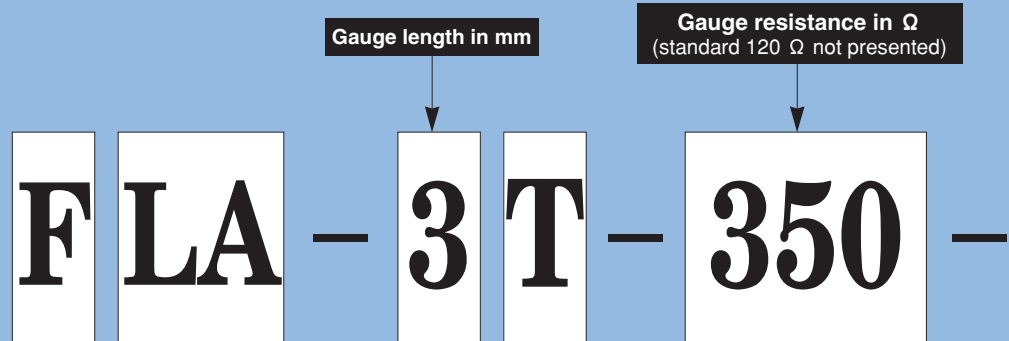


TML STRAIN GAUGE CODING SYSTEM



Gauge series	
F	General purpose Stress concentration use Chain gauge CCFXX, CCFYX
UF	General purpose
WF	Waterproof construction
PF	Polyester foil gauge
P	Polyester wire gauge
FLM / WFLM	Metal-backing strain gauge
MF	Magnetic field use
PM / PMF	Polyester mold strain gauge
YEF / YF / YUF	Post-yield foil gauge
PMFLS / SSM	For asphalt use
LF	Low elastic modulus
PFLW / PLW	For wood long term use
GF	For plastic material use
UBF / BF	For composite material use
CEF	Wide range temperature use
CF	Cryogenic temperature use
QF / ZF	High temperature use
SFA	Stress measurement
AW	Weldable encapsulated gauge
BTM	Bolt axial strain measurement
BTMP	Bolt axial force measurement
DD	One-side gauge
FAC	Crack detection
TF	Temperature measurement

Pattern configuration(*1)	
L/LA/LK/LX/LG/BX/BY	Single
C/CA/LC/CS/CB	2-element
R/LR/RA/RAS/RS	3-element
XV/YV/BXV/BYV	5-element Single
CV	5-element Cross
CT	Torque
LT	45° Single

(*1) Not always coded

Cross : 90° 2-element
Rosette : 45° /90° 3-element

Functions(*2)		Applicable gauge
A	Left 45°	QFLT
	Right 45° for shearing strain measurement	QFLT
T	Thermocouple type	Temperature- integrated

(*2) Not indicated for general model

11 – 3LT

Compensation material ppm/°C (*3)	
3 Composite material	
Ceramic (Si ₃ N ₄)	2.6~3.3
CFRP	3 ~ 5
5 Composite material	
Ceramic (SiC)	4.6
CFRP	3 ~ 5
8 Composite material	
Glass	7.9
Titanium	8.9
Titanium alloy(Ti-6Al-4V)	8.8
11 Mild steel (ferritic)	
Mild steel (0.1-0.2C)	11.8
Hard steel (0.4-0.5C)	11.2
Cast iron	10.5
Hastelloy-276	11.2
Inconel 600	13.3
Inconel 750	12.1
Monel	13.5
SUS 630 (17-4PH)	10.8
SUS 631 (17-7PH)	10.6
Concrete	7~13
17 Stainless steel/Copper alloy	
SUS 304	16.2
SUS 310	15.8
SUS 316	16.0
SUS 321	16.7
Copper	16.7
Beryllium copper	16.6
Brass	16.7
Bronze	17.0
Constantan	14.9
23 Aluminium	
Aluminium	23.4
Aluminium 2024-T4	23.0
Lead and its alloy	29.0
Gypsum	25.0
Polyimide	20~30
28 Magnesium alloy	27.0
50 Plastics	
Epoxy	45~65
70 Plastics	
Acrylics	70
ABS	74
Polyacetal (POM)	80
Polycarbonate (PC)	66~70
Polystyrene (PS)	60~80

Lead wires pre-attached	
002LE	Paralleled polyimide lead wire of 2cm long
005LE	Paralleled polyimide lead wire of 5cm long
1L	Paralleled vinyl lead wire of 1m long
3L	Paralleled vinyl lead wire of 3m long
5L	Paralleled vinyl lead wire of 5m long
3LT	3-wire paralleled vinyl lead wire of 3m long
5LT	3-wire paralleled vinyl lead wire of 5m long

(*3) Indicated only for self-temperature compensated gauges
For other materials, contact TML or your local representatives.

Color code of gauge base for different test specimen

TML strain gauges are almost self-temperature compensated. Series F, UF and WF are self-temperature compensated for the most commonly found material mild steel, stainless steel/copper alloy and aluminium, and are identified with gauge base colors of red, brown and green respectively.

Material	Linear thermal expansion coefficient	Identified color of gauge base	Gauge type exemplified
Mild steel	11ppm/°C	Red	FLA-3-11
Stainless steel Copper alloy	17ppm/°C	Brown	FLA-3-17
Aluminium	23ppm/°C	Green	FLA-3-23