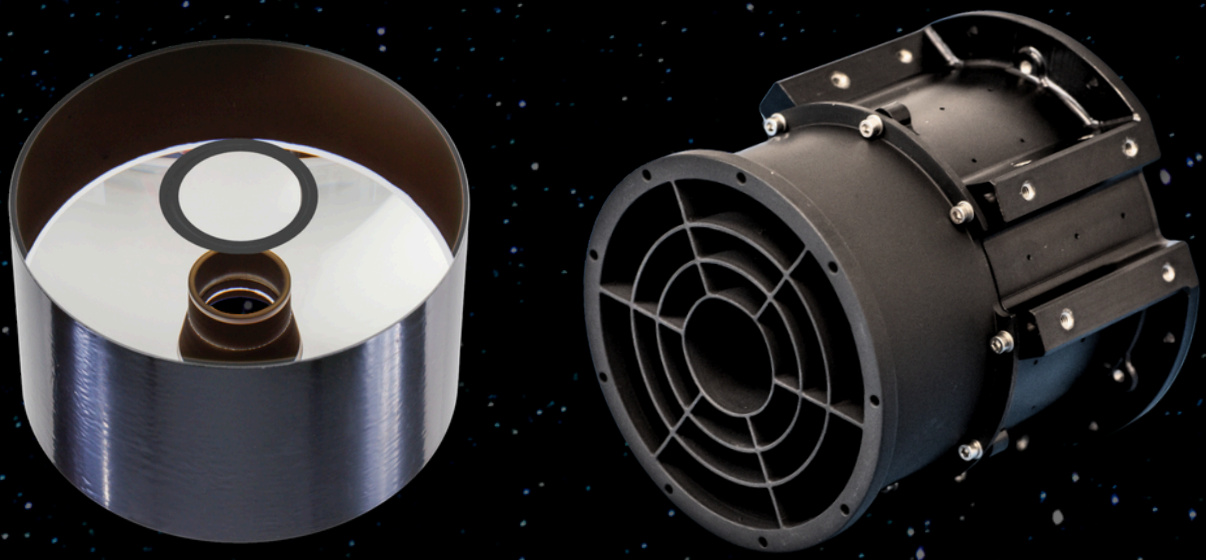
STARRIS

OPTIMAX SPACE SYSTEMS

Space-Proven Compact Telescopes

up to 250mm aperture

Precision monolithic telescopes for harsh environments



High-resolution optics for small satellites ready for rapid deployment, providing detailed and time-critical image intelligence

UV, Visible, & IR configurations

- Space Domain Awareness
- Responsive Space Solutions
- Proliferated ISR
- RSO Identification and Tracking
- Earth Observation
- Rendezvous & Proximity Operations



Single structure = optimal system

Starris SDA monolithic telescopes integrate all optical and mechanical surfaces into a single structure — eliminating metering frameworks and alignment sensitivities.

By shaping a single fused silica block into a compact optical body, the monolithic telescope design combines multiple optical surfaces into one robust element.

Simplified integration

Alignment during fabrication enables the optic to simplify integration for in-space sensing

Rugged & Stable

Maintains focus across temperature changes and offers exceptional resistance to vibration and shock, remaining shelf stable through launch and ensuring long-term performance

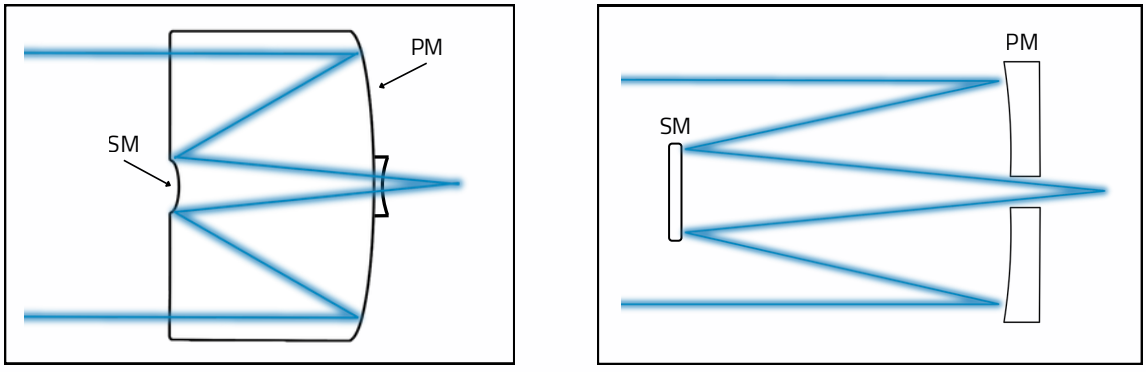
Long focal length with diffraction-limited image quality

Inherently aligned optical surfaces support high focal length to total track-length ratios, while maintaining diffraction-limited image quality and strong radiometric performance

Excellent SWaP efficiency

Delivers a low-mass form factor 3x to 6× shorter than comparable conventional designs

Monolithic Telescope VS **Cassegrain Telescope**



This monolithic architecture provides the optimal system for scalable space EO/IR payload production — reducing reliance on separately aligned multi-part structures, as is the case with a conventional Cassegrain design.

Starris space heritage

- **Three decades** of space-qualified innovation, supporting NASA, DoD, and commercial missions
- **TRL9 qualification** for multiple configurations of monolithic space telescopes
- **Continuous on-orbit operation** since 2018 across 20+ payloads

Bringing rugged and compact optical payloads to space

Starris is the manufacturing partner for monolith telescopes developed by Lawrence Livermore National Lab Space Program in collaboration with Starris's parent company, Optimax Systems. The partnership is bringing rugged, scalable optical payloads to the space industry by solving manufacturability at scale.

Scalable manufacturing

The ideal manufacturing architecture for scaling optical payloads

- High-volume manufacturing powered by more than 35 years of precision optics fabrication at Optimax Systems— the largest precision optics manufacturer in the United States, with a 230,000+ square feet facility that features 20,000+ square feet of assembly and cleanroom areas
- In-house vertical integration that avoids supply chain dependencies
- Agile and lean manufacturing enables design and demonstration technology for repeatable production
- Disciplined control of glass selection, fabrication, multi-surface metrology, coating processes, interface verification, environmental testing



USA Manufactured ▪ ISO 9001 & ITAR Compliant

STARRIS
OPTIMAX SPACE SYSTEMS

Product Line Starris SDA space telescopes

Design Specification	SDA-85 253VisNIR	SDA-85 306VisNIR	SDA-85 650VisNIR	SDA-250 2000VisNIR
Clear Aperture (mm)	85	85	85	250
Effective Focal Length (mm)	253	306	649	1996
F-number	3	3.6	7.6	8
Wavelength (nm)	450-900	450-900	450-900	450-900
Nyquist Matched IFOV (urad)	3.62	3.59	3.57	1.22
Image Circle (mm)	28.3	16	11	32
Diagonal Angular FOV (degrees)	6.22	2.9	0.93	0.88
On-Axis MTF @ 50lp/mm	61%	73%	54%	41%
Full Field MTF @ 50lp/mm	23%	63%	28%	26%
On-Axis MTF @ 100lp/mm	32%	49%	31%	25%
Full Field MTF @ 100lp/mm	10%	26%	6%	9%
Track Length (mm)	154.2	136.1	136.7	355.5
Back Focus (mm)	45.55	16.1	13.7	49.98
Weight (kg)	1.9	2.04	2.04	15.1

*Licensed from Lawrence Livermore National Laboratory US Patent 9,720,223

Additional details are available as to temperature, shock/vibe, and TVAC qualification

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