BASF
We create chemistry

Optical Thermometers

EXACTUS®

Sensors for Gob Temperature Control

A leader in precious metal thermocouples for over 30 years, BASF has now applied its technical expertise to optical temperature measurement. Exactus® instruments incorporate technology break-throughs which will enable the production of a new generation of **high quality, reduced weight, eco-friendly glass containers.**

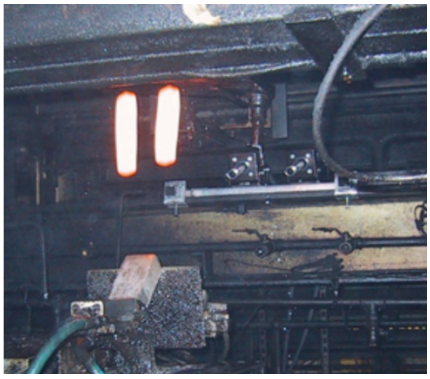
Demonstrated Benefits:

Teamed with an appropriate control system, Exactus® technology has demonstrated value-driven results which enable **more profit from existing production facilities.**

Increased pack/melt ratio
- 2%–5% yield increase
- $200K–$500K annual savings/line

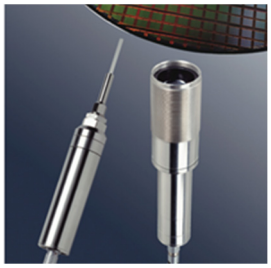
Lighter eco-friendly bottles
- 2% weight reduction per bottle
- $50K annual savings/line

More bottles
- Faster changeovers
- 3% capacity increase
- $300K annual savings/ line



Exactus System Features
- **Speed:** 1,000 readings per second
- **Stability:** Drift of less than 0.1°C per year
- **Repeatability:** Within 0.1°C
- **Precision:** Resolution up to 0.01°C
- **Output:** Digital and/or analog, easily integrated into any controls system

Exactus Specifications	
Measurement ranges	65–1150°C (0.7 to 1.6 µm measurement wave length) 100–1900°C (1.55 µm measurement wavelength) 120–3000°C (0.7 to 1.6 µm measurement wavelength) 280–2200°C (0.9 µm measurement wavelength) 350–3000°C (0.9 µm measurement wavelength) 500–3000°C (0.65 µm measurement wavelength) Specialized optics allow measurements to 200°C at 0.90 µm & 25°C at 0.7–1.6 µm
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



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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