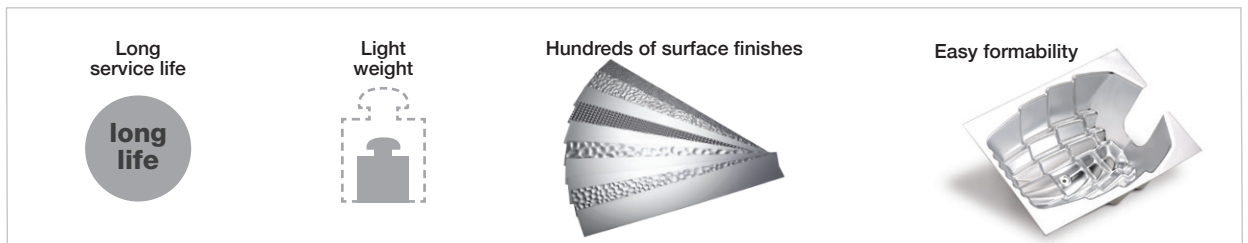
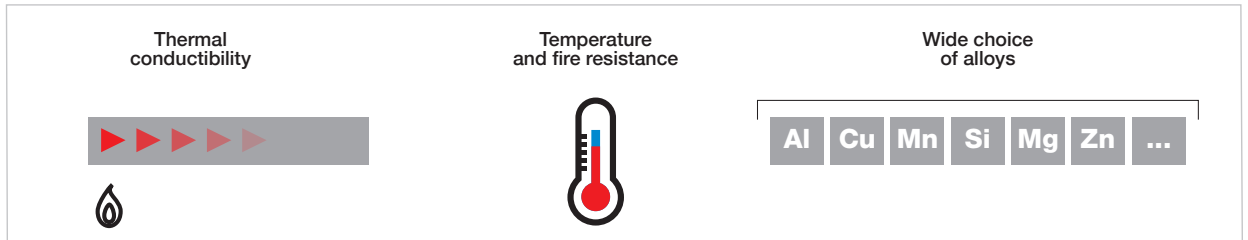
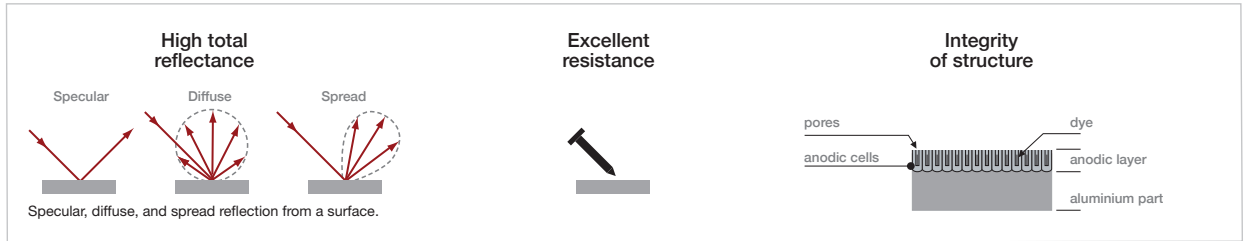


PRE-ANODIZED ALUMINIUM



Pre-anodized aluminium offers an excellent combination of high reflection and durability in a large range of finishes and qualities to suit most applications.

