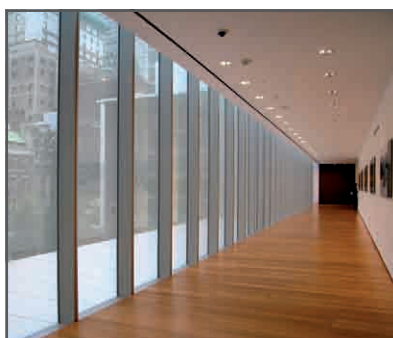
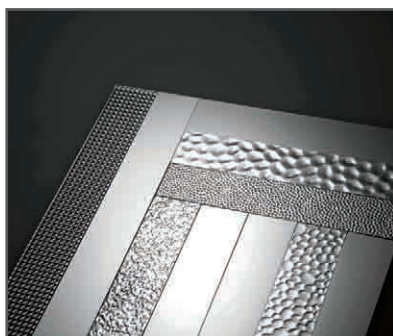


# reflect+A<sup>TM</sup> team

Powered with **vegaLED98**

L.O.R. up to 99%  
Minimum order 60 pcs.  
Fast&Easy customisation



Ready to fit - Easy to use

2014



# reflect+A<sup>TM</sup>

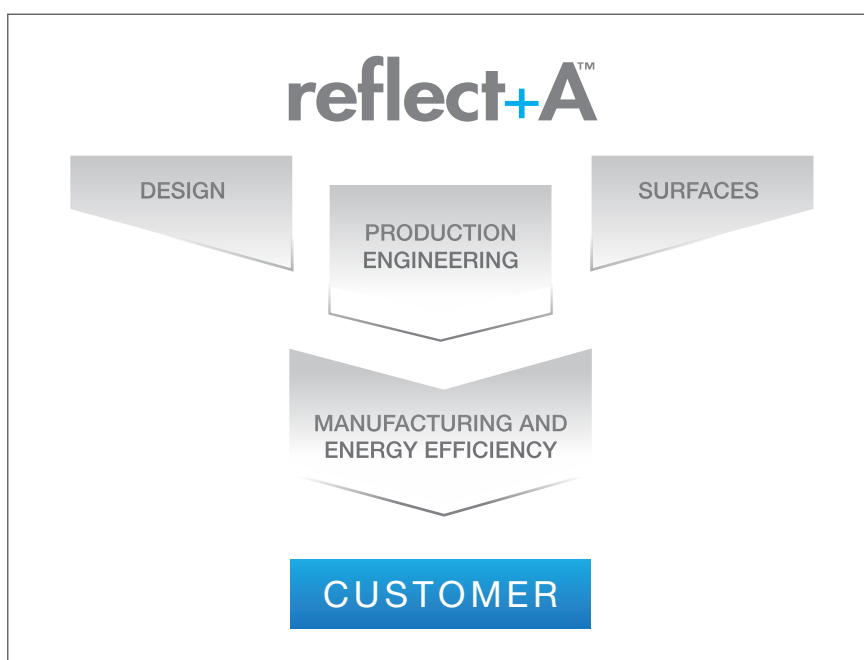
## Evolving lighting concepts

**reflect+A** is an Almeco Group concept dedicated to the design, engineering, production and commercialization of a complete range of modular reflectors for the lighting market.

Almeco is the first and only Company to integrate aluminium reflector forming and bright anodised and PVD (Physical Vapour Deposition) aluminium production on one site.

The Company stands out for its wide range of products and the high quality of its finishing processes.

**reflect+A** exists to provide lighting solutions through Almeco Group's engineers working in partnership with customers at whatever stage required, from concepts and design, through prototyping and tooling to production.



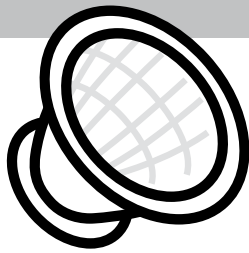
**reflect+A** concept

Adaptation to other applications and optimisation for different LED sources of the present catalogue is possible; ask for professional **reflect+A** design service to Almeco Group engineers.

