



The CTE series of strain gauges for measuring the coefficient of linear expansion is a product in which the temperature-compensated material of the strain gauge is adjusted to 0×10-6/°C so that the coefficient of linear expansion of any material can be easily calculated.

They can also measure total elongation (strain due to external force + thermal strain), making them effective for measuring strain on electronic circuit boards.



## Examples of verification

The thermal output of a CTE strain gauge when affixed to aluminium material (A2024) is shown in the diagram below



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## **Specification**

Operational temperature (°C)	Temperature compensation range (°C)	Applicable adhesive	Material			Eatique life
			Backing	Element	Strain limit	at room temperature
-30 to +200°C	+10 to +100°C	CN (-30 to +120°C) NP-50 (-30 to +200°C) EB-2 (-30 to +200°C)	Polyimide	Ni-Cr	1% (10000με)	±1500με ≧1×10⁵ times

Туре	Gauge s	ize(mm)	Backing	Resistance		
Туре	Length	Width	Length	Width	Ω	
CTELA-3	3	1.8	10.5	3.5	120	
CTELA-6	6	2.5	15.5	4.5	120	
CTELA-3-350	3	3.1	10.2	5.2	350	
CTELA-6-350	6	2.8	16	5.3	350	

## Example of CTE series thermal output

THERMAL OUTPUT ( $\epsilon_{app}$  : APPARENT STRAIN)

 $\epsilon_{app} = -2.62 \times 10^{1} + 1.62 \times T^{1} - 1.68 \times 10^{-2} \times T^{2} + 2.29 \times 10^{-5} \times T^{3} - 2.98 \times 10^{-8} \times T^{4}$ 

TOLERANCE : ±0.5 [×10<sup>-6</sup>/°C)], T : TEMPERATURE





Approval Certificate **ISO9001** Design and manufacture of strain gauges, strain measuring equipment and transducers The contents of this catalog are subject to change without prior notice. The contents of this catalog are as of February 2025. TML Pam E1026B.



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