



## OPTRIS GMBH & CO. KG

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### COMPANY DATA

#### Contacts

**Sascha Kienitz** - General Manager  
**Torsten Czech** - Head of Marketing  
**Ingo Stahlkopf** - Head of Sales

#### Number of Employees

115

#### Company founded

2003

#### Planned Exhibitions 2026

**China Glass** - Shanghai, China - 7 / 10 April  
**GlassBuild America** - Las Vegas, (NV) USA  
23 / 25 September  
**Glasstec** - Düsseldorf, Germany - 20 / 23 October

### SALES NETWORK

#### OPTRIS HEADQUARTERS

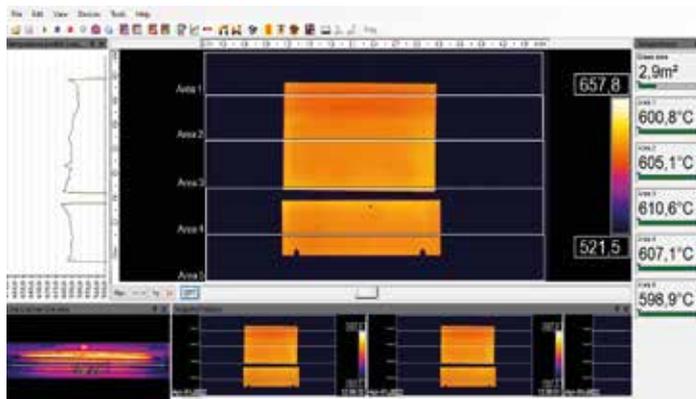
##### Optris GmbH & Co. KG

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Thermal image of monitoring temperatures of glass sheets

### COMPANY PROFILE

**Optris** is and has been, one of the leading innovative companies in the field of non-contact temperature measurement by means of infrared radiation since its establishment in 2003. The company's product range covers fixed industrial thermometers, infrared cameras, as well as accessories.

#### TRADITION AND INNOVATION

Thanks to their extensive know-how and innovative concepts, our experienced engineers and physicists continuously inspire with outstanding solutions.

#### TOP QUALITY AT REASONABLE PRICES

We provide cutting-edge infrared technology. Cost advantages arising from bulk purchasing of semiconductor products and from the production process are passed directly on to our customers.

#### PROCESS OPTIMIZATION VIA TEMPERATURE MONITORING

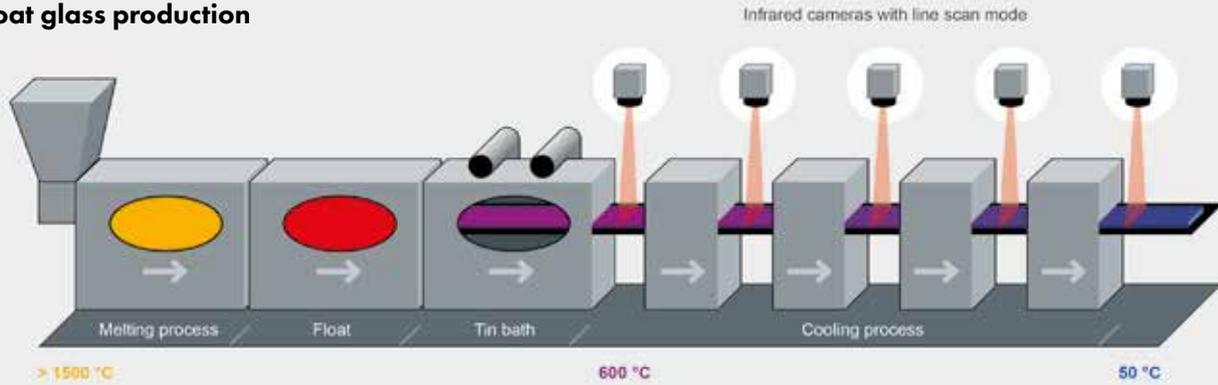
In many manufacturing processes (e.g. the glass industry), product and process temperatures are important physical variables. Non-contact temperature measurement with Optris sensors and thermal imaging cameras ensures high production line quality standards.

In order to ensure the highest level of quality, the glass industry and its energy-intensive production process relies on dependable means of temperature monitoring.

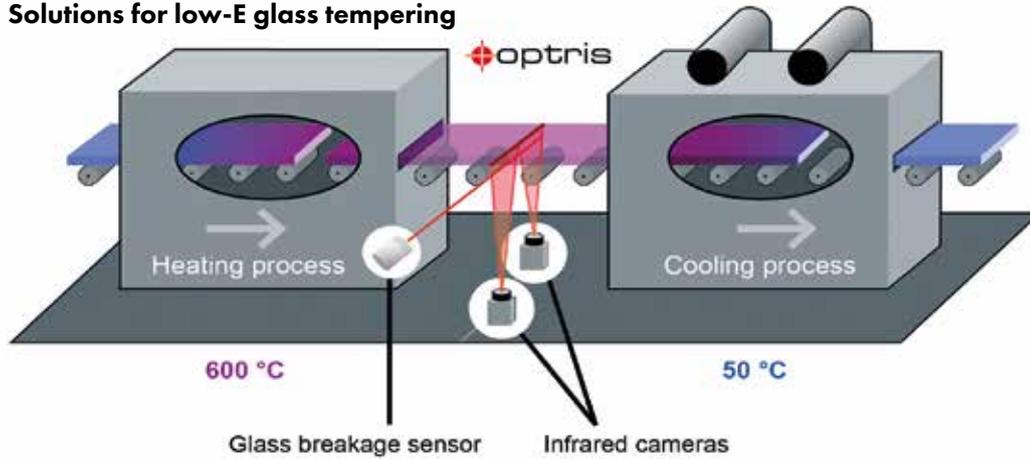
Our glass thermometers and IR cameras are optimally suited to non-contact temperature measurement of glass surfaces and use innovative double lasers to indicate the exact measurement spot.

All kinds of glass, coated and uncoated, change their emissivity behavior in dependency of the angle of view. Especially low-E coatings show an unusual behavior. The new Bottom Up Glass inspection system solves this problem by having two infrared imagers installed underneath the tempering line which measure the temperature on the non-coated high emissivity side of the glass.

**Measurement areas at float glass production**



**Solutions for low-E glass tempering**



mal treatment, which is ensured by the application of the correct temperature measurement technology.

**Ensuring the quality of laminated safety glass**

Laminated safety glass (LSG) consists of at least two flat panes of glass, which are laminated in a clean room with a sheet of PVB film between them. The temperature of the film can be monitored with infrared

**Single-pane safety glass production with correct temperature measurement technology**

For the production of single-pane safety glass (SPSG), the cut and processed flat glass is heated in a furnace under continuous movement at over 600°C. During the transport of the heated glass in the pretension zone, an infrared camera monitors the temperature distribution on the glass surface in line scan mode. Inhomogeneities can thus be compensated during the tempering process, in which the glass is air-cooled. The quality of the SPSG mainly depends on a homogeneous ther-

ermometers. In the pre-heating furnace, the glass panes are heated in order to melt the film and simultaneously press the "sandwich" together, to prevent air pockets. During the transition to the autoclaves, the temperature distribution is monitored with an infrared camera, in order to adjust the heating elements in the pre-lamination furnace for subsequent panes, when necessary.

**Measurement areas at LSG production**