### **reflect+A** main advantages:

- + High performance (up to 99% L.O.R.);
- + Flexible system;
- + Easy customisation;
- + No tool investment;
- + Small batches (from 60 pcs.).

## Customisation possibilities



Light source



to design  
with your  
light source

Bottom



to adapt it  
to your LED  
module and  
mounting  
system

Surface finish



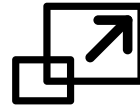
to change  
thickness,  
finish and  
colour

Frame



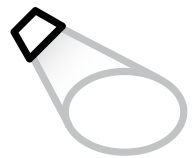
to design  
any shape,  
finish,  
position

Dimensions



to adapt it  
to your housing  
and application

Shape/Beam



to adapt it  
to your need



## Already compatible LEDs and holders

### LEDs



CREE

LEXTAR



PHILIPS

SEOUL

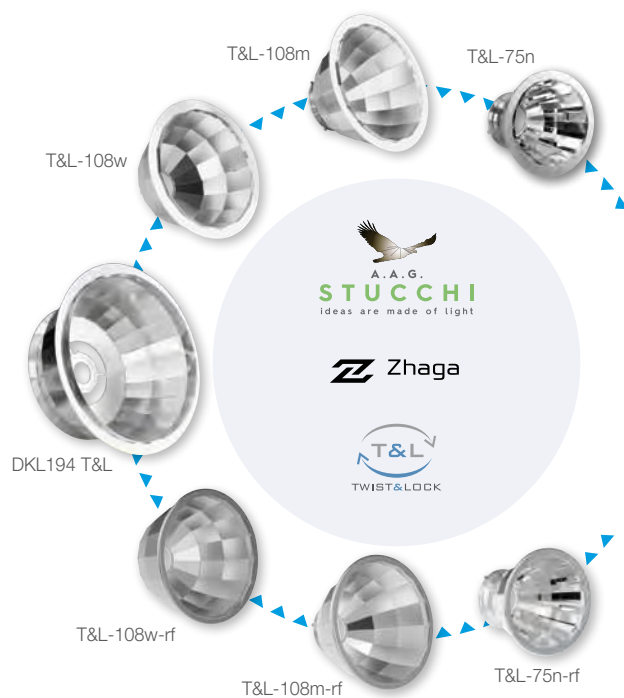
SHARP

SUNPU LED



TRIDONIC



### Holders





**Twist&Lock** is used to assembly the LED module into the  LED holder 7300. Intelligent and patented design details enable no-tool installation or disassembly of all **team** reflectors on  **Zhaga** compliant LED modules' holders. **Twist&Lock** fixing system is standard on **Twist&Lock** reflectors and is optional on larger downlights.

#### Main advantages are:

- + Easy and reliable LED module and holder assembly and installation. No screws or screwing tools required.
- + Exact positioning of the LED module.
- + During operation correct and reliable pressure of the LED module onto the heat sink thanks to rivet/spring system. Screw torque issues avoided during installation.
- + Compensation of tolerances on component dimensions.
- + Adequate component thermal expansion management.
- + Easy LED module replacement and component maintenance after first installation.
- + Reflector fully integrated into the LED module/holder system.
- + Quick replacement of the reflector allows modification of the luminous effect (different beams for temporary exhibitions or shop-windows).
- + Quick replacement of the reflector allows modification of the aesthetics (e.g. coloured reflector in bandoxal décor aluminium).



AAG Stucchi holder 7300



LED Zhaga book 3



Assembly



Complete system

Bottom fixing holes type TS-D17 is used to assembly the LED module into the holder 8101-G2 (March 2014) by AAG Stucchi.

## Main advantages are:

- + Exact positioning of the LED module.
- + Perfect focus.
- + Reflector closer to the LES, due to the deepdrawn surface.
- + Less spill light.
- + Reflector fully integrated into the system (LED module + holder).
- + Higher efficiency.
- + Quick replacement of the reflector allows modification of light distribution and aesthetic.
- + Easy and reliable LED module and holder assembly.



