Founded in 1940, Helios Quartz Group has been a family-owned company with two production plants in Italy and Switzerland combined with offices in the USA, South America, and Asia to become a major international supplier for Quartz Glass processing and the manufacturing of IR & UV Lamps. Helios Quartz also produces Specialized Equipment for Industrial, Scientific, and Medical applications.

Helios Quartz is one of the leading companies worldwide in the glass market for supplying IR quartz emitters in short, medium and fast medium wavelength; float glass for edel detectors both in manual and automatic option; UV lamps and apparatus for the polymerization (curing) of glues, inks, enamels, and varnishes that meet with the UV light.

Infrared emitters heat up the material through radiation, therefore the process happens in a direct way and with high efficacy, according to the material to be heated it is possible to choose different IR wavelengths in order to reach the maximum energy propagation and adapt the heating in a faster and more efficient way. IR emitters have no moving parts, therefore they allow very precise regulations that can be adjusted according to the different needs of the materials involved in the process.

The picture shows all the radiation intensity curves for halogen, short wave, medium and fast medium wave emitters.

To better convey and focus on the material all the energy emitted by the lamp, is possible to apply a special reflector directly on the quartz tube. Helios Italquartz offers the possibility to apply a gold, white or ruby reflector.
The usage of Infrared emitters, if compared to the Medium Wave emitters and the fast response line of 1.1 - 1.4 μm. This emitter is the optimal compromise when those cases where it is important to have a fast response time. The IR Fast Medium Wave radiation is positioned in the range of 2.2 - 3.2 μm. This emitter is particularly suitable for the fast heating of surface plastics or thin thickness materials. It is available in twin tube up to 5 meters long.

The IR Medium Wave radiation is positioned in the range of 3.2 - 3.5 μm. This emitter is particularly suitable for the fast heating of surface plastics or thin thickness materials. It is available in twin tube up to 3.5 meters long.

Both the manual and automatic options are able to detect the bottom face of dark reflective glasses as well as extra clear and low emission glasses. The automatic line side detector can be installed directly on the glass transportation line, it is positioned usually after the washing machines and before the beginning of the production process, it is equipped with a free contact that can be interfaced with the line software allowing the constant production control.

The Fast Medium Wave radiation is positioned in the range of 3.5 - 4.0 μm. This emitter is particularly suitable for the fast heating of surface plastics or thin thickness materials. It is available in twin tube up to 6.5 meters long.

The Fast Medium Wave radiation is positioned in the range of 4.0 - 4.5 μm. This emitter is particularly suitable for the fast heating of surface plastics or thin thickness materials. It is available in twin tube up to 7.0 meters long.

UV polymerization equipment is particularly useful for general polymerisation processes such as drying films of reactive resins, lacquers, and reactive inks, decorative glass, glass to metal with reactive adhesives. It is metering, dosed independently and it is guaranteed the spare part service.

UV polymerization equipment product range is represented by two basic line models UV DO Box, ZBO15 single-phase. Our Technical Department can also design, on customer specific request, UV systems with different wavelengths up to 20 meter long for the polymerisation of windscreen, rear window or big plates decoration.
Founded in 1940, Helios Quartz Group has been a family-owned company with two production plants in Italy and Switzerland combined with offices in the USA, South America, and Asia to become a major international supplier for Quartz Glass processing and the manufacturing of IR & UV Lamps. Helios Quartz also produces Specialized Equipment for Industrial, Scientific, and Medical applications. Helios Quartz is one of the leading companies worldwide in the glass market for supplying IR quartz emitters in short, medium and fast medium wavelength; float glass for side detectors both in manual and automatic options; UV lamps and apparatus for the polymerization (curing) of glues, inks, enamels, enamels and varnishes that react with the UV light.

Infrared emitters heat up the material through radiation, therefore the process happens in a direct way and with high efficacy, according to the material to be heated it is possible to choose different IR wavelengths in order to reach the maximum energy propagation and adapt the heating, in a faster and more efficient way.

The picture shows all the radiation intensity curves for halogen, short wave, medium and fast medium wavelength emitters.

To better convey and focus on the material all the energy emitted by the lamp, it is possible to apply a special reflector directly on the quartz tube. Helios Italquartz offers the possibility to apply a gold, white or ruby reflector.
ANALYZER

The glass plates obtained by the float processes normally have one side clear (air side) and one side covered by a tin film. When customers need to utilize the glass plates for the silencing processes in motor production, laminated glass production, glazing operations, glass to glass and glass to metal bonding, identification of the tin film is necessary. The glass plates can be used to obtain better adherence to the glass surface. Helios Quartz developed and tested, together with the quartz glass producers, the tin side detector apparatus in manual and automatic option. This type of apparatus is necessary for the car windshield production, for the household appliances glass such as traditional and extra clear and low emitting glass.

