



dimas solar
INDUSTRY OF SOLAR ENERGY SYSTEMS
www.dimas-solar.gr

DIMAS SOLAR LASER ABSORBERS

The solar absorber
is the most important
component of a solar collector

Dimas SA with long experience in manufacturing solar absorbers and collectors, offers now the new Laser Full plate Absorber bonded by laser welding to copper header-riser tubing. The excellent selective material we use is MIRO-THERM, a selectively blue coated aluminium substrate. After extensive stagnation tests we are confident to avouch durability of our product at highest thermal stress. Also accelerated corrosion tests in brine solution have shown life expectancy rates above 20 years.

The Advantages

Our new method of laser welding the pipe to the plate gives several advantages:

- The selective surface is not affected at all because the join is made on the rear side.
- Laser welding is done at low temperatures, which reduces the tension of material between plate and pipe.
- The absorber's coated surface remains intact and free from marks, that makes it suitable for clear glass collectors.



- The absorber can resist to high temperature stagnation and high corrosion levels.
- Our laser welding process is environmentally friendly because it needs no additives and does not release any harmful substances into the environment.
- A protection foil prevents damage to the selective surface coating until the absorber is assembled with the collector.
- Due to a 0.5mm absorber sheet, handling is much easier than with copper absorbers.

- Dimas Solar Laser Absorber is an absorber with superior flange efficiency (F'). This is achieved, amongst other things, by the joining technique, which provides excellent thermal contact between pipe and flange.
- The cost of coated aluminium sheet is lower than comparable selectively coated copper products.



Note: due to continuous improvement of the products the manufacturer keeps all the rights to any changes of the technical specifications without any prior notice.

ISO 9001:2000



ELOT

DIMAS SOLAR LASER ABSORBERS



Highly Efficient Coating

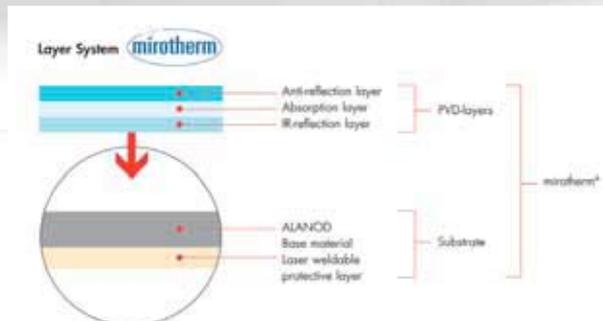
MIRO-THERM coating was developed by ALANOD, a company renowned worldwide for its reflection coatings. A multi layer selective coating is deposited on aluminium substrate by PVD technique.

Three optically active layers are applied by a special "Air-to-Air" thin film process.

A PVD anti corrosion layer protects the aluminium sheet on the rear side.

Solar absorption (AM1.5) $\alpha = 0.94 \pm 0.02$

Thermal emission (100°C) $\epsilon = 0.05 \pm 0.02$



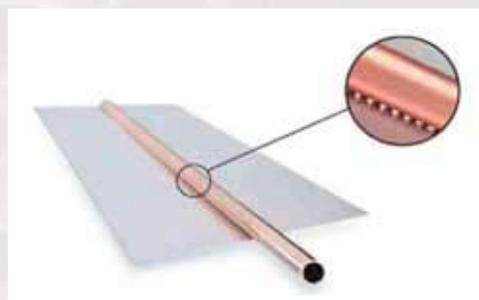
Laser Process

Our pulsed laser welds the tubes and the metal sheet together in very small spots on the rear side of the absorber, in order to prevent any damage to the front side.

Powered by 3 laser welding machines on fully automatic CNC machines, we can offer both strips and full plate absorbers, in widths up to 2000mm and length up to 6000mm. Every absorber is tested at 16bars pressure.

We also offer:

- Blue selective copper absorbers full plate
- Blue selective copper absorbers in strips
- Black painted copper absorbers in strips
- Black painted aluminium absorbers full plate
- Black painted aluminium absorbers in strips.



The DIMAS SOLAR Laser Welding products:

Absorber:	full plate absorbers
Type:	parallel, header & risers
Coating:	Mirotherm, Sunselect, Black paint
Material:	Al/Cu, Cu/Cu
Metal sheet thickness:	0.2 - 0.5mm
Absorber length:	up to 6000mm
Absorber width:	up to 2000mm
Tube's external diameter:	8 - 22mm

Offer your clients an excellent product with the qualitative unmatched laser- welding technique, to make sure thermal solar systems are worth their investment.

DIMAS SA

INDUSTRY OF SOLAR ENERGY SYSTEMS

ADDRESS: 2nd klm. ARGOS-NAFLION
ARGOS - 21200 / P.O. Box No42 / GREECE
Tel. +30 27510 29110 - 20920 • Fax: +30 27510 62671
<http://www.dimas-solar.gr> / email: info@dimas-solar.gr

DISTRIBUTOR

АКВАКЛИМА

гр. Варна, бул. „Осми Приморски полк“ 128
ет.2 офис 27
тел.: 052 304 185; факс: 052 300 824
e-mail: office@aquaclima.com