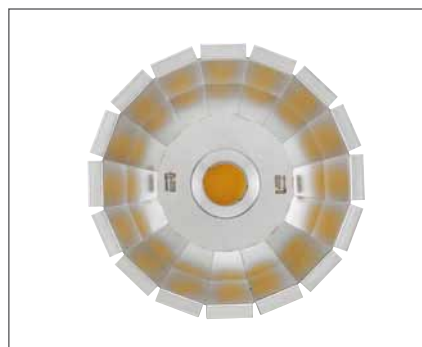
AAG Stucchi holder



LED




Assembly



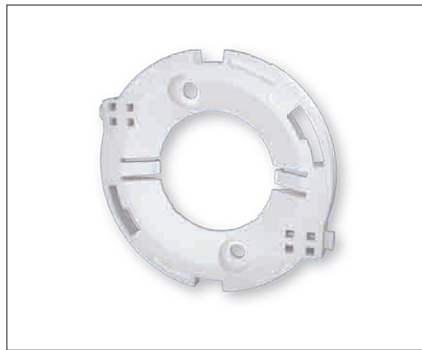
Complete system

## Bottom compatible with holder

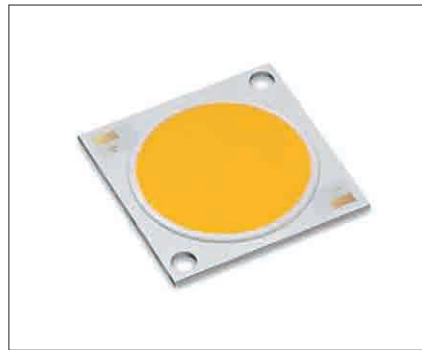
Bottom fixing holes type TB-D is used to assembly the LED module into the holder 47\_319\_2030 by  (September 2013).

### Main advantages are:

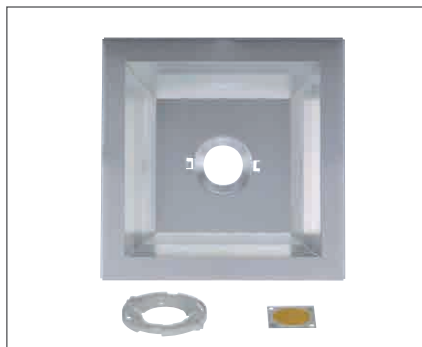
- + Exact positioning of the LED module.
- + Perfect focus.
- + Reflector closer to the LES, due to the deepdrawn surface.
- + Less spill light.
- + Reflector fully integrated into the LED module/holder system.
- + Higher efficiency.
- + Quick replacement of the reflector allows modification of aesthetic and light distribution.
- + Easy and reliable LED module and holder assembly.