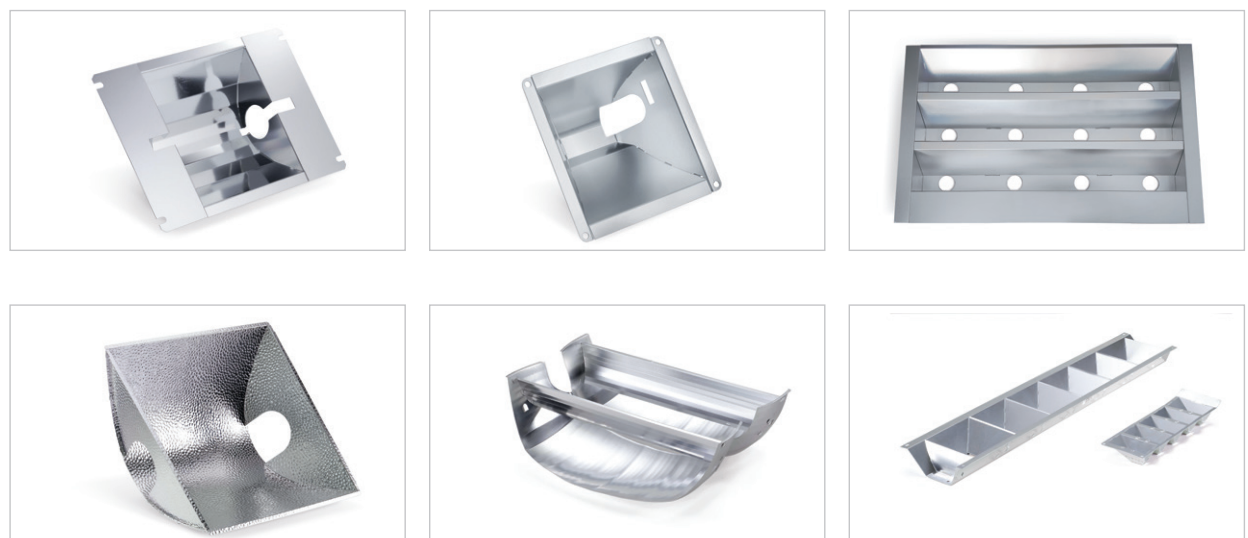
Key characteristics



Product structure

Versatile, flexible and durable, the pre-anodised aluminium provides high reflectance and durability in a wide choice of finishing. The process of electro-polishing and anodising cleanses the surface and protects it through the growth of a hard and transparent oxide layer, intimately binding it to the metal so as to impede delamination, and giving it excellent resistance to oxidation. Above all, the process of anodising ensures the aluminium those high total reflectance values that are essential to ensure the functionality in the lighting field.

Example of applications



pre-anodized technical data

| Product | Type | Total reflectance [%] | | Specular reflectance [%] | | Diffuse reflectance [%] | Iridescence scale 1-4 | Alloy purity | Temper (hardness) | Min. tensile strength [MPa] | Min. yield strength [MPa] | Min. [%] elongation A ₅ A ₁₀ |
|----------|--------------------------------|-----------------------|------------|--------------------------|-----------|-------------------------|-----------------------|--------------|-------------------|-----------------------------|---------------------------|--|
| | | ASTM E 1651 | DIN 5036-3 | 60° long | 60° trans | DIN 5036-3 | | | | | | |
| S090 | specular standard | 86 | 86 | 80 | 77 | 15 | 1 | Al 99.85 | H18 | 125 | 105 | 2 |
| S100 | specular brilllox 1 | 86 | 86 | 82 | 80 | 12 | 2 | Al 99.85 | H18 | 125 | 105 | 2 |
| S101 | specular brilllox | 86 | 86 | 83 | 81 | 10 | 2 | Al 99.85 | H18 | 125 | 105 | 2 |
| S103 | specular mirror | 86 | 86 | 84 | 82 | 8 | 3 | Al 99.85 | H18 | 125 | 105 | 2 |
| S106 | specular reflex | 87 | 87 | 85 | 84 | 6 | 3 | Al 99.9 | H18 | 125 | 105 | 2 |
| S120 | reflectormatt | 85 | 85 | 60 | 38 | 77 | 3 | Al 99.9 | H19 | 140 | 115 | 1 |
| S121 | reflectormatt | 84 | 84 | 55 | 35 | 80 | 3 | Al 99.7 | H19 | 150 | 125 | 1 |
| S125 | luminal matt | 85 | 85 | 70 | 65 | 66 | 3 | Al 99.9 | H18 | 125 | 105 | 2 |
| S130/2 | reflector diffuse | 83 | 83 | 32 | 10 | 80 | 2 | 5005 | H14 | 145 | 120 | 2 |
| S130/4 | reflector diffuse | 82 | 82 | 28 | 9 | 80 | 3 | 5005 | H14 | 145 | 120 | 2 |
| S130BF | double faced reflector Satinox | 78 | 78 | 9 | 4 | 77 | 4 | 5005 | H14 | 145 | 120 | 2 |
| S3010 BF | double faced reflector diffuse | 78 | 78 | 17 | 5 | 80 | 3 | 5005 | H14 | 145 | 120 | 2 |
| S145 | semi-specular | 84 | 84 | 50 | 45 | 45 | 3 | 5005 | H16 | 165 | 145 | 2 |
| SD80 | bright diffuse | 84 | 84 | 35 | 30 | 80 | 4 | Al 99.85 | H19 | 140 | 120 | 1 |
| S210 | stucco | 83** | 83** | not relevant | | 82 | 3 | Al 99.85 | H18 | 125 | 105 | 2 |
| S230 | concave hammered | 85** | 85** | not relevant | | 84 | 3 | Al 99.85 | H18 | 125 | 105 | 2 |
| S235 | convex hammered | 85** | 85** | not relevant | | 84 | 3 | Al 99.85 | H18 | 125 | 105 | 2 |
| S250 | etched rigato | - | - | not relevant | | - | 4 | 5005 | H14 | 145 | 120 | 4 |
| S250.02 | rigato | - | - | not relevant | | - | 3 | 5005 | H14 | 145 | 120 | 4 |

