

Portable Fiber Optic Thermometer

Accuracy of $\pm 1^{\circ}\text{C}$; Resolution of $\pm 0.1^{\circ}\text{C}$, USB



The PFOT is a dual-channel fiber optic thermometer with an LCD display, featuring PC connectivity and battery recharging via a USB port. It is an ideal solution for challenging temperature measurements in the medical field, as well as in environments with microwave, radio frequency, high voltage, aerospace, and military applications.

The PFOT is perfect for scenarios requiring immunity to electromagnetic interference, where traditional metallic sensors are ineffective. It supports a long working distance of over 500 meters, utilizing a single strand of fiber optic cable for each sensor.

Features

- Efficiently performs quality control on probes during their installation
- USB 2.0 interface
- Accuracy of $\pm 1^{\circ}\text{C}$; Resolution of $\pm 0.1^{\circ}\text{C}$
- 32 MB logging memory, with storage of all probe signal parameters
- Convenient direct interface to Excel datasheets
- Rechargeable built-in batteries

Applications

- Medical applications
- Aerospace



Specifications

Parameter	Min	Typical	Max	Unit
System Accuracy		± 1 [1]		$^{\circ}\text{C}$
Number of Channels		1		
Temperature Measurement Range	-80		+300	$^{\circ}\text{C}$
Resolution		0.1		$^{\circ}\text{C}$
Sampling Rate		5		Hz
Memory capacity		32		MB
Light Source (MTBF)		> 300 [2]		years
Operating Temperature	-20		+50	$^{\circ}\text{C}$
Storage Temperature	-30		+50	$^{\circ}\text{C}$
Communication [3]	USB 2.0 and above			
Batteries [4]	Built-in rechargeable lithium-ion batteries			
Power Supply [5]	included			
Connector (optical)	1 ST connector			
Connector (computer and power)	1 USB 2.0 port (type B)			
Logging modes	1 per second to 1 per hour [6]			
Weight		0.7		kg
Dimensions		186 x 37 x 118		mm

Note:

- [1]. Can be improved through a local single point probe referencing
- [2]. MTBF > 300 years of continuous use
- [3]. PC software option
- [4]. Built-in rechargeable lithium-ion batteries, with 5 hour autonomy. Rechargeable through USB port (1 A recommended). User settable power management
- [5]. 1 ampere USB power supply included (85 to 265 VAC). USB cable included
- [6]. Plus snap mode. Logged information includes probe performance data

Note: The specifications provided are for general applications with a cost-effective approach. If you need to narrow or expand the tolerance, coverage, limit, or qualifications, please [click this link](#):

Rev 11/10/24

Portable Fiber Optic Thermometer

Accuracy of $\pm 1^{\circ}\text{C}$; Resolution of $\pm 0.1^{\circ}\text{C}$, USB



DATASHEET

Mechanical Dimension (mm)

*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

Ordering Information

Prefix	Channel	Type	1	1	1	1	1
PFOT-	1 = 01 2 = 02	Standard = 11					

Portable Fiber Optic Thermometer

Accuracy of $\pm 1^{\circ}\text{C}$; Resolution of $\pm 0.1^{\circ}\text{C}$, USB

DATASHEET

Caution Electrostatic Sensitivity



- Never touch laser diode and the module using hands
- Always use protections when handle a laser diode
- Recommend mounting the laser diode using an ionic gun and ESD finger cots



Laser Safety

This product meets the appropriate standard in Title 21 of the Code of Federal Regulations (CFR). FDA/CDRH Class 1M laser product. This device has been classified with the FDA/CDRH under accession number 0220191. All versions of this laser are Class 1M laser products, tested according to IEC 60825-1:2007 / EN 60825-1:2007. An additional warning for Class 1M laser products. For diverging beams, this warning shall state that viewing the laser output with certain optical instruments (for example eye loupes, magnifiers, and microscopes) within a distance of 100 mm may pose an eye hazard. For collimated beams, this warning shall state that viewing the laser output with certain instruments designed for use at a distance (for example telescopes and binoculars) may pose an eye hazard.

Wavelength = 1.3/1.5 μm .

Maximum power = 30 mW.



*Caution - Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

*IEC is a registered trademark of the International Electrotechnical Commission.