$$\begin{split} \Delta \left( tanh \left( a \right) \right) &= \left| tanh \left( a \right) \right| \sqrt{ \left( \frac{\Delta sinh \left( a \right)}{sinh \left( a \right)} \right)^2 + \left( \frac{\Delta cosh \left( a \right)}{cosh \left( a \right)} \right)^2 } \\ &= \left| 0.99991 \right| \sqrt{ 0.25002^2 + 0.24998^2 } \\ &= 0.35352 \end{split}$$

 $\therefore tanh(a) = 0.99991 \pm 0.35352$