

Thermal Imaging Camera for Tubes of Heating Furnace

NEC
NEC San-ei

Model TH7102WB



A window of heating furnace

The First UFPA Detector with a Flame Filter

Spectral Range: 3.7 to 3.9 μ m
(Patent Pending)

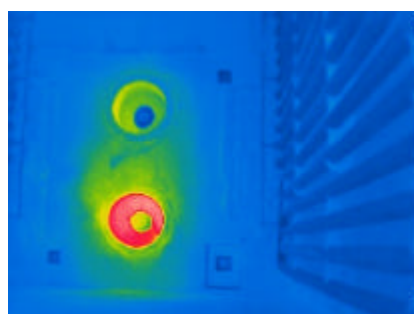
Early Detection of Unusual Temperature
You can check tube's temperature behind flame and see thermal image directly in your eyes.



With protective shield



TH7102WB standard



Burner/Thermal Image

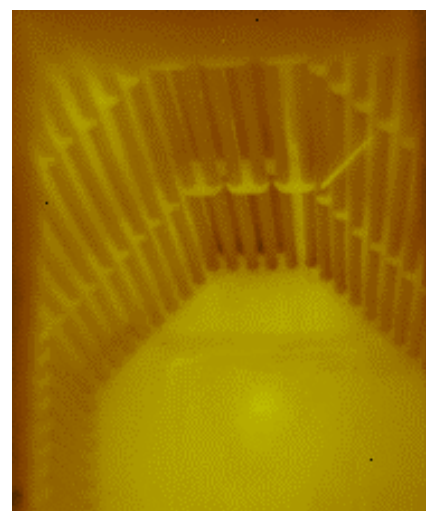
A burner behind flame can be identified.



Burner/Visible Image

Can not be identified because of flame.

- The temperature change(caused by clogging, etc.) can be seen directly as thermal images.
- Simultaneous recording of thermal/visible images.
- Pattern monitoring by PC.
- Standard accessories for measurement of extremely high heat.
- Not only for furnace inspection, but also available in maintenance field.



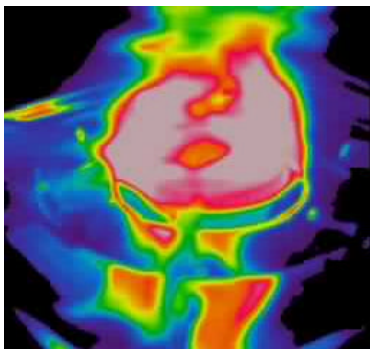
A temperature distribution on tube wall

Specifications

Model	TH7102WB
Measuring Range	Range 1: -40 to 120 °C
	Range 2: 0 to 500 °C
	Range 3(through flame): 200 to 2000 °C (except 200 to 400 °C : out of spec)
Resolution (Normal mode)	Range 1: 0.07 deg C(at 30 °C)
	Range 3(through flame): 5.0 °C(at 400 °C)
Accuracy	+/-2% at full range scale
Spectral Range	Range 1 & 2: 3 to 14μm
	Range 3(through flame): 3.7 to 3.9μm (*1)
Field of View	29 °(H) x 22°(V) with standard lens
I.F.O.V.	1.6mrad
Focusing Range	30cm to infinity
Effective image pixel	280 x 240 pixels
Display	View Finder & LCD w/ Remote Control(optional)
Battery	Approx. 110 minutes
Digital Camera	0.41M pixels
Ope. Temp/Hum	-15 to 50 °C 90%RH or less(not condensed)
Env . Protection	IP54(IEC60529) dust-proof & splash-proof
Dimensions	97(W) x 110(H) x 169(D) mm (excluding protection shield & window)
Weight	Approx. 1.7kg(excluding battery, protect shield & window)

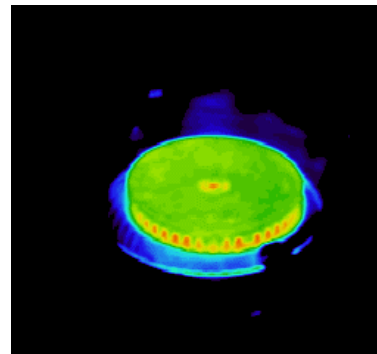
*1: May be influenced by some kind of fuels. Please consult with us .
Specifications are subject to change without prior notice.

Comparison: Gas Burner



No Flame Filter
3 to 5.3mm

Temperature of burner can not be identified because of influence by flame.



With Flame Filter
3.7 to 3.9mm

Temperature of burner surface can be measured because of less influence by flame.

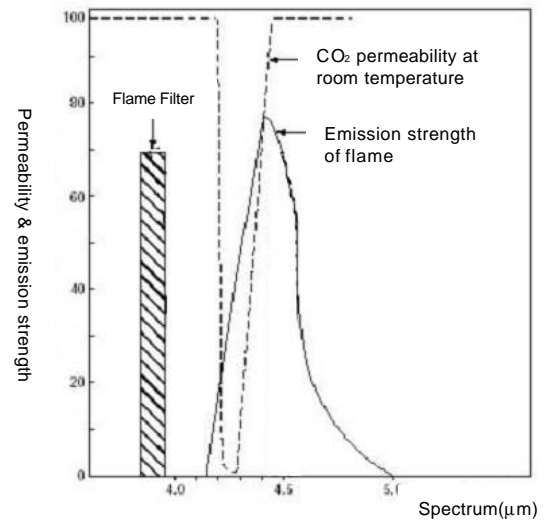
CAUTION FOR SAFETY

Please read "WARNING" & "CAUTION" in the operation manual attached to the product carefully for proper operation before using the product.

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Distributor:

Characteristics of Flame



Strength of flame & CO₂ permeability

When something burns, it usually emit carbon Dioxide(CO₂) gas. Measuring temperature through flame can be possible by avoiding spectral range of CO₂ and using a band-pass filter at 3.6 to 3.9 μm.

Standard Accessories: AC adaptor, battery pack, battery charger, compact flash memory card, grip belt, neck strap, lens protection cap, lens protection window, main-body protection shield and manual.