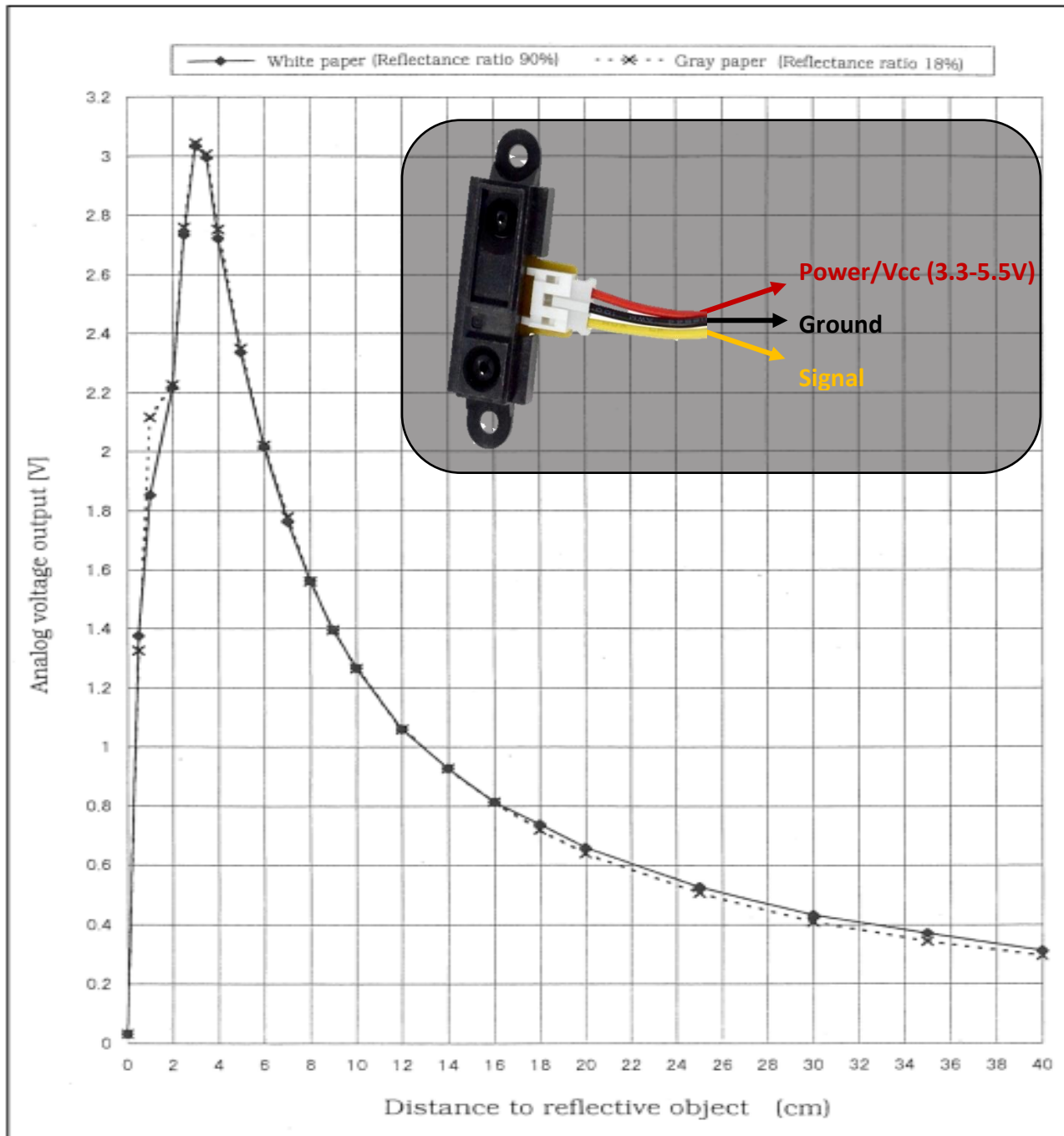


# Sharp Distance Sensors

0A41S Sensor Characteristics	
Distance Range	4 to 30 cm
Supply Voltage	3.3 to 5.5 V
Average supply current	12-22 mA

2Y0A21 and GP2D12 Sensor Characteristics	
Distance Range	10 to 80 cm
Supply Voltage	3.3 to 5.5 V
Average supply current	12-22 mA

**Note:** There is no calibration curve for the 10-80cm sensors



PSC Notes-

1/31/2023 Colter took measurements on all 3 sensors using plywood as the reflective object. Data was collected at 3.3V, 4.5V, and 5.5V input. Measurements were taken both with lights on and off, and no difference was seen.

Barring experimental error, no difference was seen between output values of the 2Y0A21 and GP2D12 sensors(10-80cm), so their data is grouped together. There was also no significant difference from 3.3V input to 5.5V input, so all these measurements are grouped together into the same chart as well.

With the OA41S sensor(4-30cm) there was no difference in output values at 4.5V input or 5.5V input so those are grouped in the same chart. Output voltage was slightly lower at 3.3V, so that data is in a separate chart.

<b>2Y0A21 and GP2D12</b>	
<b>Input: 3.3-5.5 Volts</b>	
Distance (cm)	Output Voltage (V)
80	0.372
60	0.48
40	0.67
25	1
15	1.585
10	2.19

<b>OA41S, Input: 4.5-5.5 Volts</b>	
Distance (cm)	Output Voltage (V)
30	0.336
20	0.55
15	0.788
10	1.2
4	2.61

<b>OA41S, Input: 3.3 Volts</b>	
Distance (cm)	Output Voltage (V)
30	0.308
20	0.512
15	0.725
10	1.119
4	2.385