Part Number: QAL-0027
Revision: B
Effective Date: 6/17/2016

# TRAVELER: Q5179-0050, Tesseract XL-HD

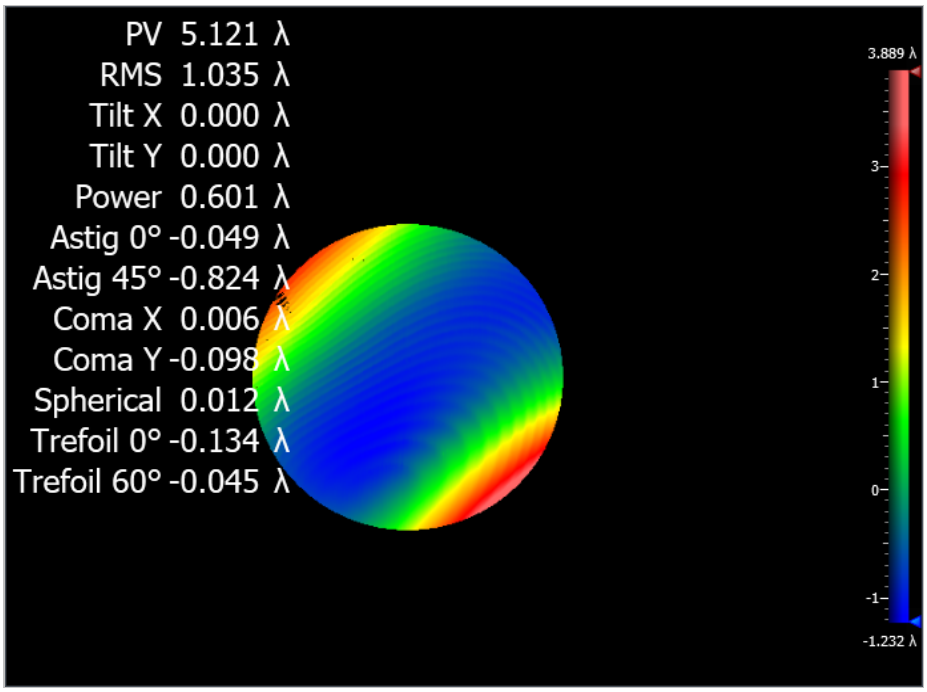
| Part Information | | | |
|---|---|---|---|
| The following section contains information about the assembly. | | | |
| **Part #** | Q5179-0050 | | |
| **Revision** | A | | |
| **Description** | ASSY, Tesseract XL-HD | | |
| **Serial #** | 000564 | | |
| **Date Recorded** | 2/15/2022 8:29:17 PM | | |
| **Internal Components** | **Component** | **Part Number** | **Serial #** |
| | Tesseract XL-HD Optical Column | Q5179-0053 | 000497 |
| | Diffractive Optic Element | AFCL-GU3211B | 58148-132 A |
| | Iodine Board | BAPI22 | FV41072004KJMX221 |

| Requirement Description | Requirement | Measurement | | In Spec YES/NO | | Measurement Method |
|---|---|---|---|---|---|---|
| DOE Surface to Collimated Beam Tip/Tilt Error (Mean) | ≤ 50 arcseconds | 35.3 | arcseconds | ☑ | ☐ | Auto-collimator |
| DOE to Mechanical Interface Clocking Error | ≤ 0.1° | 0.0013 | ° | ☑ | ☐ | Spot Pattern Image Processing |
| Collimated Beam to Mechanical Interface Tip/Tilt Error | ≤ 2 arcminutes | 0.37 | arcminutes | ☑ | ☐ | Spot Pattern Image Processing |
| Collimated Beam Transmitted Wavefront Error at 532nm, Single Pass Peak to Valley | ≤ 0.50 wave | 0.47 | wave | ☑ | ☐ | Shack Hartmann Wavefront Sensor |
| DOE Reflected Wavefront Error at 633nm, Peak to Valley | ≤ 8 wave | 5.1208 | wave | ☑ | ☐ | Zygo Interferometer Wavefront Measurement |
| Diffractive Optic Orientation (Vx or Vy) | $V_Y$ | Vy | - | ☑ | ☐ | Visual Inspection |

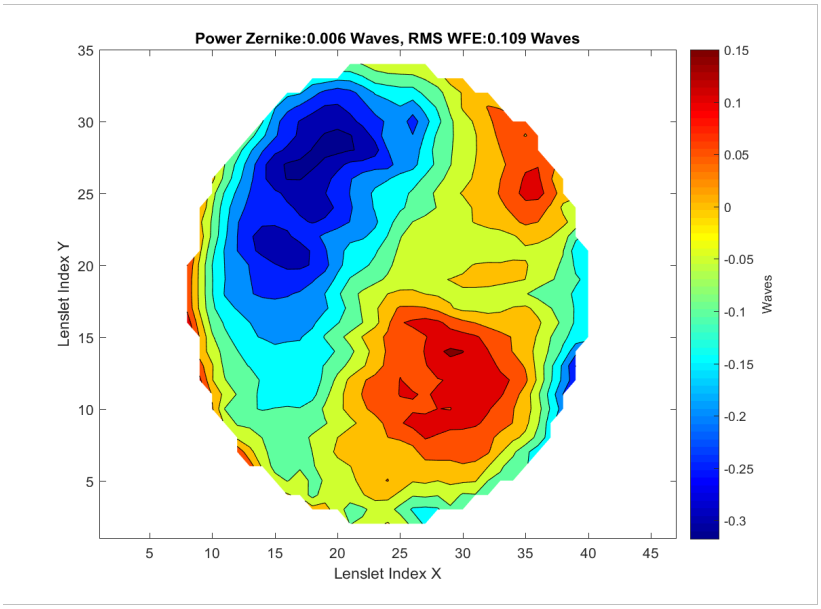
| Quality Check Description | Result Pass/Fail | | Timestamp |
|---|---|---|---|
| Calibration Data | ☑ | ☐ | 7/23/2021 8:58:35 AM |
| QC Camera | ☑ | ☐ | 2/15/2022 8:24:37 PM |
| QC Power Meter | ☑ | ☐ | 2/15/2022 8:03:57 PM |

| **Additional Information** |
| --- |
| The following section includes any additional information used to generate results. Include graphs, images, and calculations as needed. |

DOE Reflected Wavefront Error at 633nm, Peak to Valley




Collimated Beam Transmitted Wavefront Error at 532nm, Single Pass Peak to Valley



Diffractive Optic Orientation