

Specifications of IR-300

Model	IR-312M	IR-314M	IR-322M	IR-324M	IR-322MA	IR-324MA	IR-322MB	IR-324MB	
Gas cell optical path length	5mm		50mm		50mm				
Target chemical/ full-scale concentration *1	TMGa / 25 vol% , DEZn / 10 vol% IPA / 5 vol% , IPA / 10 vol%		TMIn / 1 vol% , TMIn / 2.5 vol% , TEGa / 1 vol% , TMGa / 1 vol% TMAI / 2 vol% , DEZn / 2.5 vol% , IPA / 1 vol%		GeH4 1vol%/H2		B2H6 10vol%/H2 or He		
Measurement concentration range	0 to 100% of full scale								
Repeatability *2	±0.5% of full scale								
Linearity *2	±1.0% of full scale								
Accuracy *3	±1.0% of full scale								
Zero drift *2	±1.0% of full scale/day								
Response (T90) *4	≤ 4 sec								
Sensor response	≤ 0.4 sec								
Operating pressure range *2*5	30 kPa to 300 kPa (A)				100 kPa to 300 kPa (A)				
Proof Pressure	500 kPa (A)								
Operating flow rate range*2*5	50 to 1000 SCCM								
Operating ambient temperature	15 to 35°C				20 to 35°C				
Setting gas cell temperature	60 °C (Need temperature controller prepared by users) *6				Non heating				
Gas cell temperature sensor	Thermocouple K Type (Connector type: OMEGA SMP-K-F)								
Thermal switch	100°C (self-hold)								
Warming up time	More than 1 hour								
Wetted material	Body: SUS316L, Gas cell optical window: Sapphire, Ag, Cu, Ti, Ni *7				Body : SUS316L, Gas cell optical window : sapphire, Ni , Al				
Leak integrity	≤ 5×10 ⁻¹² Pa·m ³ /s (He)								
Fitting	1/4 VCR male or equivalent								
Communication type	Analog/Digital	DeviceNet™	Analog/Digital	DeviceNet™	Analog/ Digital	DeviceNet™	Analog/ Digital	DeviceNet™	
Power requirement	Main unit	±15 V DC/3.8 W	24 V DC/12 W	±15 V DC/3.8 W	24 V DC/12 W	±15 VDC / 3.8 W	24 V DC/12 W	±15 VDC / 3.8 W	24 V DC/12 W
	Gas cell heater	200 to 240 V AC/Max. 50 VA (Connector type: Molex Standard .093 1545-P1)							
Dimensions	124 x 50.8 x 135 mm exception of projection								
Mounting orientation	Free								
Mass	Approx.1.2 kg		Approx.1.5 kg		Approx.1.2 kg		Approx.1.5 kg		

*1 Please contact HORIBA STEC regarding chemical and/or full-scale concentration other than those shown above.

*2 The specification is guaranteed under the standard conditions of HORIBA STEC.
Ambient temperature: 23 ± 2°C / Gas cell temperature: 60°C / Measurement flow rate: 1000 SCCM / Calibration gas: C₂H₆ balanced in N₂ at 105 KPa (A).

*3 Accuracy is based on concentration of the calibration gas.

*4 Gas replacement time (Td: time delay) is not included in the response.
The typical Td in our inspection equipment is approx. 1.0 second.

※The response without moving average is approx. 1.5 seconds.

It is necessary to change # of moving average of firmware settings by digital communication.

*5 This is recommended operating condition.

*6 Required specification of temperature controller
PID operation by auto tuning
Control cycle : 1 second or less

*7 Optional wetted Material : Body ; SUS-316L, Gas cell optical window ; Sapphire, Ni, Al