

T1300342-v1 OFI Optical Test Results, LLO
2/7/2013

| Measured Parameter | Value | Req |
|----------------------|----------|----------|
| OFI S/N | | |
| Location | LLO | |
| Polarization Prism | iLIGO | |
| Faraday Rotator | iLIGO | |
| Optical Alignment | | |
| input power at BS, W | 5.56E-02 | |
| PD1, W | 2.60E-02 | |
| PD2, W | 2.93E-02 | |
| PD3, W | 2.86E-02 | |
| PD4, W | 6.70E-06 | |
| BS Reflectivity | 4.68E-01 | |
| BS Transmissivity | 5.27E-01 | |
| BS total | 9.95E-01 | |
| OFI Transmissivity | 9.76E-01 | 9.50E-01 |
| OFI Extinction Ratio | 5.01E-04 | 1.00E-03 |

| Parameter | | Zernike Coeff., micron | | |
|-------------------------|-------|------------------------------------|--------------------------------------|-----------------------------------|
| | | SH Zernike, double pass data | SH Zernike single pass calc | Req (<10% coupling loss) |
| OFI S/N | | | | |
| Location | LLO | | | |
| Polarization Prism | iLIGO | | | |
| Faraday Rotator | iLIGO | | | |
| Wavefront Distortion | | | | |
| Zernike #4, astigmatism | | 0.014 | | |
| Zernike #6, astigmatism | | 0.012 | | |
| Zernike 4,6 average | | 0.013 | 0.009 | < 0.04 |
| Zernike #7 - 15 | | 0.01 | 0.007 | < 0.04 |