



A JDS Uniphase Company

Optical Coating Laboratory Inc.
2789 Northpoint Parkway, Santa Rosa, CA 95407

Product Specification

Complete # 0227201 - OCLI-FCI-9 (Section 2.1)

EMI/RFI SHIELDING AND THIN FILM HEATER 50/20 Ω/□ COATING

6035004

1.0 Description:

This specification defines EMI/RFI Shielding and Thin Film Heater 50/20 Ω/□ ITO transparent conductive coatings applied to glass display products.

2.0 Reference Documents

#11112002-Q0CJ-SCX9 EMI/RFI Shielding and Thin Film Heater 50/20 Ω/□ Coating
/ Document #6035004 Rev. D

The following documents form a part of this specification to the extent specified herein.

- MIL-C-675C Coatings of Glass Optical Element (Anti reflection)
- MIL-C-14806A Coatings, Reflection Reducing, for Instrument Cover Glasses
and Lighting Wedges
- MIL-M-13508C Mirror Coating Process, Front Surface Aluminized for Optical Elements
- OCLI Procedure “Scotch” Tape Adhesion Test
8510002

3.0 Performance/Operating Characteristics Required

EQUIPMENT, MATERIALS, AND SUPPLIES

Rapid Scanner or equivalent, and a Delcom Conductance Monitor or equivalent

ELECTRICAL PERFORMANCE

The sheet resistance of the coating offered in this product is as follows:

- a) $\leq 50 \Omega/\square$
- b) $\leq 20 \Omega/\square$

NOTE: When over coated with AR or index matched, the specified sheet resistance is not present on the surface of the coating. Contact to the specified conductive layer is made by application of busbars.



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SPECTRAL PERFORMANCE

Three types of thin film designs are available in this product: no AR (or single layer), with AR, and index matched.

Specular spectral performance specified below are averages between 425nm and 675nm at 10 degrees of incidence and all the values exclude the substrate absorption and the influence of the second surface reflection.

<u>PRODUCT TYPE</u>	<u>REFLECTION</u>	<u>TRANSMISSION</u>
No AR	not specified in 1.00 medium ≤ 2.5% in 1.52 medium	≥ 85% in 1.00 medium ≥ 93% in 1.52 medium
With AR over coat	≤ 2.0% in 1.00 medium	≥ 93% in 1.00 medium
Index matched to 1.00 medium	≤ 2.0% in 1.00 medium	≥ 93% in 1.00 medium
Index matched to 1.4 ~ 1.52 medium	≤ 0.75% in matched medium	≥ 93% in matched medium

4.0 Quality Assurance Provisions

ENVIRONMENTAL PERFORMANCE

Coating Adhesion:

The coating shall show no evidence of damage when an approved tape (refer to OCLI Procedure 8510002) is pressed firmly against the coated surface and slowly removed (reference MIL-13508C, Para. 4.4.6).

Abrasion Resistance:

The coating shall show no evidence of deterioration after subjected to a 40 rub (stroke) eraser abrasion resistance test using a rub force of 2 ~ 2½ lbs. (reference MIL-C-675C, Para. 4.5.10).

Humidity

The coating shall show no evidence of deterioration after subjected to a continuous exposure for 24 hours in an atmosphere of 120°F ± 4°F with 95 ~ 100% relative humidity (reference MIL-C-675C, Para. 4.5.7).



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PRODUCT CERTIFICATION

Solubility

The coating shall show no evidence of deterioration after being immersed for 24 hours in water containing six ounces of Sodium Chloride per gallon (reference MIL-C-675C, Para. 4.5.7).

Temperature Shock:

The coating shall show no evidence of deterioration after exposure to ambient temperature of -65°F and +160°F for a period of four hours at each specified temperature (reference MIL-C-14806A, Para. 3.11.3).

5.0 Preparation for Delivery

N/A

6.0 Definitions

N/A

7.0 Notes

N/A

8.0 Safety Information

N/A