



Dendrometer MIJ-02 LMS Type 2 measure L2 plus dL NOT dr.
 Use equation below, when you convert from dL to dr or Vout to dr.

Vout : measured voltage mV
 Vpre : Pre heat voltage to LMS mV
 r, L, r1, r2, L1, L2 : see figure
 dr : radius deviation
 dL : Length deviation of LMS detection
 dL(um) : $11000 * (Vout / Vpre)$

$$L = r * (1 + \text{SQR}2)$$

therefore

$$r = L / (1 + \text{SQR}2)$$

$$\begin{aligned} dr &= r2 - r1 \\ &= L2 / (1 + \text{SQR}2) - L1 / (1 + \text{SQR}2) \\ &= (L2 - L1) / (1 + \text{SQR}2) \end{aligned}$$

$$\begin{aligned} dr &= dL / (1 + \text{SQR}2) \\ dr &= 11000 * (Vout / Vpre) / (1 + \text{SQR}2) \end{aligned}$$

H.Katayama EMJ