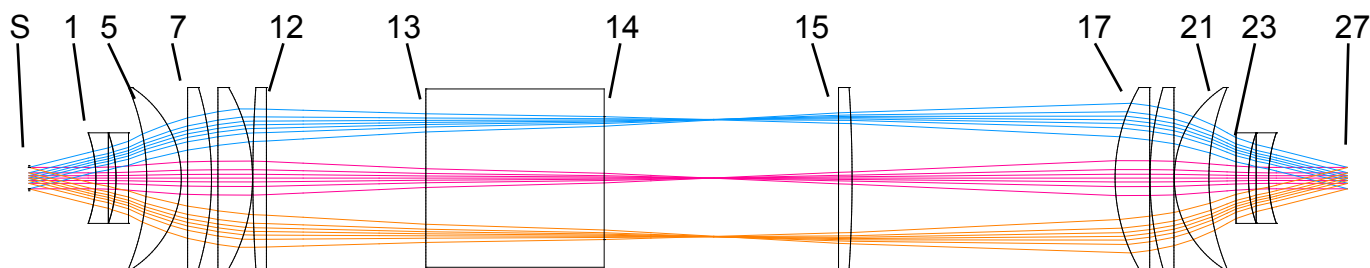


Supplementary Figure 1
Stirman *et al.*

Relay 1 - Beam recombination relay; SM-1/2 to SM-X relay

Surface #



| Surface # | Description | Radius (mm) | Thickness (mm) | Material | Semi-Diameter |
|-----------|-------------|-------------|----------------|----------|---------------|
| Stop | SM-1/2 | | 18.769 | | 3.0 |
| 1 | LC1582 | -38.6 | 3.5 | N-BK7 | 12.7 |
| 2 | | Inf | 2.15 | | 12.7 |
| 3 | LC1582 | -38.6 | 3.5 | N-BK7 | 12.7 |
| 4 | | Inf | 5.1 | | 12.7 |
| 5 | LE1076 | -65.8 | 9.7 | N-BK7 | 25.4 |
| 6 | | -30.3 | 1.77 | | 25.4 |
| 7 | LA1399 | Inf | 6.7 | N-BK7 | 25.4 |
| 8 | | -90.1 | 1.8 | | 25.4 |
| 9 | LA1050 | Inf | 9.7 | N-BK7 | 25.4 |
| 10 | | -51.5 | 0.1 | | 25.4 |
| 11 | LA1727 | 386.3 | 3.8 | N-BK7 | 25.4 |
| 12 | | Inf | 44.7 | | 25.4 |
| 13 | 65-606 | Inf | 50 | N-SF11 | 25.0 |
| 14 | | Inf | 65.707 | | 25.0 |
| 15 | LA1727 | Inf | 3.8 | N-BK7 | 25.4 |
| 16 | | -386.3 | 73.746 | | 25.4 |
| 17 | LA1050 | 51.5 | 9.7 | N-BK7 | 25.4 |
| 18 | | Inf | 0.1 | | 25.4 |
| 19 | LA1399 | 90.1 | 6.7 | N-BK7 | 25.4 |
| 20 | | Inf | 0.1 | | 25.4 |
| 21 | LE1076 | 30.3 | 9.7 | N-BK7 | 25.4 |
| 22 | | 65.8 | 7.61 | | 25.4 |
| 23 | LC1582 | Inf | 3.5 | N-BK7 | 12.7 |
| 24 | | 38.6 | 2.15 | | 12.7 |
| 25 | LC1582 | Inf | 3.5 | N-BK7 | 12.7 |
| 26 | | 38.6 | 22.089 | | 12.7 |
| 27 | SM-X | Inf | next page | | |

Thorlabs

Edmund Optics

Supplementary Figure 1. Full prescription data for the steering mirror (SM) to X scanning mirror (SM-X) relay.

The optical relay was constructed from commercial off-the-shelf (COTS) components and was designed to minimize aberrations at high scan angles. The polarizing beam splitter (PBS) was offset from the focal point of the relay to minimize photo-damage to the optical cement.