**

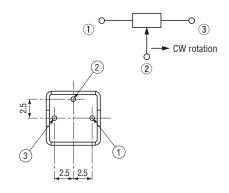
Unless otherwise specified, tolerance:  $\pm\,0.3$  (Unit: mm)

 $3 - \phi \ 0.45$ 

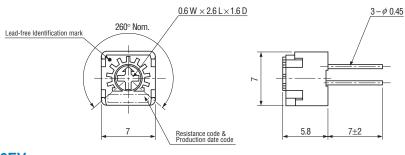
 $3 - \phi \ 0.45$ 

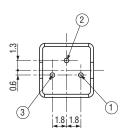
### CT-6EPTop adjustment





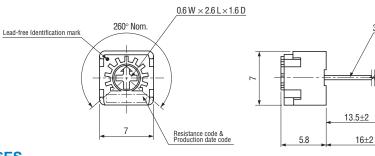
### CT-6EWTop adjustment

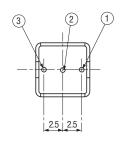




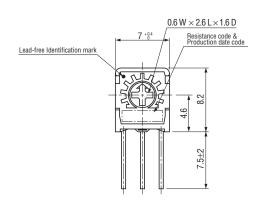
### CT-6EVTop adjustment

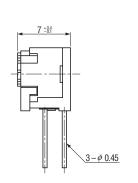
★Pin pitch in W type is different from P type.

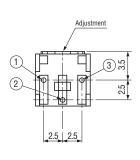




## CT-6ESSide adjustment



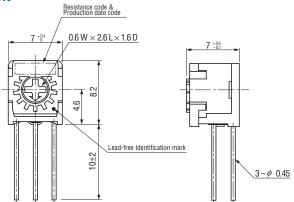




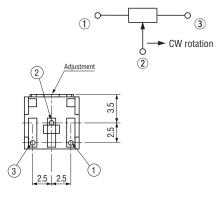


### **OUTLINE DIMENSIONS**

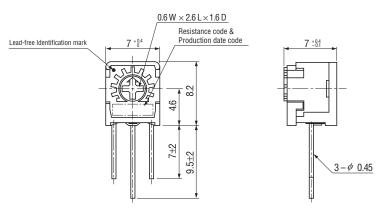
CT-6EXSide adjustment

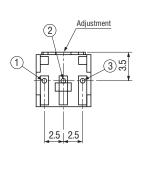


Unless otherwise specified, tolerance:  $\pm\,0.3$  (Unit: mm)

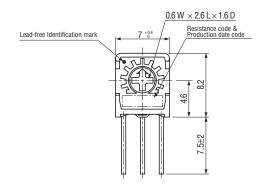


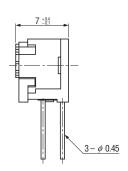
### CT-6EHSide adjustment

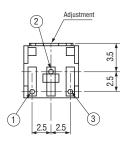




### CT-6ENSide adjustment







★Terminals ① & ③ position in N type is different from X type.

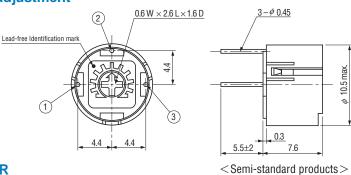


### **OUTLINE DIMENSIONS**

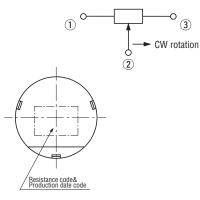
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• CT-6EF

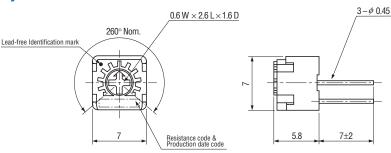
Rear adjustment

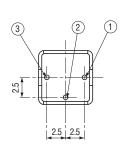


<Semi-standard products>



CT-6ERTop adjustment

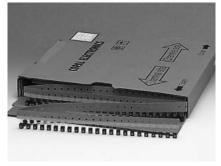




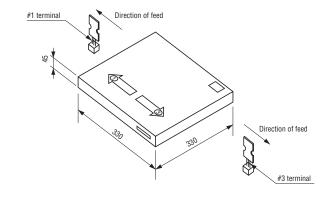
### PACKAGING SPECIFICATIONS

#### <Taping packaging specifications>

- Taping version is packaged in 1000 pcs. per reel.
  Orders will be accepted for units of 1000 pcs., i.e., 1000, 2000, 3000 pcs., etc.
- Taping version (ammo pack type) is boxed with one reel (1000 pcs.).



