

## General Use Plastic and Glass pH and Reference Electrodes

### Feature:

- Fast - 95% Response in Less than 1 Second (bulb-type only)
- Combination or Half Cell Designs
- Single or Double Junction Construction
- Choose between Sealed and Re-fillable Models
- Choose between Glass and Plastic Body Models



### Description:

#### Combination or Separate Electrodes?

Omicron makes both types. The convenience of handling one combination electrode as compared to using separate pH and reference electrodes has been well established in laboratory and portable pH measurements. The price of Omicron combination electrodes is much less than the total price of the separate electrodes,. Individual half cell electrodes are used only for special purposes.

#### Glass or Plastic Body Electrodes?

Omicron makes both body types and they provide the identical excellent pH measurement. Traditionally, pH electrodes have been made of all glass construction. Today's plastics allow pH electrodes to be constructed with sturdy and chemically resistant epoxy or premium ULTEM bodies. The recessed protected design of the Omicron plastic body electrodes extends over the measuring surface so that the pH glass bulb is virtually un-breakable.

#### Single or Double Junction Reference?

Most pH measurements can be made with single junction reference electrodes. However, materials such as heavy metals, proteins and sulfides can precipitate at the junction. Double junction designs use a buffering salt such as  $\text{KNO}_3$  in the lower chamber contacting the sample, and prevent these reactions. They are also useful for pH measurement of tris buffers. Both combination or separate reference electrodes are available from Omicron.

### Performance Specification :

pH Range	:	0-14 (Na <sup>+</sup> error at >12.3 pH)
Response	:	95% in 1 second (bulb-type only) 95% in 5 seconds (flat-type only)
Isopotential point	:	pH 7.00 (0 mV)
Offset	:	+/- 0.20 pH
Span	:	97% of theoretical or higher



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Dimension :

How do I choose the appropriate laboratory electrode for my use?

OR: Select by electrode type you currently use:

- a) Combination pH or ORP
- b) Sealed or re-fillable reference
- c) Epoxy or glass body
- d) Dimension required Length and diameter (12mm dia x 150mm L is most common)
- e) Separate pH or ORP half-cell/separate reference half -cell

APPLICATION	OMICRON PART NUMBER		
	Glass Body	Epoxy Body	pHASE
Standard Lab use	SG201C	S200C	N/A
Field use	Not recommended	S200CD	N/A
Biological Samples, proteins,...	SG360CD	S350CD	S1021CD
Fluoride in acidic conditions	Not recommended	S350CDHF S450CDHF	N/A
Low ionic and ultrapure water	Not recommended	970070	S1021CD*
Viscous samples	SG360CD	S450CD	S1030CD
Test tubes and small diameter containers	SG901C	S900C	N/A
Tall flasks, deep reactors,...	SG301C	S300C	N/A
Meats, cheeses, jellies and other viscous foods	Not recommended	S450CD or S175CD Spear tip	S1030CD
Wide range of temperatures from sample to sample	Not recommended	Not recommended	All pHASE
High pH (up to 14pH)	Any model	Any model	Any model
Mixed aqueous/organic solvents	SG201CD, SG360CD	Not recommended	SG1030CD SG1041CD
Samples containing Heavy metals	SG200CD	S200CD	S1021CD
Paints	Not recommended	S450CD	S1030CD
Soil samples	Not recommended	S450CD	N/A
Surface measurements (agar plates, electrophoresis gels,...)	SG360CD	S350CD, S450CD	
Dairy product (milk, yogurt, cheese)	SG360CD	S350CD, S450CD	SG1041CD
Photographic	SG200CD	S200CD	S1021CD
Beer, wine and other liquors	SG201C	S200C	S1021CD

pHASE Electrode specs can be found on the pHASE Series Spec sheet.