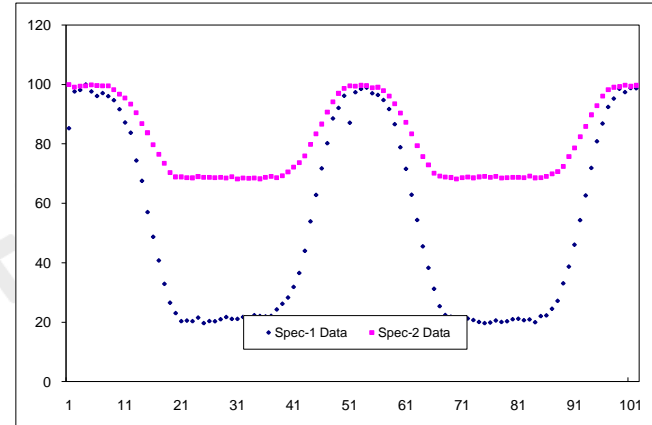


4.3 Spot Size

| Test | Function | x | y | Metric (µm) | Result |
|--------|---|---------|----------|-------------|--------|
| 4.2 #1 | Verify Spec-1 Spot Size | 30 | 32 | 35 | PASS |
| 4.2 #2 | Verify Spec-2 Spot Size | 32 | 32 | 35 | PASS |
| 4.2 #3 | Verify overlay of Spectrometer Spots | -1.33 | 1.67 | 3 | PASS |
| 4.2 #4 | Determine Measurement & Vision Offset on 50µm Box | -0.0060 | -25.4002 | 1 | N/A |
| 4.2 #5 | Verify Overall Spot Size | 32.0 | 33.7 | 35 | PASS |



Step Size (µm)
Box Size (µm)

| |
|----|
| 2 |
| 50 |

Performed by:

Date:

Current M&V Offset (mm)

| x | y |
|--------|----------|
| 0.0000 | -25.4000 |

New M&V Offset (mm)

| x | y |
|---------|----------|
| -0.0060 | -25.4002 |

| # | Spec-1 Data | Spec-2 Data | Spec-1 Moving Avg | Spec-2 Moving Avg |
|----|-------------|-------------|-------------------|-------------------|
| 1 | 8.53E+01 | 1.00E+02 | 95.28 | 99.53 |
| 2 | 9.77E+01 | 9.91E+01 | 95.76 | 99.59 |
| 3 | 9.82E+01 | 9.95E+01 | 95.82 | 99.60 |
| 4 | 1.00E+02 | 9.96E+01 | 96.00 | 99.59 |
| 5 | 9.77E+01 | 9.98E+01 | 97.55 | 99.52 |
| 6 | 9.61E+01 | 9.96E+01 | 97.12 | 99.40 |
| 7 | 9.71E+01 | 9.96E+01 | 96.20 | 99.01 |
| 8 | 9.61E+01 | 9.95E+01 | 94.37 | 98.42 |
| 9 | 9.47E+01 | 9.82E+01 | 92.38 | 97.51 |
| 10 | 9.17E+01 | 9.68E+01 | 89.28 | 96.20 |
| 11 | 8.72E+01 | 9.54E+01 | 85.06 | 94.39 |
| 12 | 8.38E+01 | 9.34E+01 | 79.48 | 92.14 |
| 13 | 7.44E+01 | 9.05E+01 | 72.91 | 89.49 |
| 14 | 6.76E+01 | 8.68E+01 | 65.63 | 86.59 |
| 15 | 5.70E+01 | 8.38E+01 | 57.86 | 83.45 |
| 16 | 4.87E+01 | 7.97E+01 | 49.68 | 80.16 |
| 17 | 4.07E+01 | 7.64E+01 | 42.34 | 77.07 |

| Reflectance Δ | Spec-1 - x | Spec-1 - y | Spec-2 - x | Spec-2 - y |
|---------------|------------|------------|------------|------------|
| | 2.30 | 3.00 | 0.50 | 0.50 |

| Spot Size | | | | | Σ St. Dev. 8.619 |
|-----------|-------|-------|-------|-------|---------------------|
| Entering: | 28 | 26 | 32 | 28 | |
| Leaving: | 30 | 26 | 30 | 30 | |
| Inside: | 28 | 32 | 28 | 32 | |
| St. Dev. | 1.155 | 3.464 | 2.000 | 2.000 | |

| Center Position | | | | Expected - x | Expected - y |
|-----------------|------|------|------|--------------|--------------|
| Entering: | 14.5 | 63 | 14.5 | 61.5 | 13.5 |
| Leaving: | 43 | 92 | 44 | 92 | 38.5 |
| Inside: | 28.5 | 77.5 | 29.5 | 76.5 | 26 |

| Offset | | | | Visual Offset - x: | 6.00 |
|-----------|------|------|------|--------------------|----------------------------|
| Entering: | 2 | -3 | 2 | -6 | Visual Offset - y: 0.17 |
| Leaving: | 9 | 5 | 11 | 5 | |
| Inside: | 5 | 1 | 7 | -1 | |
| Average: | 5.33 | 1.00 | 6.67 | -0.67 | Overlay - x: -1.33 |
| | | | | | Overlay - y: 1.67 |

| References | |
|------------------|-----|
| Count | 102 |
| Half | 51 |
| X mid-point | 26 |
| Y mid-point | 77 |
| X-scan row start | 19 |
| X-scan row end | 69 |
| Y-scan row start | 70 |
| Y-scan row sent | 120 |