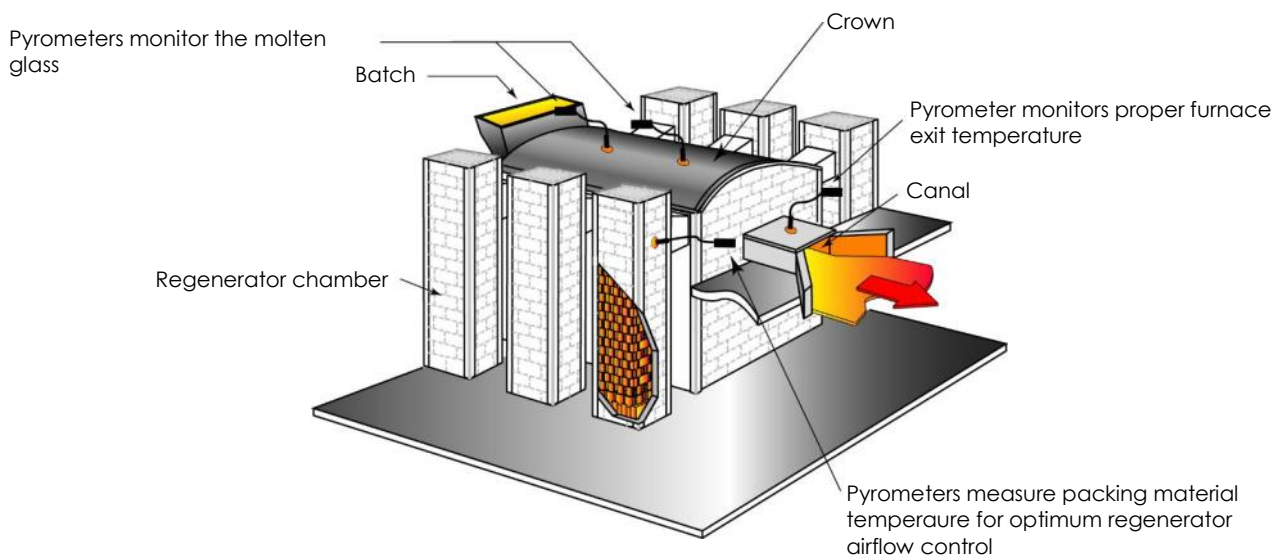


### GLASS MELTING:

Glass production starts with the molten glass at temperatures of 1480 to 1550 °C (2696 to 2822 °F). The batch melts inside the furnace and is freed from gases (refined). Melting furnaces can be either cross-fired or end-fired. Regenerators improve fuel efficiency by heating incoming air and alternating the firing direction. The temperature of the brick packing in the regenerator columns increases as the heated air from the furnace escapes. When this packing reaches the appropriate temperature, the cycle is reversed and these columns are then used to heat air entering the furnace. For economical reasons, it is absolutely necessary to detect the optimum point in time to reverse the regenerator airflow. The temperature of the bridge-wall and the port arch must be measured to optimize the melting process and the furnace durability.

### TEMPERATURE MEASUREMENT AT THE MELT FURNACE AND REGENERATORS



### ENDURANCE SERIES

- Single / Dual color and fiber optic models
- LAN / Ethernet interface with PoE
- Wide temperature range: up to 3200 °C
- Video function
- Plug and Play with high measuring accuracy and reproducibility



### THERMALERT 4.0 SERIES

- Ethernet / Ethernet-IP, PoE & more interfaces available
- Galvanically isolated inputs and outputs
- Simple two-wire installation or RS485 communication
- USB port



# APPLICATION EXAMPLE

## Processes of the Glass Industry Glass Melting & Glass Containers

### PARAMETERS ENDURANCE SERIES:

- Operating Ambient Temperature: 0 to +315 °C (with cooling)
- Temperature Range: +50 to +3200 °C
- Spectral Response: 1,0 to 2,4 µm (different models)
- Response Time: starting at 2 ms
- Enviromental Rating: IP65
- Superior Optical Resolution to 300:1
- Optional Accessories

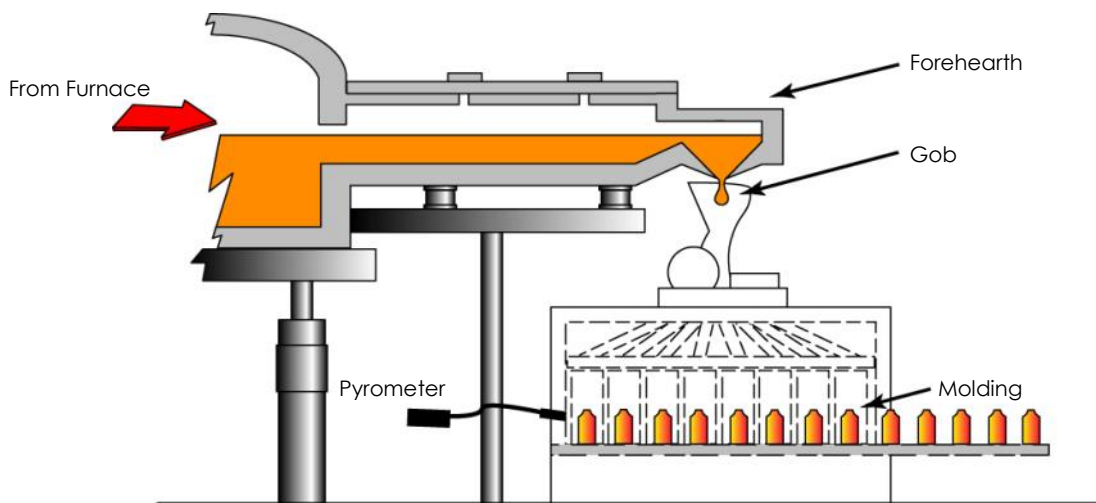
### PARAMETERS THERMALERT 4.0 SERIES:

- Operating Ambient Temperature: -20 to +315 °C (with cooling)
- Temperature Range: -20 to +2300 °C (different models)
- Spectral Response: 1,0 to 14 µm (different models)
- Response Time: starting at 10 ms
- Environmental Rating: IP65
- Laser sight

### GLASS CONTAINERS:

From the furnace, molten glass flows into one or more forehearth and is cut by a shearing blade to form a cylinder of glass called a gob. The gob is dropped into molds where the initial forming is done by either a blowing process with compressed air, or a pressing process using a plunger and mold. During the whole process, temperature monitoring is very important to ensure the quality of the product.

### GLASS CONTAINER/BOTTLE PRODUCTION



If you are unsure which measuring device is the right one for your application, please feel free to call us or use our enclosed reply form to briefly describe the application and the general conditions.

We will contact you as soon as possible to present you with a suitable solution in detail without obligation.