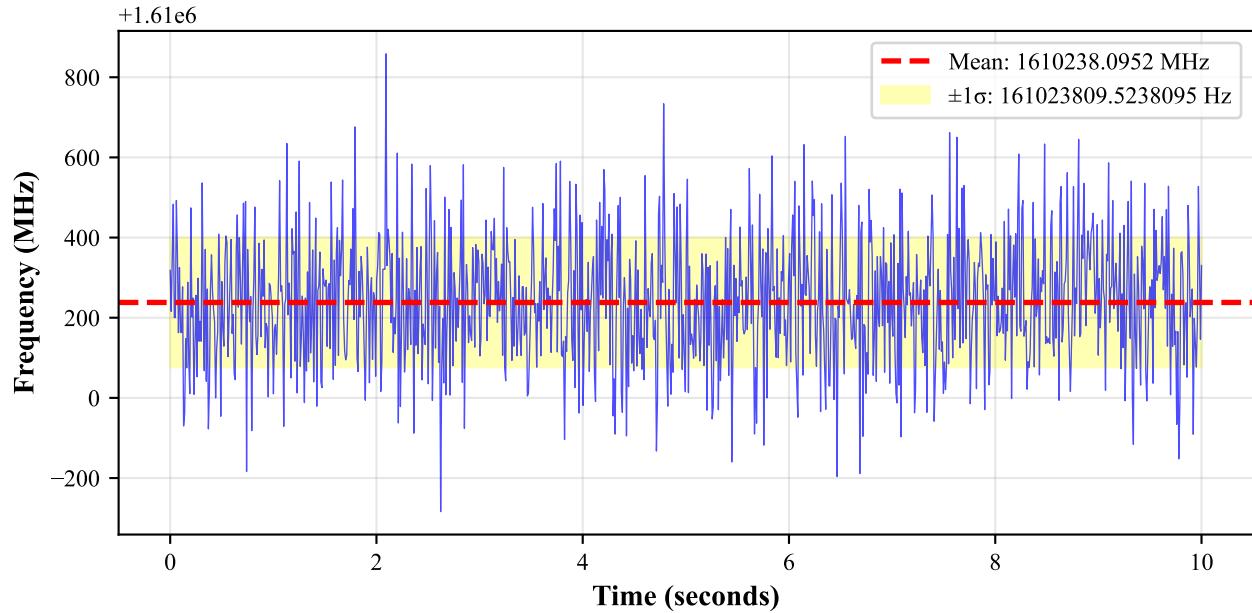
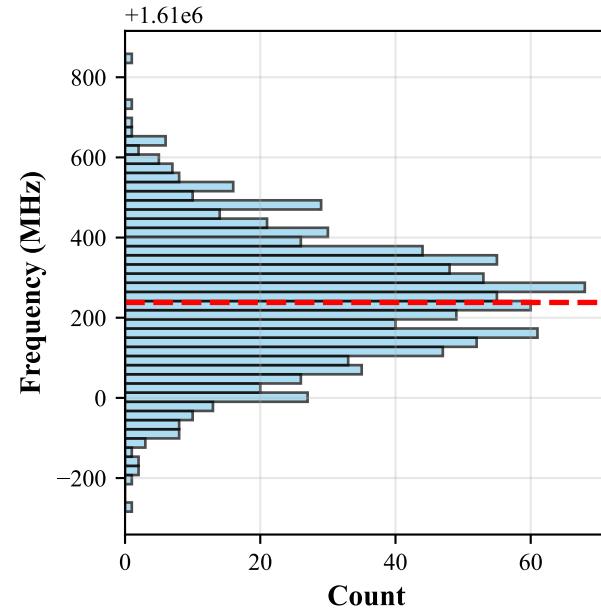


# Figure 5: Hardware Platform Validation - LED Spectroscopy System

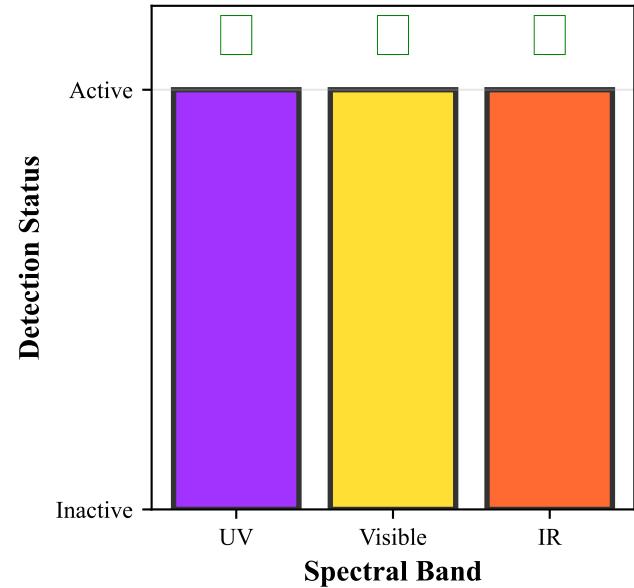
**(A) Operating Frequency Stability**



**(B) Distribution**



**(C) Multi-Band Detection**



#### SYSTEM PERFORMANCE METRICS

##### Frequency Characteristics:

- Mean: 1610238.095238 MHz
- Std Dev: 161023809.5 Hz
- Stability: 100.00 ppm

##### Synchronization Quality:

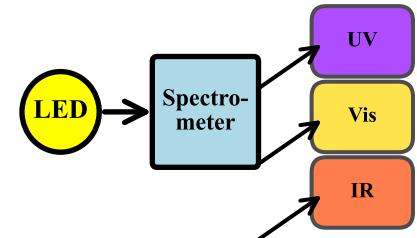
- Status: EXCELLENT
- Jitter: < 322047619 Hz (2σ)
- Drift: Negligible

##### Data Acquisition:

- Samples: 1000
- Duration: 10 s
- Rate: 100 Hz

System Status: OPERATIONAL

**(E) System Architecture**



1610238.10 MHz