BASF
We create chemistry

EXACTUS®

Temperature sensors for the glass industry

A leader in precious metal thermocouples for over 30 years, BASF has now applied its technical expertise to optical temperature measurement of glass furnace crown and bottom applications. BASF has paired industrially proven optical components with our highly repeatable measurement electronics to provide stable temperature measurement of these critical process values. BASF Exactus instruments incorporate our breakthrough technology to provide temperature insights to improve process yields and reduce operating costs.

Features and benefits

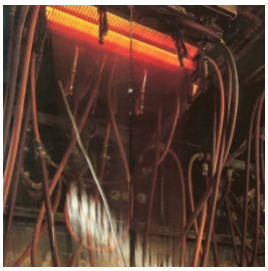
- Significantly reduced drift in these very high temperature applications; drift of <0.1 ºC/yr.
- Outperforms traditional furnace crown and bottom thermocouples for accuracy over a longer life period.
- Robust heavy wall 11/16" (17.5mm) diameter thermowells and sight tubes suitable for furnace bottom and crown measurement applications.
- Digital and/or Analog outputs easily integrated into any control system.
- Metal sleeve, overall length etc. to customer specification.
- Lens housing and fiber optic cable able to withstand up to 250ºC.

Applications

In-block, in-glass, direct atmosphere immersion and corrosive atmosphere designs are available. Exactus optical sensors are suitable for a wide range of applications within the glass and other material processing industries. Robust and repeatable measurement electronics, precision optics, and quality materials allow BASF Exactus instruments to provide years of repeatable process temperature measurements.

General Exactus Instrument Specifications	
Accuracy	Greater of 1.5 °C or 0.15% of reading
Resolution	Up to 0.01 °C
Repeatability	0.1 °C
Drift	0.1 °C / year plus 0.05 °C / °C change in ambient temperature
Speed	Up to 1000 readings per second, 1ms response time
Target sizes	Standard target size is Focal Distance / 40.0 Small target size is Focal Distance / 200.0 Custom optics available
Maximum environment temperature without cooling	10-60 °C for electronics and standard optics If Fiber optic cable is used: – < 70 °C for standard fiber optic cable – < 250 °C for high temperature fiber optic cable
Measurement wavelengths	0.65 µm 0.90 µm 0.7 – 1.6 µm 1.55 µm

In addition to furnace crown and bottom measurements, Exactus instruments also provide quality measurements of glass forehearths, container gobs and moulds, and fiberglass bushings and spinners.



About Us

BASF's Catalysts division is the world's leading supplier of environmental and process catalysts. The group offers exceptional expertise in the development of technologies that protect the air we breathe, produce the fuels that power our world and ensure efficient production of a wide variety of chemicals, plastics and other products, including advanced battery materials. By leveraging our industry-leading R&D platforms, passion for innovation and deep knowledge of precious and base metals, BASF's Catalysts division develops unique, proprietary solutions that drive customer success.

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www.catalysts.basf.com/tempsensing

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