

NEWSPACE MARKET · COMPANY PROFILE



SURFACE OPTICS

Surface Optics Corporation

United States · founded 1977 · surfaceoptics.com

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as of 20 August 2026



Surface Optics Corporation

Surface Optics Corporation was founded on May 5, 1977 in San Diego, California, by aerospace engineers formerly of Douglas Aircraft, Lockheed, North American Aviation, and Convair, some with Apollo-program experience, initially as an optical measurement and modeling subcontractor supporting advanced thermal and RF coating process development for General Dynamics. Over nearly five decades the company grew into a vertically integrated manufacturer spanning three core disciplines: optical properties measurement (spectral reflectance, emissivity, transmittance, BRDF/BSDF scatter, ASTM-compliant testing), vacuum deposition thin-film coatings (including stealth/low-observable coatings, large-area and diamond-like-carbon coatings, and thermal control coatings), and electro-optics engineering (hyperspectral imaging systems, portable field instruments, SBIR/STTR-supported R&D). The company holds AS9100 certification for its five-chamber coatings lab and operates a 20,000-sq-ft San Diego facility purchased in 1998 and expanded in 2020-2021. Notable heritage milestones include a 1983 prime contract from the Ballistic Missile Defense Office for infrared signature prediction, the 1990 launch of the SOC-100 Hemispherical Directional Reflectometer, the 1993 delivery of a thermal control coating for NASA's Chandra X-ray Observatory, installation in 2002 of a 3.3-meter vacuum coating chamber among the largest in the US, and the application in 2007 of a specialized silver coating to NASA's Kepler Space Telescope. The company continues to serve NASA/JPL, Lockheed Martin, L3Harris, Northrop Grumman, and the Missile Defense Agency.

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SERVICES

Services

ASTM Testing

Offers comprehensive optical property testing that adheres to the rigorous standards set by the American Society for Testing and Materials (ASTM).

Electro-Optics Engineering

Provides full-service analytical modeling, optomechanical design, and production unit delivery, covering product development from feasibility studies to prototyping and production.

Optical Property Measurements

Offers various optical property testing services including hemispheric directional reflectance (HDR), bidirectional reflectance (BRDF), emissivity, absorptance, emittance, and solar reflectance (SRI/T

SBIR/STTR Collaboration

Welcomes potential STTR partners to collaborate on cutting-edge research, leveraging its history of turning SBIR R&D efforts into market-ready solutions.

Vacuum Coatings

Provides various vacuum deposition coating services including Vacuum Deposited Gold (VDG), Anti-Reflection (AR), Spaceflight & Thermal Control, Vacuum Deposited Aluminum (VDA), Low Observable/Stealth,

Product catalogue



SURFACE OPTICS CORPORATION

410-DHR Reflectometer

A portable directional-hemispherical reflectometer that measures the integrated infrared surface reflectance of large objects in the field at two angles of incidence across six wav

Measurement type	Integrated directional-hemispherical reflectance
Angles of incidence	20° and 60°
Wavelength bands	Six bands
Spectral range	0.9 to 12 μm
Interface	SOC410-DHR touchscreen interface with guided calibration, sample identification, and measu

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SURFACE OPTICS CORPORATION

710 Series Hyperspectral Cameras (HyCore / OmniCore VNIR)

The 710-HyCore VNIR is a compact camera built around a proprietary spectrograph with co-engineered optics and sensor, for integrators or use with the 710 Lab Tower. The 710-OmniCor

Spectral range	375-1025 nm
Spectral channels	784
Spectral resolution (FWHM)	1.65 nm
Spatial channels	1500
Sensor type	CMOS
Full well capacity	32,000 e-
Max frame rate (full frame)	167 fps

price on request



SURFACE OPTICS CORPORATION

SOC-100 Hemispherical Directional Reflectometer

The SOC-100 HDR is an automated reflectometer that measures polarized, angular diffuse reflectance, transmittance, and directional emittance in the 2.0 to 25.0 μm spectral range, o

Spectral Range	2.0 – 25.0 λ (μm) / 5000 – 400 cm^{-1} Range can be modified based on FTIR optics.
Method	Automated reflectometer 18" electroformed hemiellipsoid mated to Thermo Scientific™ Nicole
Calibration	Comparison of scans of the specimen sample and calibrated specular gold standard at each a
Source	A custom heated cavity provides uniform 2π steradian radiation into the subtended hemielli
Resolution	Depending on data requirement: 2, 4, 8, 16, or 32 cm^{-1} resolution may be employed.
Sample Size	Standard: 1" OD. Sample mounting can accommodate up to 3" x 4" samples.
Automation	The automated process is computer controlled by five stepper motors which provide: polariz

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SURFACE OPTICS CORPORATION

SOC-210 Bidirectional Reflectometer

The SOC-210 BDR is an automated goniometer designed for precise and comprehensive measurement of Bidirectional Reflectance Distribution Function (BRDF) and Bidirectional Transmitta

Spectral range	0.35-14 micron
Incident polar angle	0-85 degrees
Incident azimuth angle	0-360 degrees
Reflected polar angle	0-85 degrees
Reflected azimuth angle	0-360 degrees
Sample size	1-inch dia standard, up to 4-inch square max
Detectors	Si (0.4-1.1 micron), InGaAs (1.0-1.7 micron), InSb (2.5-5.0 micron), MCT (7.0-14.0 micron)

[price on request](#) [datasheet](#)



SURFACE OPTICS CORPORATION
SOC-750 Midwave Infrared Hyperspectral Imager

The SOC-750 is a real-time, military-grade MWIR hyperspectral imaging system combining a high-speed, high-sensitivity MWIR array with an imaging spectrometer for dynamic scene appl

Spectral range	2-5 μ m
Cube acquisition/processing rate	11 cubes per second
Cube dimensions	256 x 240 pixels x 42 bands
Bit resolution	14-bit
Configurations	Two configurations available, differing in focal plane, spectral resolution, spatial resol
Processing	On-the-fly hyperspectral processing with multiple matched filters and three spectral integ

price on request [datasheet](#)



SURFACE OPTICS CORPORATION
SOC-760 VNIR-SWIR Hyperspectral Imager

Portable dual-band (VNIR/SWIR) hyperspectral imager, 0.4-2.5 micron, 650 co-registered bands.

Spectral regions	VNIR/SWIR
Range	400-2500 nm
Spectral resolution	VNIR 2.5 nm / SWIR 5 nm
Bands	650
Spatial resolution	640 px vertical, up to 2048 px horizontal
Pixel size	20 micron
FOV (vertical)	12.5 degrees

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Contact Surface Optics Corporation

Open the company profile on NewSpace Market to see full specifications and datasheets, and to send a request for quotation that reaches the manufacturer directly.

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