

Recalibration Test

The recalibration test will command the Laser Driver board to turn the laser on and perform a recalibration cycle for both zero and half power density values. Following each recalibration cycle, a read of the Filter Motor Status register (port 182H) will verify that the WSENSE (bit 7) feedback signal from the Laser Driver board, DENS_FDBK and the IEC density DACs were driven to their proper states.

The LDM will drive WSENSE “low” when the diode is turned off and will set it to a “high” when the diode is on. The IEC will drive DENS_FDBK “high” when the diode is off and drive it “low” when the diode is on. The completion time allowed for this test is 2 seconds.

Fault Isolation

A failure will be detected if WSENSE is in the incorrect state after either recalibration cycle. To isolate the cause of the fault, a read of the DENS_FDBK signal for the calibration cycle will determine if the error was caused by the IEC sending an incorrect density value to the LDM. If the density value is correct, then the failure is assumed to be beyond the IEC Module (LDM or cabling) and an error message **60 LDM Error** will be reported.

If a read of the DENS_FDBK bit indicates the IEC sent an incorrect density value to the LDM, then the fault is assumed to be with the IEC and a **60 IEC Error** will be reported.