

# LORIN

## PreMirror® 11 Optima

## TECHNICAL DATA SHEET

**Finish Description:** Lorin's PreMirror® 11 Optima finish is a semi-specular anodized aluminum finish developed to provide lighting engineers with a high quality reflective surface that minimizes iridescence while offering additional protection for exterior applications.

### Reference Part Number (s)

0312-225-002

### Industry Designations

#### Aluminum Association

AA-M11-C32-A21

#### Mil A-8625F Classification

Type II Sulfuric Anodize

### Industry Standards

#### ISO 9001

Quality management system

#### Mil A-8625F Anodizing Standard

Anodic coatings for aluminum and aluminum alloys

### Aluminum Properties

**Alloy:** 1085

**Temper:** H18

**Finish:** BMF

### Mechanical Properties

**UTS:** 20 ksi min [138 MPa]

**YTS:** 17 ksi min [117 MPa]

**Elongation:** 2% min

**Bend Radii:** Recommended 3t min

### Chemical Properties

**Si:** 0.10 %

**Fe:** 0.12 %

**Cu:** 0.04—0.06 %

**Zn:** 0.03 %

**Ti:** 0.04 %

**Ga:** 0.03 %

**Others:** 0.01 %

**Al:** Remainder

### Stock Gauge Availability <sup>1</sup>

0.020" (0.5 mm)

0.025" (0.6 mm)

### Stock Width Availability <sup>2</sup>

48.5" (1232 mm)

### Anodize Film Thickness

#### Decorative Anodic Layer:

0.225 mils [5.7 µm]

### Anodize Finish Properties

#### Optical:

**Rs:** 46-60

**D/I:** 80-100

15 Degree: 0-0.05

**60° with Grain:** 640-870

**60° against Grain:** 560-890

**Gloss:** Not applicable

**Color:** Natural Aluminum

**Color Target:** Not applicable

**UV Stable:** Yes

**Environment:** Exterior

**Seal:** S3, Duplex Seal III

**Quality Grade:** 2

**Other:**

**Footnotes:** 1 - Other gauges can be custom ordered. 2 - Other widths can be custom ordered.



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### Aluminum Secondary Services

- Shearing, Width Capabilities:**  
7" (178mm) - 62" (1575 mm)
- Shearing, Length Capabilities:**  
Up to 192" (4876 mm)
- Shearing, Loading Gauge:**  
Up to 0.080" (2.0 mm)
- Slitting, Width Capabilities:**  
0.75" (19 mm) min
- Slitting, Loading Gauge:**  
Up to 0.100" (2.5 mm)
- Other Secondary Services:**  
Protective peel-able films  
International packaging  
Perforating and embossing

### Maintenance and Cleaning

The anodized aluminum finish can be washed with mild soap and water followed by a clean water rinse. For more information on cleaning anodized aluminum, please refer to the Aluminum Association Publication 92, Care of Aluminum or AAMA 609 & 610-09, Cleaning and maintenance guide for architecturally finished aluminum.

### Sustainability and LEED

- Recycled Content:**  
100% recyclable  
Recycled Content = 0 %
- Volatile Organic Compounds:**  
The aluminum oxide layer does not contain any VOC's

### Availability

The standard lead time for stocked gauges and widths is two weeks for anodizing and one week for any secondary services such as slitting, shearing and applying transparent protective films or paper.

Please check availability of Non-Stocked materials by contacting our sales staff using our toll free number 800.654.1159 or email your request to [info@lorin.com](mailto:info@lorin.com). Some raw materials may have extended lead times.

### Technical Support

A staff of factory trained personnel are available to offer technical assistance. Please call our toll free number 800.654.1159 or email your question to [info@lorin.com](mailto:info@lorin.com).

### Product Support Partners

Lorin Industries works very closely with many manufacturers' in multiple markets who specialize in anodized aluminum fabrication. Our support staff can assist you if you are looking for finished components. Please call our toll free number 800.654.1159 or email your request for product and application support to [info@lorin.com](mailto:info@lorin.com).

### Warranty

A limited warranty may be available upon request. The warranty is issued on a per project basis and can be applied for on line by completing an application for warranty at [www.Lorin.com](http://www.Lorin.com)

### Anodized Finish Test Data

Characteristic	Test Method	Standard	Test Results
Oxide Layer, Thickness	ASTM B244 - Eddy current method	AA Protective & Decorative coating less than 10.2 µm (0.400 mils) maximum	Nominal Target, 5.7 µm (0.225 mils)
Oxide Layer, Weight	ASTM B137 - Coating Dissolution		> 1.4 mg/cm <sup>2</sup> (8.7 mg/in <sup>2</sup> )
Film Hardness	ASTM D3363 - Pencil Hardness	Based on an anodized film thickness of 6 µm (0.250 mils)	9H hardness
Corrosion Resistance	ASTM B117 - Neutral Salt Spray	500 hours, No visible pits	Pass, No visible pits
Seal Quality	ASTM B136 - Dye Stain	Dye Stain Test	Pass, No Visible Stain

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