PACKAGE DESIGNATION

TML strain gauges are delivered together with TML Strain Gauge Test Data (example shown below). The evaluation methods conform to the National Aerospace Standard NAS942 (modified). For installation, handling and bonding procedures, please see the data sheet.



This represents the actual grid length in the sensitive direction. Within this length, the measured strain is averaged.

This factor is a ratio of the resistance variation to the strain generated due to the uniaxial stress in the direction of the gauge axis.

COLOR CODING FOR TEST SPECIMEN

Colors of package label differ depending on the test specimen material for temperature compensation.

Test specimen	Linear thermal expansion coefficient	Coloring	Gauge type exampled	
Mild stee (ferritic)	11ppm/°C	Red	FLA-3-11-5LT	
Stainless steel Copper alloy	17ppm/°C	Brown	FLA-3-17-5LT	
Aluminium	23ppm/°C	Green	FLA-3-23-5LT	
Others	-	Grey	GFLA-3-70-5LT	

PACKAGE DESIGNATION

LEADWIRE-INTEGRATED STRAIN GAUGE PACKAGE

TYPE	FLA-3-11-5	LT				
LOT NO		A510511	GAUGE LENGTH	3 mm		
GAUGE FACTOR						
			2.14	±1%		
GAUGE	RESISTANCE	119.5±0.5 Ω	QUANTITY	10		
TEMP.COMPENSATION FOR			TEST CONDITION			
		11 ×10 ⁻⁶ /°C	23°C	50%RH		
TRANSVERSE SENSITIVITY 0.0 %			BATCH NO. ZF28T			
LEADWIRES						
→ 10/0.12 3W 5m						

LEADWIRES

Gauge type

Lot Number

Gauge Factor

used in tests

pensation

meter

Core number/diameter (or cross section area) Wiring procedure Length of leadwire Above in column examples 10-core 0.12mm diameter,

3-wire leadwire of 5-meter long

TML STRAIN GAUGE TEST DATA



A linear thermal expansion coefficient of ■ GAUGE TYPE FLA-3-11 TESTED ON SS 400 specimen materials in COEFFICIENT OF thermal test $\times 10^{-6}$ /°C LOT NO. A502515 THERMAL EXPANSION : 11.8 Temperature coefficient **TEMPERATURE** of Gauge Factor with COEFFICIENT OF G.F. +0.1±0.05 %/10°C GAUGE FACTOR 2.14 ±1% tolerance per 10°C Bonding adhesive ADHESIVE P-2 DATA NO. A0312 Quadratic equation of THERMAL OUTPUT (Eapp: APPARENT STRAIN) thermal output (apparent Allowable tol- $\text{Eapp} = -2.94 \times 10^{1} + 2.32 \times T^{1} - 4.60 \times 10^{-2} \times T^{2} + 1.65 \times 10^{-4} \times T^{3} + 5.00 \times 10^{-7} \times T^{4} \text{ (} \mu\text{m/m)}$ erance of temstrain with temperature) perature com-TOLERANCE : $\pm 0.85 \left[(\mu m/m) / ^{\circ}C \right]$, T: TEMPERATURE Gauge Factor (INSTRUMENT G.F. SET :2.00) -- APPARENT STRAIN - - - - GAUGE FACTOR set on strain-300 6.0 (m/mu) 200 4.0 Temperature coefficient of G.F. 100 2.0

Test specimen used in thermal output test

VARIATION OF G.F. WITH TEMPERATURE TEMPERATURE COEFFICIENT OF G.F. (%) APPARENT STRAIN 0 0.0 -100 -2.0 Thermal output -200 -4.0 -300 6.0 20 80 0 40 60 TEMPERATURE (°C) Example of curved data on thermal output

GAUGE FACTOR OF LEADWIRE-INTEGRATED STRAIN GAUGES

Gauge factor of leadwire-integrated strain gauges given in the supplied TML STRAIN GAUGE TEST DATA is of the strain gauge itself, which is not corrected with attached leadiwre. Refer to the test data sheet in which Gauge Factor Correction due to Leadwire attachment is given.