IR rangefinder response curve (II)

Exponential curve fitting

Linear fit region

Sensor 1 (avgd.)
Sensor 2 (avgd.)
Sensor 3 (avgd.)
Fitted curve

$v_{fit}(d) = 21.6\frac{1}{d} + 0.16$

Sensor output v [V]

Actual distance d from sensor to wall [cm]

Linearity evaluation

$d_m(v(d)) = \dfrac{21.6}{v(d) - 0.16}$

Reported distance d_m [cm]

Actual distance d [cm]