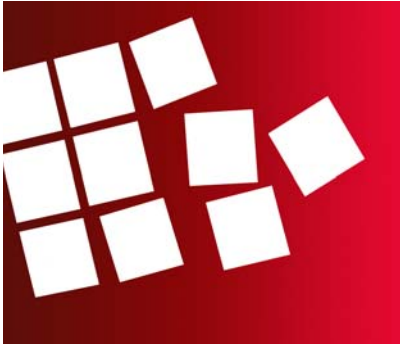


Optical Solar Reflector (OSR), Microsheet



Key Features

- High-reflectance coating
- Conductive coatings
- Metalized edges
- Special corner crops, notches, and configurations (rounds, trapezoids)
- Dimensional tolerance tightened upon request

OSR Products

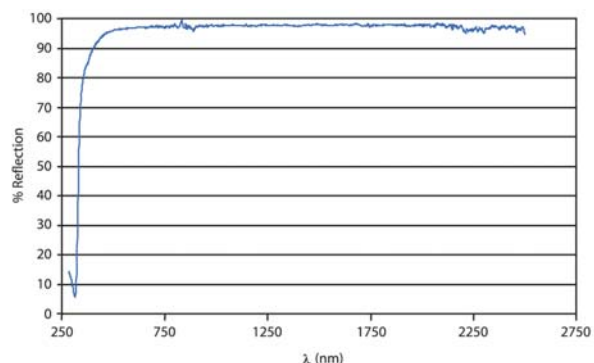
- OSR—High-reflectance coating on back surface, with protective dielectric overcoat
- OSRc—OSR with conductive coating on back surface
- COSRc—OSR with conductive coating on front and back surfaces
- UOSR—Front-surface, UV reflector (UVR) OSR, with protective dielectric overcoat
- UOSRc—Front-surface, UVR-coated OSR, with conductive coating on back surface
- CUOSRc—Front-surface, UVR-coated OSR, with conductive coating on front and back surfaces

JDSU microsheet optical solar reflectors provide low solar absorption and high thermal emittance to control satellite temperature. Developed by JDSU they have flown on many critical US satellites and numerous international satellites.

JDSU offers Corning 0214 microsheet, which provides the greatest resistance to radiation-induced darkening and damage in hostile space environments. Silver is used as the primary coating because it provides optimum solar reflectance. Mirrors with low solar absorption, coupled with high thermal radiation properties, are used to reduce satellite operating temperature and diurnal temperature variations.

JDSU offers dielectric or conductive protective overcoats for solar reflects in addition to customized edge metallization.

Typical OSR or OSRc Performance on 0214 Microsheet



Material

- Corning 0214, ceria doped microsheet

Physical Properties

- Density: 2.5 grams/cm³ (41 grams/in³)
- Refractive index: 1.516 at 589 nm
- Young's Modulus: 73,000 MPa, 25°C
- Poisson's Ratio: 0.22, 25°C

Product Configuration

- Thickness: 0.075 mm to 0.150 mm/0.003" to 0.006"
- Tolerancing (LxW): ±0.05 mm/±0.002"
- Surface finish: As drawn surfaces to 80/50 scratch/dig
- Parallelism: within 0.05 mm/0.002"
- Perpendicularity: within ±0°15'
- Complete surface coating coverage

Durability

- Humidity resistance: 24 hours at 120°±4°F and 95 – 100% relative humidity (MIL-M-13508)
- Adhesion: cellophane tape test (ISO9211-4, slow pull)
- Abrasion resistance: 50-rub cheesecloth test (0.75 to 1.25 lbs)

Specifications	Specification Number OSR-6069001					
Parameter	OSR	OSRc	COSRc	UOSR	UOSRc	CUOSRc
Maximum integrated solar absorptance from 0.28 to 2.5 μm	0.070	0.070	0.073	0.040	0.040	0.055
Minimum normal emittance from 5 to 50 μm	0.88	0.88	0.84	0.80	0.80	0.80
Rear-surface resistance (Ω)	-	<50	<50	-	<50	<50
Front-surface resistance (Ω/square)	-	-	<10 ⁵	-	-	<10 ⁵

Ordering Information

For more information on this or other products and their availability, contact your local JDSU account manager or JDSU directly at 1-800-498-JDSU (5378) in North America and +800-5378-JDSU worldwide, or via e-mail at customer.service@jdsu.com.

Notes

1. Additional details are contained in the product specification.
2. Continuous process improvements may require changes to product specifications.