Pre Lab 3.1 – DA32435 – Dyab Asdi – 19305

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1)

| Name | Range | Sensitivity | Data Rate |
|---|---|---|---|
| **Linear Acceleration** | +/- 2g, +/- 4g, +/- 8g, +/- 16g | 0.061 – 0.488 mg/LSB | 1.6 Hz – 6664 Hz |
| **Angular Rate** | 125 – 2000 dps | 4.375 – 70 mdps/LSB | 12.5 Hz – 6664 Hz |

2) To run a 2g test in lab, we must apply an acceleration of 2g to the accelerometer in all directions. We need to note the output values while pointing each axes to the ground, and then rotating 180 degrees to face the sky. In the lab, we need to make sure all of the axes reach 1g while rotating the accelerometer. The sensitivity is the difference between the first output value and second output value divided by 2. It is useful to check for sensitivity to ensure accurate results while measuring the linear acceleration and angular rate.