

Rechargeable battery and semiconductor manufacturing

	Vaisala's dew point probe	CRDS	Chilled mirror transmitter
Td measurement range*	-80 °C...+20 °C	-100 °C...-50 °C	-70 °C...+20 °C
In-situ measurement	Yes	No, requires sampling and a large pressure difference	No, requires sampling
Td accuracy in laboratory conditions*	+/-2 °C	+/-0.2 °C	+/-0.2 °C
Pressure range*	1...50 bar	1...5 bar	~ 1 bar only
Dependency of atmospheric conditions	Not dependent	Dependent. Stable atmospheric conditions required. Sampling might generate errors in non-laboratory environment.	Dependent. Minimum dew point will raise if the ambient temperature increases. Sampling might generate errors in non-laboratory environment.
Response time*	Minutes	Tens of minutes	Hours
Sensitivity	High	Low (cannot detect quick changes, averaging measurement)	Low (cannot detect quick changes, averaging measurement)
Size	Small and light. Fits easily to multiple locations	Mid size, about 10 kg	From big and heavy to mid size
Operator to provide regular service	Not required	Not required	Required
Components requiring service	Not required	Not required, if in clean environment	Required (e.g., Peltier)
Local calibration/support available	Yes	Unlikely	Unlikely
Dependency of background gases	Minor	Potentially strong	Potentially crucial

* Typical values in battery and semiconductor manufacturing