**Measured on the flat surface before patterning

NOTE: Iridescence internal classification 1= normal, 2= low, 3= very low, 4= no iridescence

All information provided is based on up-to-date values where possible. Optical values are typical results from 0.4 mm (0.016") metal and are published for guidance only; they may vary according to raw material thickness. For more detailed information please contact our technical sales department.

Physical characteristics of the materials are in accordance with EN (European Committee for Standardization).

Applicable standards

Specular Reflectance (ISO 2813 - ASTM D-523)

Measurements are made by BYK - Gardner GmbH reflectometer.

Total Reflectance (DIN 5036-3)

Measurements are made using a 50 cm integrating sphere (Ulbricht Globe).

Total Reflectance at 30° (ASTM E 1651)

Measurements are made by the Technidyne TR2 integrating sphere.

Diffuse Reflectance (DIN 5036-3)

Measurements are made using our 50 cm integrating sphere with a specular exit port.

Class efficiency (EN 16268:2013)

Performance of reflecting surfaces for luminaire according to above measurements.

Test Standard For Anodic Oxidation

Microscopic measurement of oxide layer UNI EN ISO 1463.

European Standards (EN) for aluminium

Ente Nazionale Italiano di Unificazione (UNI)

Alloys UNI-EN 573-3

Mechanical Properties UNI-EN 485-2

Measuring Standards UNI-EN 485-4

General Tolerance

Thickness tolerance according to UNI-EN 485-4

Width tolerance: ± 0.15mm / ±0.00591"

Length-cut sheets: ± 1mm/m / ±0.03937"

Note

All materials listed above can be delivered in various sizes and shapes according to customer requirements.

Products with protective tape are guaranteed for six months after delivery if stored in a conditioned room (temperature 20-30°C and relative humidity 50-60%) and kept away from sunlight and any heating source.

Protective tape is not UV resistant.

Products are supplied with a peelable self-adhesive polyethylene protection tape, which guards against scratching during transportation and manufacturing.

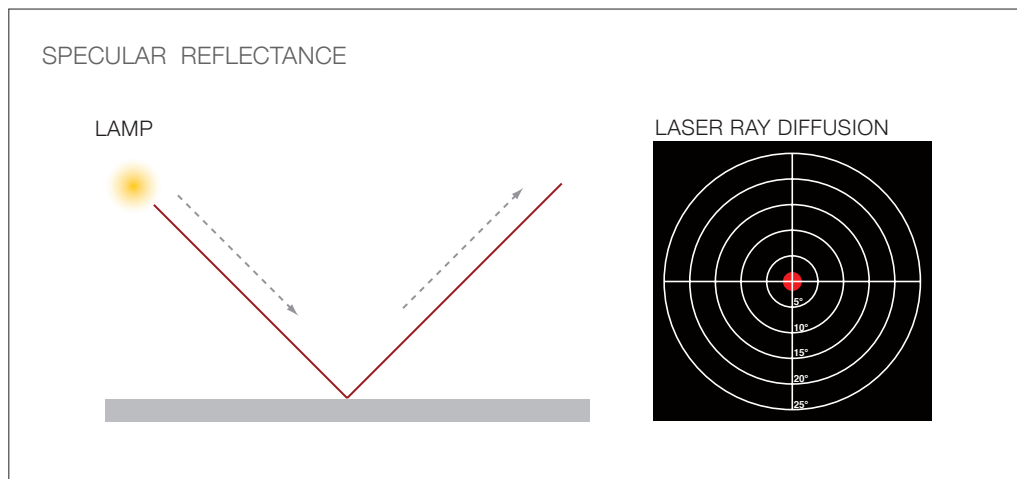
The samples shown in this catalogue are purely exemplary, although the materials and finishes correspond to the items listed.