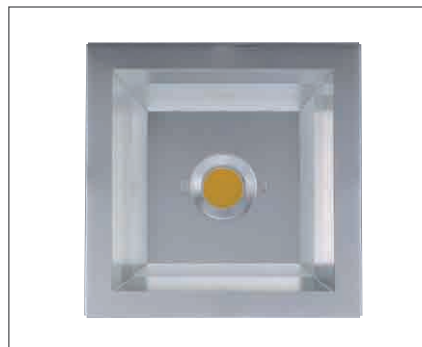
BJB holder 47\_319\_2030



LED CoB



Assembly

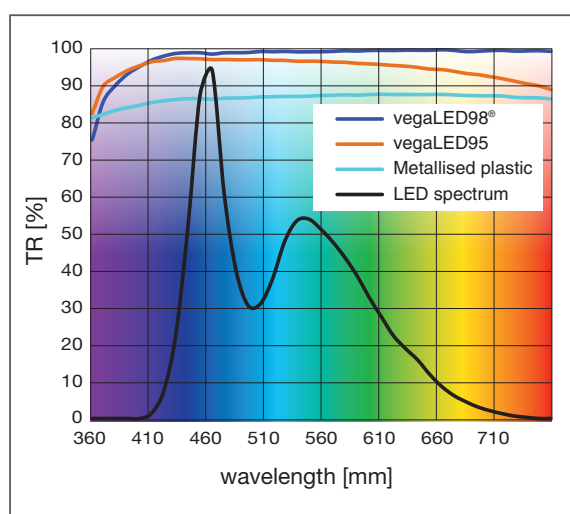


Complete system

# vegaLED98® - pvd aluminium surfaces

Product	Type	Reflection Layer	Total Reflectance [%]		Specular Reflectance [%]		Diffuse Reflectance [%] DIN 5036 - 3	Alloy	Temper (hardness)	Min Tensile Strength [MPa]	Min Yield Strength [MPa]	Min [%] Elongation A <sub>5</sub> A <sub>10</sub>
			ASTM E 1651	DIN 5036-3	60° long	60° trans						
vegaLED 98100	high specular	99.99% pure silver	≥ 98	≥ 98	93	93	< 11	1085	H18	160 - 200	105 - 190	2
vegaLED 98120	specular diffuse	99.99% pure silver	≥ 97	≥ 97	73 - 80	58 - 65	82 - 92	1090	H19	140	120	1
vegaLED 98127	bright diffuse	99.99% pure silver	≥ 97	≥ 97	28	28	95	1090	H18	125	105	2
vegaLED 98D80	specular diffuse	99.99% pure silver	≥ 97	≥ 97	47 - 53	46 - 52	75 - 82	1090	H19	140	120	1
vegaLED 98210	stucco	99.99% pure silver	≥ 98	≥ 98	not relevant		95	1085	H18	125	105	2







**vegaLED98** reflectors, with over 98% L.O.R., open up the possibilities of more controlled light distribution and higher efficiency achievement with LED sources. High reflectance **vegaLED** aluminium reflector materials are available in a range of surface finishes from high quality mirrors to mechanically textured diffusing surfaces, offering the kind of range and performance you will not find with other types of reflector product. With over 98% reflectivity across the full output spectral range for all types of LED, **vegaLED98** is the ultimate lighting reflector material, giving 15% more light on every reflection compared to metallised reflectors and a higher efficiency than lenses as well. Have a look to our full range of **vega** surfaces on [www.almecogroup.com/en/products/lighting/high\\_reflective\\_surface](http://www.almecogroup.com/en/products/lighting/high_reflective_surface).



Spectral data graph

**reflect+A<sup>team</sup>** up to 99% L.O.R. with **vegaLED98**.

The new **bandoxaldecor+** service offers you small quantities in a short time, the following surfaces are always in stock.

Code	Colour	Finish	Thickness
AL233B	 Alunor 233	BRILLANT	0.5 mm / 0.020"
AL233M	 Alunor 233	MILL FINISH	0.5 mm / 0.020"
AL032G	 Alunor 32	GRAND BRILLANT	0.5 mm / 0.020"
AL032M	 Alunor 32	MILL FINISH	0.5 mm / 0.020"
CP082B	 Copper 82	BRILLANT	0.5 mm / 0.020"
GM054G	 Gunmétal 54	GRAND BRILLANT	0.5 mm / 0.020"
GM054L	 Gunmétal 54	LAPIDE	0.5 mm / 0.020"
IN000G	 Incolore	GRAND BRILLANT	0.5 mm / 0.020"
IN000M	 Incolore	MILL FINISH	0.5 mm / 0.020"
IN000S	 Incolore	SATIN	0.5 mm / 0.020"
IX040L	 Inox 40	LAPIDE	0.5 mm / 0.020"
NO870G	 Noir 870	GRAND BRILLANT	0.5 mm / 0.020"

Looking for other colours of finishing?

Have a look to our full collection on [www.bandoxaldecor.com](http://www.bandoxaldecor.com)

You can find several profiled, brushed, mirrors and textured finish in all colours.