Ammo pack type



#### **Ammo Pack**

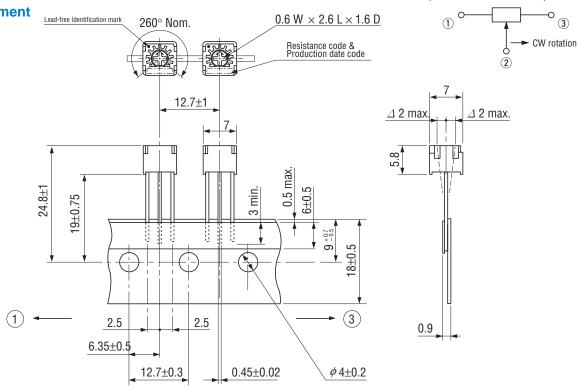
- Package size: 330 mm × 330 mm × 45 mm
- The leader and end of the tape have an empty part of minimum 300 mm respectively.
- There are two tape outlets on the package for different terminal alignment directions, for which details refer to the sketch above.
  - (e.g.) When the tape is fed from the right outlet marked ③, #3 terminal comes out first.
- Gross weight of the boxing version ETV : Approx. 840 g

ETH: Approx. 930 g ETP: Approx. 850 g

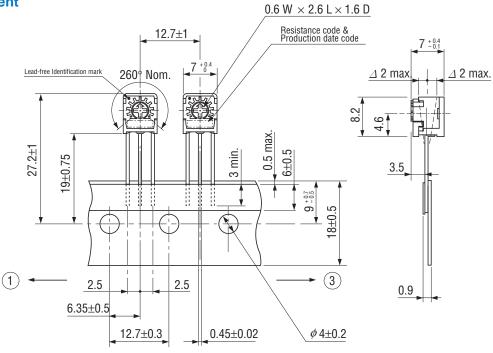


CT-6ETVTop adjustment

Unless otherwise specified, tolerance:  $\pm$  0.3 (Unit: mm)



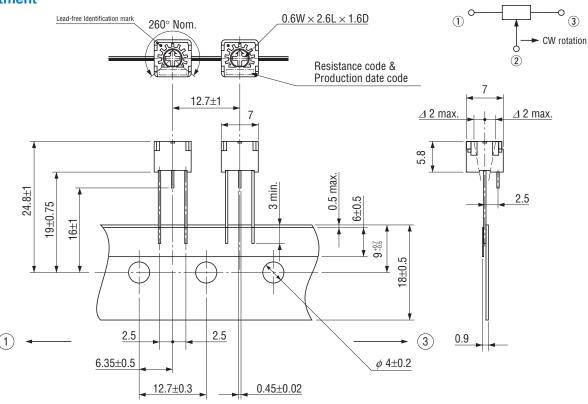
CT-6ETHSide adjustment





### CT-6ETPTop adjustment

Unless otherwise specified, tolerance:  $\pm$  0.3 (Unit: mm)

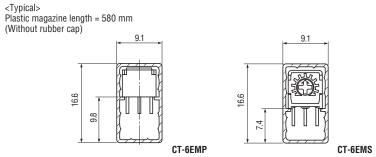


#### <Magazine packaging specifications>

- Magazine is packaged 75 pcs. per stick.
  Orders will be accepted for units of 75 pcs. i.e., 150, 225 pcs., etc.
- Magazine is packed 3000 pcs. sticks per box.



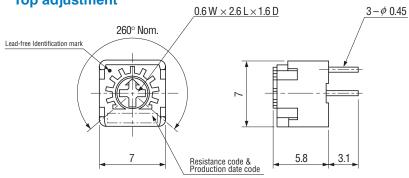
Plastic magazine type

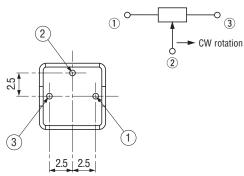




CT-6EMPTop adjustment

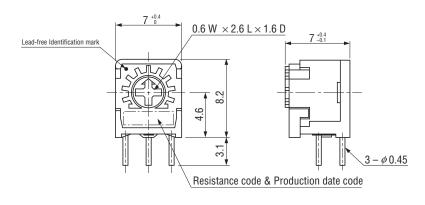
3-\psi 0.45

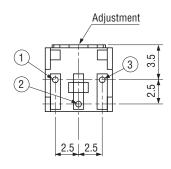




Unless otherwise specified, tolerance: ± 0.3 (Unit: mm)

#### CT-6EMS Side adjustment





#### <Bulk pack specifications>

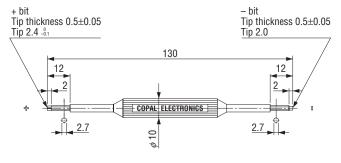
- Unit of bulk pack in a plastic bag is 50 pcs. per pack.
- Boxing of bulk in a plastic bag is performed with 200 pcs. (CT-6EF is 100 pcs.) per box.

### **MADJUSTMENT TOOL, MODEL TA-64**

- Good for both minus and cross slot rotors / shafts.
- Recommended for use with the following copal trimmers.

Recommended models		
+ bit	– bit	
CT-6	ST-4	
FT-63	RJ-4	
	RJ-6	
	TM-7	

Unless otherwise specified, tolerance:  $\pm$  0.3 (Unit: mm)



Material: Polyoxymethylene

Note: Please do not use the tool for purposes other than adjustment of electronic components.