The automatic tin side detector can be installed directly on the glass transportation line, it is positioned usually after the washing machines or before the beginning of the production process, it is equipped with a free contact that can be interfaced with the line software allowing the constant production control.

Applications

UV polymerization equipment is particularly useful for general polymerization processes such as drying times of reactive inks, lacquers and paints, glazing operations, glass to metal with reactive adhesives, it is used in decorative coating and for which it is guaranteed the opaque part service.

UV polymerization equipment product range is represented by two basic series, the UVB 250 and the UVB 250 R, both single-phase.

Our Technical Department can also design, on customer specific request, UV systems with different wave lengths up to 2,30 meter long for the polymerization of windscreen, rear window or big plates decoration.

FLOAT GLASS TIN SIDE DETECTOR

The glass plates obtained by the float processes normally have one side clear (air side) and one side covered by a tin film. When customers need to utilize the glass plates for the silencing processes in motor production, laminated glass production, glazing operations, glass to glass and glass to metal bonding, identification of the tin film is necessary. The glass plates can be used to obtain better adherence to the glass surface. Helios Quartz developed and tested, together with the quartz glass producers, the tin side detector apparatus in manual and automatic option. This type of apparatus is necessary for the car windshield production, for the household appliances glass such as traditional and extra clear and low emitting glass.

The automatic tin side detector can be installed directly on the glass transportation line, it is positioned usually after the washing machines or before the beginning of the production process, it is equipped with a free contact that can be interfaced with the line software allowing the constant production control.

The IR Quartz Emitters radiation is a positioned in the range of 1,4 to 1,6 μm. The IR Quartz Emitters are particularly useful for their high heating power and very fast on/off response time.

IR SHORT WAVE QUARTZ EMITTERS

The IR Short Wave radiation is positioned in the range of 1,1 to 1,4 μm. This emitter is characterized by high heating power and is particularly recommended in those cases where it is important to have a fast response switching on/off time. It is available in twin tube up to 4,5 meters long.

In manual and automatic option are able to detect the tinned side of dark non-reflective glass as well as extra clear and low emitting glass. The automatic tin side detector can be installed directly on the glass transportation line, it is positioned usually after the washing machine or before the beginning of the production process, it is equipped with a free contact that can be interfaced with the line software allowing the constant production control.

QUARTZ EMITTERS

Fast Medium Wave radiation is positioned in the range of 1,1 e 1,4 μm. The Halogen radiation has a very high heating power, and very fast on/off response time. It is available in twin tube up to 4,5 meters long.

In manual and automatic option are able to detect the tinned side of dark non-reflective glass as well as extra clear and low emitting glass. The automatic tin side detector can be installed directly on the glass transportation line, it is positioned usually after the washing machine or before the beginning of the production process, it is equipped with a free contact that can be interfaced with the line software allowing the constant production control.

QUARTZ EMITTERS

The IR Quarters Wave radiation is positioned in the range of 1,4 to 1,6 μm. The IR Quartz Emitters are particularly useful for their high heating power and very fast on/off response time.

In manual and automatic option are able to detect the tinned side of dark non-reflective glass as well as extra clear and low emitting glass. The automatic tin side detector can be installed directly on the glass transportation line, it is positioned usually after the washing machine or before the beginning of the production process, it is equipped with a free contact that can be interfaced with the line software allowing the constant production control.

QUARTZ EMITTERS

The IR Medium Wave radiation is positioned in the range of 1,1 e 1,4 μm. This emitter is characterized by high heating power and very fast on/off response time. It is available in twin tube up to 4,5 meters long.
The usage of Infrared emitters, if compared to the
radiation of the Medium Wave emitters and the fast response
time in the switching on/off proper of the Short Wave emitters.

The IR Fast Medium Wave radiation is positioned in the range of 0,9 e 1,1 μm. The Halogen radiation has a very high heating
effect for those cases where is important to have a fast response switching on/off time. It is available in twin tube up to 6,5 meters long.

The IR Medium Wave radiation is positioned in the range of 1,4 e 1,6 μm. This emitter is the optimal compromise when
one specific application requires at the same time the IR
effect and a good response time. The Fast Medium Wave emitters produced by Helios Italquartz are particularly indicated for the glass preheating before the silvering process. For this process, it is advisable to make the glass cool down in a controlled way; for this process it
is advisable to check the glass with the TIN SIDE
DETECTOR ANALYZER, in fact if the coating or the
polymer is not properly adhered during the process it will be non conform to the specifics with defects. In the drying screen printing processes of automotive
industry are used for the glass preheating before the silvering process. For this process, it is advisable to make the glass cool down in a controlled way; for this process it
is advisable to check the glass with the TIN SIDE
DETECTOR ANALYZER, in fact if the coating or the
polymer is not properly adhered during the process it
will be non conform to the specifics with defects.

