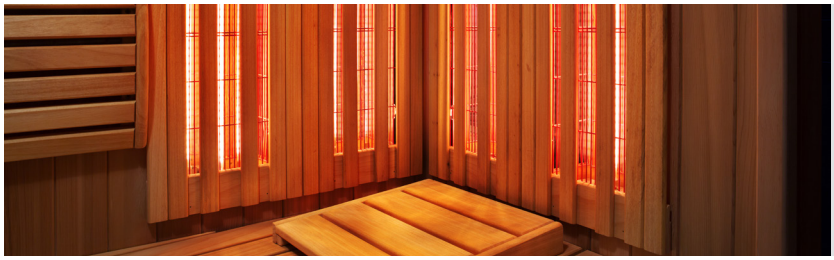
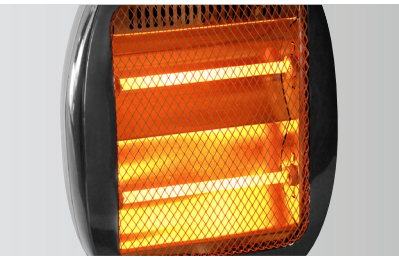
MANAGE THE HEAT

infrared
SURFACES

ALMECO
GROUP

infrared SURFACES





infrared SURFACES are the high-reflective aluminium solutions designed specifically by Almeco to manage the Infrared radiation.

What infrared waves are

Infrared (IR), sometimes called infrared light, is an electromagnetic radiation (EMR) with wavelengths longer than those of visible light, invisible to the human eye and perceived as heat.

Infrared waves transmit large amounts of energy (defined as heat) in a short time without direct contact or the need of any intermediate conductive matter.
To avoid excessive concentration of heat and annoying light reflections, a good expertise is needed in the design of the heating system for any specific environment.

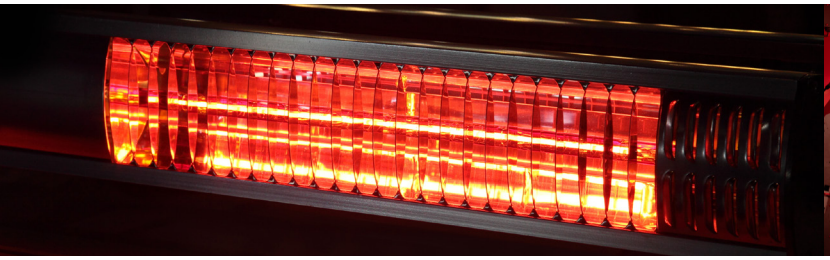
Why to use IR surfaces?

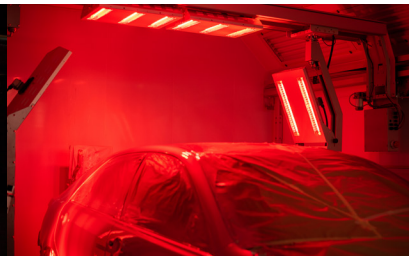
The **infrared** SURFACES can help maximize the irradiance by concentrating radiation toward a specific direction or they can spread the radiation incresing the overall uniformity distribution.
Infrared heat can be directed exactly where it is required by the use of optimized reflectors that improve the effectiveness of the irradiation system and reduce the energy waste.
Most products undergo a heating process during the manufacturing phase: eg. paints are cured, adhesives activated, plastics heated prior to forming.
Using the IR systems, the heating is faster and the space requirements are smaller which results in a more cost-efficient and sustainable production chain.

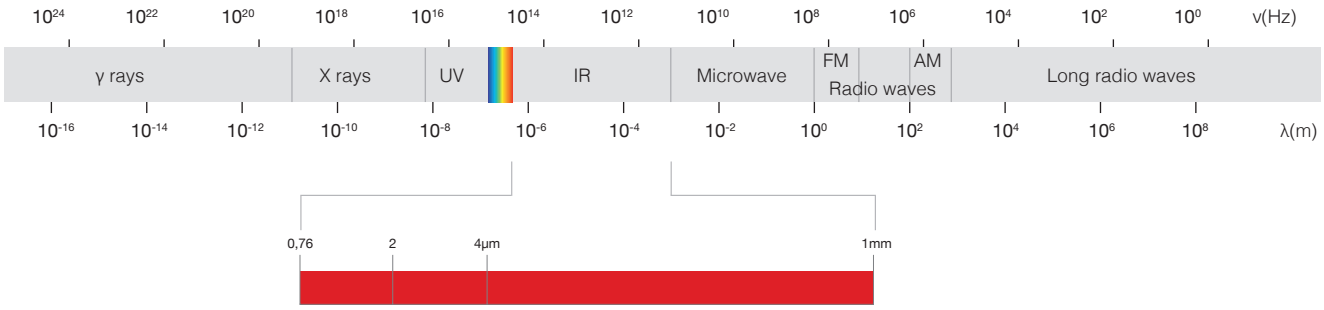
Where to use IR products?

