

## Applications & Solutions

### High Temperature

Flexible High temperature uncooled probes have been tested to 600F.

We have built large quantities of these scopes for applications that require insertion through difficult paths and static use. Continuous bending shortens life, and sometimes causes unpredictable failures. The fiberoptics have chemical treatments applied that enhance flexibility, and depending on the manufacturer these will bake off over time. If the scope is static, it is not usually a problem. These can be built up to approx 3m in length.

The exact specification may lead to a minimum order depending on image bundle supplier. Internal emissivity of the hot glass can be an issue and must be tested in each application. Air or water cooling can be added if needed, but this would need to be tested individually-standard products do not exist. Rigid high temperature scopes have more choices. Cooling is easier to apply, and they can be built using fiberoptics without regard to bending issues. They can be built with conventional relay lens system for ultimate resolution, but if uncooled must be built without any optical cement joints if working above ~400F.

Once again, testing may be required depending on the individual need. All high temperature scopes work better the less they are cycled, and all will have some finite life. This varies by application, and can sometimes vary unpredictably.