

▶ NEW GENERATION OF ALUMINIUM MIRRORS

▶ CONCENTRATING THE POWER OF SUN

TECHNICAL DETAILS

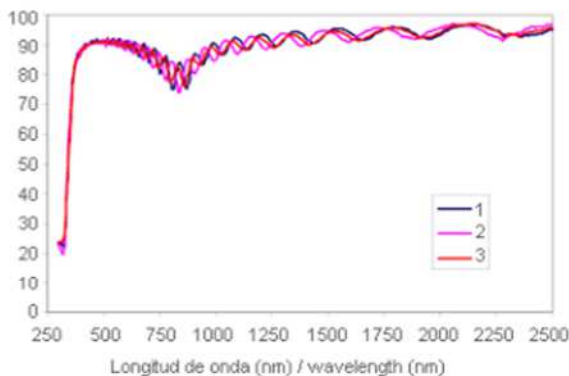
Optical properties

Mirrors Aluminum Multi **Almirra**[®], consisting of two sheets of aluminum and a core of plastic resins. The front reflector is composed of an aluminum foil 0.3 mm thick which are deposited on the aluminum salts through a PVD (Physical Vapor Deposition) and subsequently coated with a protective lacquer, ceramic for use outdoors. The back side is protected by a layer of polyester paint.

To measure the specular reflectance of Mirrors Multi **Almirra**[®], have been analyzed three samples from Almería to the PSA, test facility belonging to CIEMAT (Research Center on Energy, Environment and Technology).

As shown in the figure, the specular reflection of the three samples is very similar and only small changes in the position of the multiple effects of interference due to slight variations in the thickness of the protective layer.

The values of specular reflectance, integrated over the range with the solar spectrum AM 1.5, are shown in the following table and graph:



Specular reflectance of three samples of **Almirra**[®], measured with the URA.

Sample	Specular Reflectance
Sample 1	87.8%
Sample 2	87.5%
Sample 3	87.6%

Mechanical Properties

Concepts	Standards	203 PE	303 PE	403 PE	603 PE
Flexural rigidity E-1 (kN m ² /m)	ASTM C-393	0.0206	0.065	0.1261	0.306
Module of elasticity of Aluminium (N/mm ²)	UNE EN ISO/587-1:1996 UNE EN ISO/587-2:1198		70000		
Yield Strength (0.2 limit) (N/mm) (N/mm)	UNE EN ISO/587-1:1996 UNE EN ISO/587-2:1197		32,2 ± 0,28		
Longitudinal thermal expansion. m/m (by Δ T ^a 100° C) (Δ T ^a 100° C)			2,3 × 10 ⁻⁵		
Thermal conductivity K (W/m ^o K)	UNE 92-202-89; 1989		0,221 ± 0,002		
Panel tensile strength (N/mm ²)	UNE EN ISO/587-1:1996 UNE EN ISO/587-2:1197		40,08 ± 0,43		

Test Resistance

Alucoil works continuously on improving the Multilaminar Aluminium Mirrors **Almirra**[®], with many analysis and tests in its own laboratories and in the most prestigious independent institutions. For more information, please contact us.