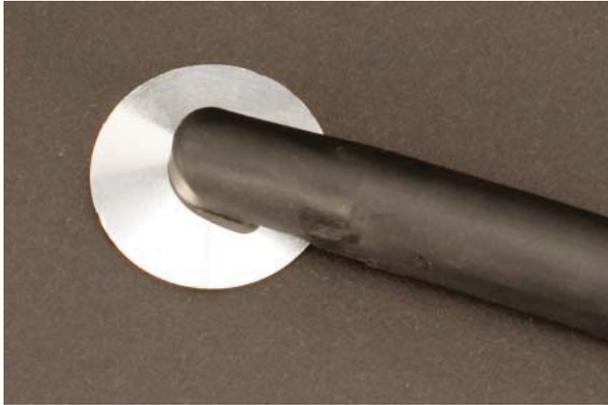


# 110PV Surface Mount Thermistor



The 110PV surface mount thermistor typically measures the back of photovoltaic (PV) module temperature, but it also can measure other surface temperatures. PV module temperature is an important measurement in solar energy applications since the output of a PV module is affected by its temperature. As the temperature of the PV module increases, its output decreases.

The 110PV probe incorporates a thermistor for measuring temperature from  $-40^{\circ}$  to  $+135^{\circ}\text{C}$ . The thermistor is encased in an aluminium disk that protects the thermistor and promotes heat transfer from surfaces.

## Mounting

For temperatures up to  $70^{\circ}\text{C}$ , an adhesive tab on the probe's aluminium disk fastens the 110PV to the measurement surface. If the temperature may exceed  $70^{\circ}\text{C}$ , Kapton tape\* or high temperature epoxy is recommended to secure the probe to the measurement surface via a user-supplied method that is compatible with submersion.

## Temperature Uncertainty:

Temperature	Tolerance
$-40^{\circ}$ to $70^{\circ}\text{C}$	$\pm 0.2^{\circ}\text{C}$
$71^{\circ}$ to $105^{\circ}\text{C}$	$\pm 0.5^{\circ}\text{C}$
$106^{\circ}$ to $135^{\circ}\text{C}$	$\pm 1^{\circ}\text{C}$

## Time Constant in Air:

Test	$\tau$
Still Air	252 seconds
Surface	25 seconds

## Ordering information:

### Temperature Probe for Harsh Environments

**110PV** - Surface Mount Temperature Probe. Standard cable length 3m. Other cable lengths available to special order.

\*Common accessory: #27015 - Roll of Kapton tape for locations where the temperature may exceed  $70^{\circ}\text{C}$ .

## Specifications

Measurement range:  
 $-40^{\circ}$  to  $+135^{\circ}\text{C}$

Survival Range:  
 $-50^{\circ}$  to  $+140^{\circ}\text{C}$

Maximum water submersion depth:  
21 psi (50 ft)

Steinhart-Hart linearization equation error (max):  
 $0.0024^{\circ}\text{C}$  at  $-40^{\circ}\text{C}$

Maximum lead length:  
304.8m (1000 ft)

Disk Diameter: 2.54 cm

Overall probe length:  
6.35 cm

Overmoulded joint dimensions:

Width: 1.12 cm  
Height: 1.47 cm  
Length: 5.72 cm

Cable diameter:  
0.622 cm

Material  
Disk: Anodized aluminium

Cable jacket: Santoprene  
Cable/probe connection:  
Santoprene

Weight: 90.7 g with 3.2 m cable