



Dendrometer MIJ-02 LMS, LMM, LML measure dL plus dr 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, M, L (mV)

r1, r2, L1, L2 : see figure

dr : radius deviation

dL : Length deviation of LMS, M, L detection

dL(um) :  $11000 * (Vout / Vpre)$

$$L = r * \sqrt{1 + SQR2}$$

therefore

$$r = L / \sqrt{1 + SQR2}$$

$$dr = r_2 - r_1$$

$$= L_2 / \sqrt{1 + SQR2} - L_1 / \sqrt{1 + SQR2}$$

$$= (L_2 - L_1) / \sqrt{1 + SQR2}$$

$$dr = dL / \sqrt{1 + SQR2}$$

$$dr = 11000 * (Vout / Vpre) / \sqrt{1 + SQR2}$$