

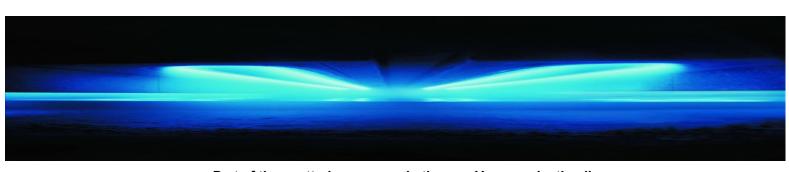
Vega 95 is the new range of highly reflective aluminium with 95% total reflectance. It is the result of a major technical development project carried out by **Almeco**, which combines the proven quality of the galvanic processes and the technology of surface coating in "vacuum".

The new **PVD** (**Physical Vapour Deposition**) treatment line, believed to be the largest of its kind in the world, is located in Bernburg, Germany, close to one of the world's most important research & development hubs for vacuum coating of materials. The plant has been designed and equipped with the most recent systems for roll to roll metal surface treatment by PVD processes.

The key features of Vega 95 allow users to improve optical performance and optimize the luminous efficiency of lighting equipment by **10 – 20%** with potential energy savings of **20%** or more.

Its high performance characteristics make Vega aluminium the ideal product for all applications that need highly reflective aluminium, like reflectors for the latest high efficiency lamps, backlight units and aluminium surfaces for solar concentrators.

The Vega range covers all surface finishes and is available in all suitable lighting industry formats and gauges.



Part of the sputtering process in the new Vega production line



VEGA 95100

Vega 95100 is the mirror finish product in the Vega range. Its enhanced optical characteristics make it the ideal material for a wide range of reflector applications requiring very high efficiency.

Optical properties

Total reflectance	ASTM E 1651 TR2 Reflectometer	> 95%
	DIN 5036 Integrating sphere	> 95%
Diffuse reflectance	DIN 5036 Integrating sphere	< 10%
Specular reflectance	ISO 7668 60 degree, Longitudinal	88%
	Transverse	88%
Iridescence		Absent

Base material

Pre-anodized aluminium	1085 alloy, purity 99.85%	Temper – H18
Mechanical Properties	Tensile strength typical	160– 200 Pa
	0,2% Proof Stress typical	150-190 MPa
	Elongation min.	2%

Coating system characteristics

Anodized base coat, covered by a high reflectance, 99.99% pure aluminium reflectance layer, and an outer dual layer vacuum deposited oxide system, tuned for maximum reflection enhancement.

Coating performance

Bending	No film de-lamination on forming to a bend radius of 1t in long or transverse directions.
Adhesion	Cross hatch tape pull-off test – no detachment of coating.



Vega plant in Bernburg, Germany