**bandoxaldecor+ ... aluminium for your dreams.**



Example of gold reflectors in different finishes

**reflect+A<sup>TM</sup>** team, no limits to your imagination with **bandoxaldecor+**

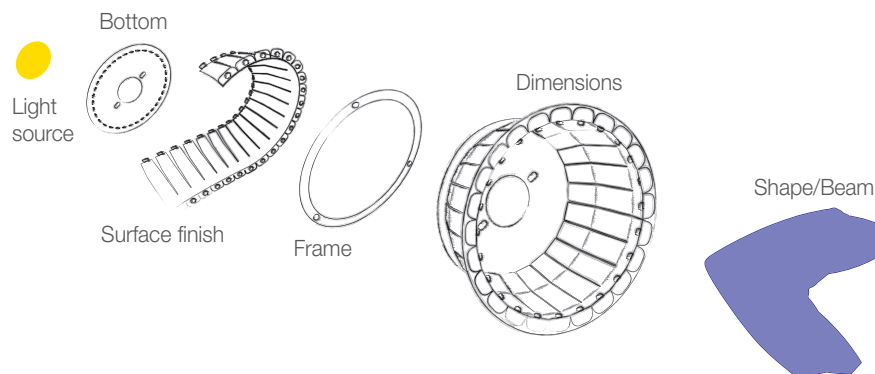
Note: TZZL and TZZL2 cannot be manufactured in coloured surfaces.



# Fast&Easy customisation

Almeco Group is the only Company combining surface treatment and reflector design and manufacturing, therefore fast customisation, design and prototyping are possible.

## What can we adapt?...Everything!



### Some examples:

	Almeco Standard	Contact us	Your Needs
Bottom		To adapt it to your LED module and mounting system	
Dimension		To adapt it to your housing and application	
Frame		To design any shape, finish, position	
Surface finish		To change thickness, finish and colour	
Light source		To design with your light source	
Shape/Beam		To adapt it to your need	

Any extra wish? ASK US!!!

**Almeco Group : service at 360°.**

Note: No tool investment. Minimum order 60 pcs. only.

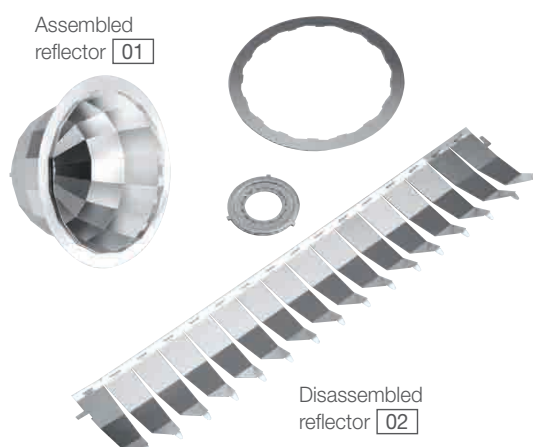
# Remarks

The reflectors can be shipped assembled [01] or disassembled [02].

Please specify your requirement at the moment of the order.

The dispatch of disassembled reflectors can be economically effective for large quantities or shipments outside the EU.

With the exception of the top of **Twist&Lock** models, the **vegaLED98** material is 0.5 mm.



## Technical data and simulations

All the technical data are based on OPTIS simulations realised by **reflect+A<sup>LAB</sup>**. For non **Zhaga** modules, rear surface of the LED unit is located on the back of the reflector bottom plate in all simulations.

For **Zhaga** modules and for Osram PrevaLED LEP, the front surface of LED unit is located on the rear surface of the reflector bottom plate in all simulations.

Declared performance is based on LED simulation data (3D models and photometrics) provided by LED manufacturers. Please refer directly to LED manufacturers for boundary conditions, which can be specific for each producer.

## Cleaning and handling

Use gloves to avoid touching the inside of the reflector directly with your hands which might affect its perfect operation. Should the reflector need to be cleaned, do not use water or solvents and use only clean, non scratch, microfiber cloth. Assembled and disassembled reflectors are guaranteed for 6 months before installation if stored in a conditioned room (temperature 20-30°C and relative humidity 50-60%).

The vegaLED 98100 disassembled reflectors [02] are shipped with protective film. Store conditions remain the same. Protective tape is not UV resistant. Remove the protective film from the reflector surfaces components before assembling.

## General information

With this catalogue, all previous information about **reflect+A<sup>team</sup>** items lose their validity. Almeco Group can optimise all the products or adapt them to new or changed regulations during the validity of this catalogue.

Current data, mainly based on simulations, are available on request and available for download at **www.almecogroup.com**. All documents and drawings are property of Almeco SpA, duplication and transmission to third party and exploitation is strictly forbidden. All right are reserved.

## Patent

**reflect+A<sup>team</sup>** and **Twist&Lock** are both patented systems. Any copy will be persecuted.



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