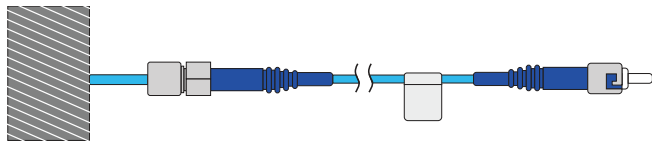


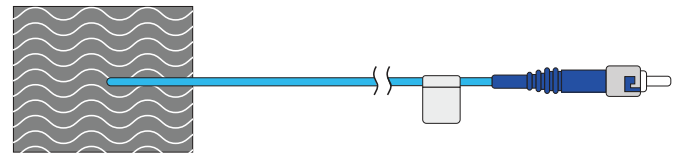
## FIBER OPTIC TEMPERATURE PROBES

Photon Control's fiber optic temperature probes use the principal of phosphorescence to measure temperature very accurately in the harshest environments. Proprietary phosphor material at the tip of the probe is in close thermal contact with a solid surface (contact probe) or immersed in a gas or liquid (immersion probe), and the phosphor decay time is measured and converted to temperature.

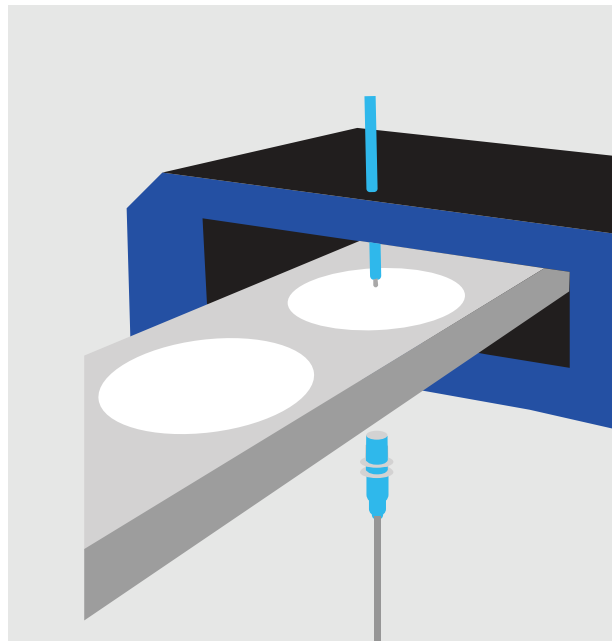
Our expertise in phosphor materials and their application in temperature probes sets Photon Control apart from our competitors with respect to accuracy and long term stability in a real semiconductor manufacturing environment.



**CONTACT PROBE**



**IMMERSION PROBE**



## POSITION AND DISPLACEMENT SENSORS

We custom design, develop, and manufacture optical position and displacement sensors that can measure wafer/chuck edge and center locations with accuracies down to  $\sim 25 \mu\text{m}$ .

Repeatable wafer position, leveling, and wafer placement in the process chamber is critical for achieving high yields making accuracy of the utmost importance.