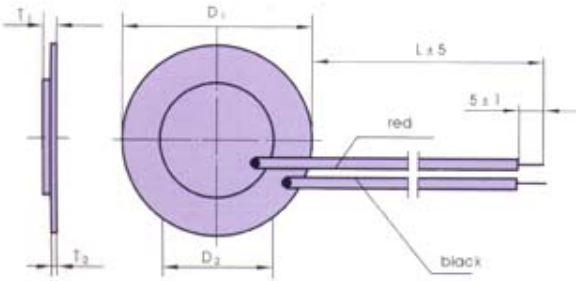


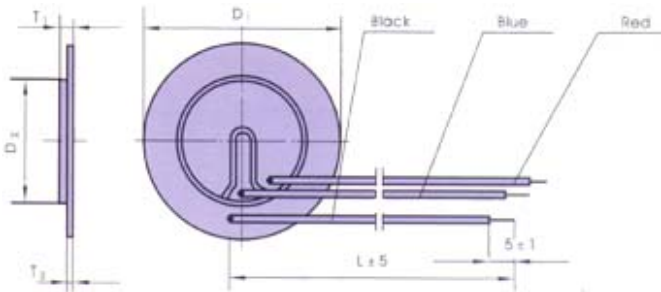
# Piezo Element with Lead Wire



External-driven Piezo Element with Lead Wire



Self-driven Piezo Element with Lead Wire



ELECTRICAL SPECIFICATIONS :

| Model No.                     | FML-12T-9.2A1-L                  | FML-13.5T-7.7A1-L                  | FML-15T-7.9A1-L                    | FML-20T-4.5A1-L                  | FML-20T-6.0A1-L                  |
|-------------------------------|----------------------------------|------------------------------------|------------------------------------|----------------------------------|----------------------------------|
| Outer diameter (mm)D1         | Ø12 <sup>0</sup> <sub>-0.1</sub> | Ø13.5 <sup>0</sup> <sub>-0.1</sub> | Ø15 <sup>0</sup> <sub>-0.1</sub>   | Ø20 <sup>0</sup> <sub>-0.1</sub> | Ø20 <sup>0</sup> <sub>-0.1</sub> |
| Ceramic diameter (mm)D2       | Ø8.5 ± 0.1                       | Ø10 ± 0.1                          | Ø11 ± 0.2                          | Ø14.7 ± 0.2                      | Ø14.7 ± 0.2                      |
| Total thickness (mm) T1       | 0.20 ± 0.04                      | 0.24 ± 0.04                        | 0.30 ± 0.04                        | 0.30 ± 0.04                      | 0.40 ± 0.05                      |
| Plate thickness (mm) T2       | 0.07 ± 0.02                      | 0.10 ± 0.02                        | 0.19 ± 0.02                        | 0.19 ± 0.02                      | 0.23 ± 0.03                      |
| Resonant frequency (kHz)      | 9.2 ± 0.6                        | 7.7 ± 0.5                          | 7.9 ± 0.7                          | 4.5 ± 0.4                        | 6.0 ± 0.5                        |
| Resonant Impedance (Ω)        | ≤500                             | ≤800                               | ≤400                               | ≤500                             | ≤300                             |
| Static capacitance (nF ± 30%) | 10                               | 10                                 | 14                                 | 24                               | 15                               |
| Wire Standard                 | UL1571-30AWG                     |                                    |                                    | UL1095-28AWG                     |                                  |
| Material of metal plate       | Brass                            |                                    |                                    |                                  |                                  |
| Model No.                     | FML-27T- 3.9A1-L                 | FML-31T- 4.0A1-L                   | FML-34.7T- 2.9B1-L                 | FML-35T- 3.0A1-L                 | FML-41T- 1.0A1-L                 |
| Outer diameter (mm) D1        | Ø27 <sup>0</sup> <sub>-0.1</sub> | Ø31 <sup>0</sup> <sub>-0.1</sub>   | Ø34.7 <sup>0</sup> <sub>-0.1</sub> | Ø35 <sup>0</sup> <sub>-0.1</sub> | Ø41 <sup>0</sup> <sub>-0.1</sub> |
| Ceramic diameter (mm) D2      | Ø20 ± 0.2                        | Ø20 ± 0.20                         | Ø25 ± 0.25                         | Ø25 ± 0.25                       | Ø25 ± 0.25                       |
| Total thickness (mm) T1       | 0.48 ± 0.05                      | 0.24 ± 0.04                        | 0.55 ± 0.05                        | 0.60 ± 0.05                      | 0.25 ± 0.04                      |
| Plate thickness (mm) T2       | 0.23 ± 0.03                      | 0.10 ± 0.02                        | 0.25 ± 0.03                        | 0.38 ± 0.03                      | 0.12 ± 0.02                      |
| Resonant frequency (kHz)      | 3.9 ± 0.3                        | 4.0 ± 0.5                          | 2.9 ± 0.3                          | 3.0 ± 0.4                        | 1.0 ± 0.5                        |
| Resonant Impedance(Ω)         | ≤200                             | ≤300                               | ≤250                               | ≤200                             | ≤1000                            |
| Static capacitance (nF ± 30%) | 23                               | 45                                 | 24                                 | 32                               | 66                               |
| Wire Standard                 | UL1095-28AWG                     | UL1571-30AWG                       |                                    | UL1095-28AWG                     |                                  |
| Material of metal plate       | Brass                            |                                    |                                    |                                  |                                  |