There is a huge number of application fields:

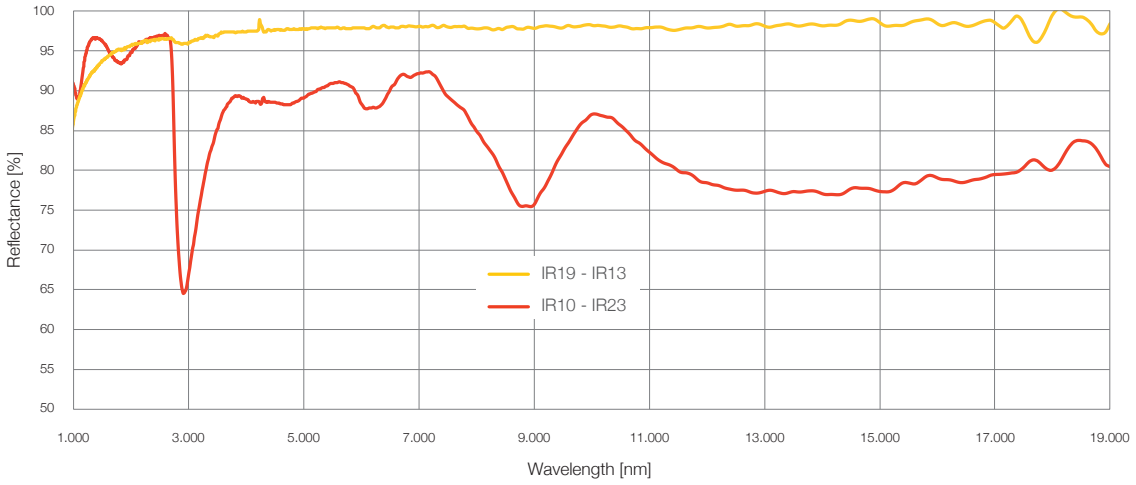
- Heating
- Surface modification
- Activating adhesives
- Forming
- Baking
- Curing and polymerisation
- Drying
- Melting
- Annealing
- Germ reduction



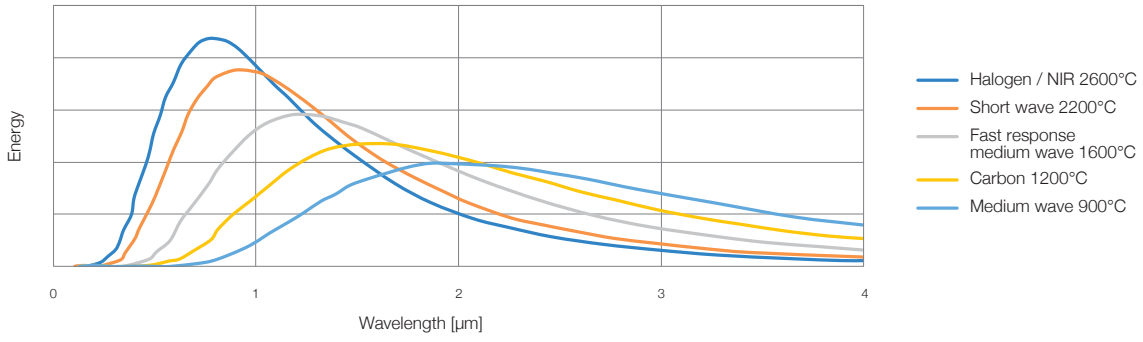




IR spectra



Spectral radiation curves for different infrared emitters and temperatures



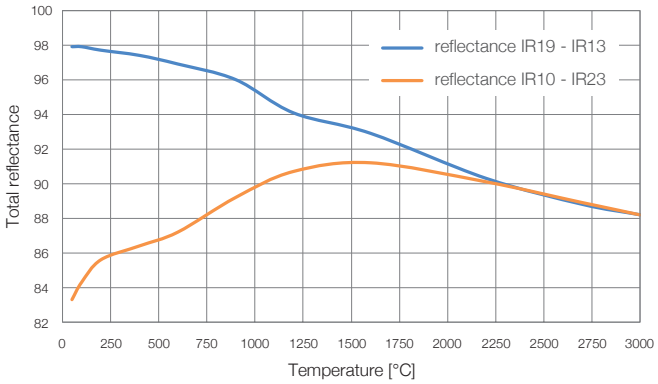
IR19 - IR13 HIGH REFLECTIVITY **IR10 - IR23** HIGHER RESISTANCE

	Standards	IR19	IR13	IR10	IR23
Alloy	EN 573-3	1085	1080	1085	1085
Temper	EN 515	H18	H18	H18	H18
Finishing		specular	mill-finish	specular	hammered
Min tensile strength Rm	EN 485-2	125 MPa	125 MPa	125 MPa	125 MPa
Min Yield strength Rp 0,2	EN 485-2	105 MPa	105 MPa	105 MPa	105 MPa
Min elongation A5A10	EN 485-2	2%	2%	2%	2%

Gauge available from 0,3 to 1,0 mm in max width 1250 mm

T°C	Reflectance (%)	
	IR19 - IR13	IR10 - IR23
3000	88,20	88,20
2700	88,80	88,90
2200	90,30	90,10
1600	92,90	91,20
1200	94,08	90,70
900	96,00	89,20
600	96,90	87,20
400	97,40	86,40
200	97,70	85,60
100	97,90	84,30
50	97,90	83,30

Total reflectance of black body radiance at specific temperatures



L122 – ENG – 04/2021

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