The IR Halogen radiation is positioned in the range of 0,9 e 1,1 μm. The Halogen radiation has a very high heating
effect for those cases where is important to have a fast response switching on/off time. It is available in twin tube up to 6,5 meters long.

Both the manual and automatic option are able to
detect the tinned side of dark non-reflective glass as
well as extra clear and low-e reflecting glass.

The automatic tin side detector can be installed directly
on the glass transportation line, it is positioned usually
after the washing machine or reactors before the beginning of the production process, it is equipped with a free contact that can be interfaced with the line software allowing the constant production control.

DRYING SCREEN PRINTING AND COATING CURING

In the glass bending and glass fusion processes
more and more often the IR quartz emitters are
chosen as heat generator. They allow a shorter
time to reach the desired temperature profile.

Both the manual and automatic option are able to
detect the tinned side of dark non-reflective glass as
well as extra clear and low-e reflecting glass.

The automatic tin side detector can be installed directly
on the glass transportation line, it is positioned usually
after the washing machine or reactors before the beginning of the production process, it is equipped with a free contact that can be interfaced with the line software allowing the constant production control.

IR HALOGEN QUARTZ EMITTERS

The IR Halogen radiation is a positional source between 0,9 e 1,1 μm. The Halogen radiation has an high-heating power and very fast on/off response time.

IR SHORT WAVE QUARTZ EMITTERS

The IR Short Wave radiation is positioned in the range of 1,4 e 1,6 μm. This emitter is very suitable for the fast heating of surface parts or thin thickness materials. It is available in twin tube up to 6,5 meters long.

IR FAST MEDIUM WAVE QUARTZ EMITTERS

The IR Fast Medium Wave radiation is positioned in the range of 1,4 e 1,6 μm. This emitter is particularly suitable for the fast heating of surface parts or thin thickness materials. It is available in twin tube up to 6,5 meters long.

IR MEDIUM WAVE QUARTZ EMITTERS

The IR Medium Wave radiation is positioned in the range of 1,4 e 1,6 μm. This emitter is particularly suitable for the fast heating of surface parts or thin thickness materials. It is available in twin tube up to 6,5 meters long.

UV polymerization equipment is particularly useful for
general polymerization process such as drying films of
reactive resins, lacquers and paints, bonding glasses to glass, to metal with reactive adhesions, it is existing, manufactured internally and it is guaranteed
the spare part service. UV polymerization equipment product range is represented by two basic units: the UV PIKE 200, 200 watt single-phase.

Our Technical Department can also design, in customer specific request, UV systems with different wavelength up to 2,0 meter long for the polymerization of windscreen, rear window or big plates decoration.

Helios Quartz design its IR Medium Wave emitters
for the production of laminations ovens. The Fast Medium Wave emitters, thanks to their fast on/off response time, are used in the laminated glass cooling processes.

MIRROR PRODUCTION

In the mirror production lines the IR quartz emitters are used for the glass pretreatment before the silverying process and also for the cutting processes.

GLASS SENSING AND COATING

In the glass bending and glass fusion processes
more and more often the IR quartz emitters are
chosen as heat generator. They allow a shorter
time to reach the desired temperature profile.

In UV processes after glass processing, in order to avoid
stress and easy breakage, it is advisable to make the
glass cool down in a controlled way. For this process it
is advisable to use the IR quartz emitters that, thanks
to their easy control, allow a straight control of the
desired temperature profile.

GLASS ANNEALING/PROCESSES

After glass processing, in order to avoid
stress and easy breakage, it is advisable to make the
glass cool down in a controlled way. For this process it
is advisable to use the IR quartz emitters that, thanks
to their easy control, allow a straight control of the
desired temperature profile.

IR LOW-EMITTING GLASS QUARTZ EMITTERS

Helios Italquartz can be properly designed for their usage in vacuum chamber, as it happens in the thin film solar cells production and during the prefiring process before the coating of the low emitting glass.
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Helios Quartz is one of the leading companies worldwide in the glass market for supplying high-quality quartz emitters in short, medium and fast medium wavelengths; float glass iris detectors both in manual and automatic option; UV lamps and apparatus for the polymerization (curing) of glues, inks, enamels, enamels and resins that react with the UV light.

Infrared emitters heat the material through radiation; therefore the process happens in a direct way and with high efficacy, according to the material to be heated it is possible to choose different IR wavelengths in order to reach the maximum energy propagation and adapt the heating, in a faster and more efficient way, according to the material being processed. Helios Quartz emitters allow very precise regulations that can be adjusted according to the different needs of the materials involved in the process.

The picture shows all the radiation intensity curves for halogen, short wave, medium and fast medium wave emitters.

To better convey and focus on the material all the energy emitted by the lamp, it is possible to apply a special reflector directly on the quartz tube. Helios Italquartz offers the possibility to apply a gold, white or ruby reflector.