For material approval and characterization, please ask for sampling.

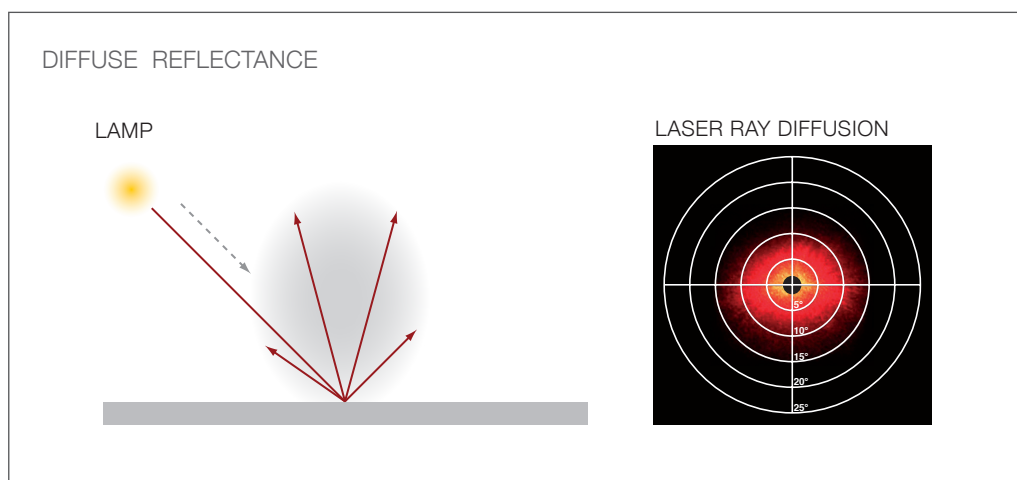


Reflectivity characteristics

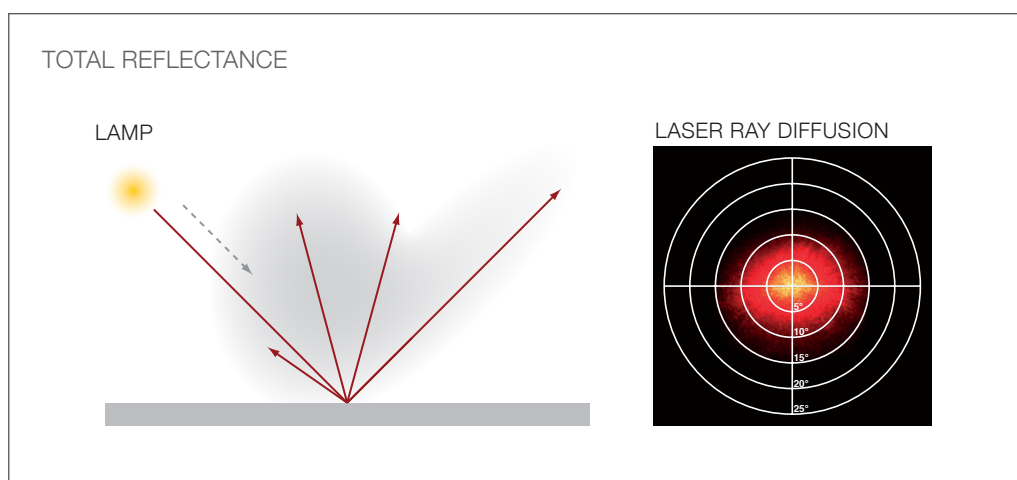
Each material is characterised by three complementary reflective properties



A measure of light reflected at an angle equal to the angle of incidence i.e. mirror reflection



A measure of the amount of scattered light



This encompasses the total amount of light reflected from the surface as a percentage of the incoming light



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