

# Agilent xCELLigence Real-Time Cell Analyzer HT-Biotek BioSpa 8 Specifications

Parameter		Value
Temperature Control	Range	Ambient Temperature (AT) +4 °C to 45 °C
	Resolution	0.1 °C
	Stability	±0.5 °C at 37 °C Temperature Stability is the range divided by 2 of a single measurement point in the incubator monitored over a half-hour period, following minimum 2-hour stabilization (e.g. R = 0.1 equivalent to ±0.5 °C) with all doors and covers closed.
	Heater Ramp	Less than 1 hour from ambient temperature (AT) to 37 °C. That is, from AT 20 °C or greater, time for air temperature to read within 0.5 °C of 37 °C setpoint (e.g. 36.5 °C) without overshooting by 0.5 °C (37.5 °C) with all doors and covers closed.
CO <sub>2</sub> Control	Range	0 to 20%
	Control Resolution	±0.1%
	Stability	±0.2 at 5% CO <sub>2</sub>
O <sub>2</sub> Control	Range	1 to 19%
	Control Resolution	±0.1%
	Stability	±0.2 at 1% O <sub>2</sub>
Humidity	Control	Passive humidity is provided by water pan and temperature control only. * The system shall operate for a period of 3 days without needing to refill the water pan (assuming maximum door opening frequency of eight times per hour, with chamber at 37 °C and 5% CO <sub>2</sub> )
	Range	Relative humidity shall be in the range of 80 to 95% when running with lidded plates at 37 °C and 5% CO <sub>2</sub> , with all drawers and doors closed, and following a minimum 1-hour stabilization time.
Labware	Compatible Labware	E-Plate 384
	Capacity	BioSpa can hold up to eight E-Plate 384
Impedance Measurement	Test Signal	22 mV rms ±20% with maximum 5 mV DC offset at 10 kHz
	Average Impedance Measurement Speed	6 seconds/plate
	Impedance Measurement Accuracy	±(1.5% + 1 Ω)
	Impedance Measurement Repeatability	0.8%
	Impedance Measurement Dynamic Range	50 Ω to 2 kΩ
	Electronic Switch Resistance	7 to 12 Ω
Data Management	Software	RTCA Software Pro (HT-BioSpa)
	Parameters	Cell Index
	File Format	.plt
	File Export	Excel file; text file
	User Management	Administrative creation of individual user accounts
	Workstation	Intel Core i7 processor or above; 16G DDR4 RAM or above; 512G solid state drive or above

Parameter	Value	
Operating Conditions	System Dimensions (W x D x H)	180 cm x 72 cm x 55 cm
	System Weight	62.6 kg (with an empty water pan)
	Operating Environment	Operating temperature range: 15 to 30 °C. Operating humidity range: 80% max. up to 25 °C, 60% max. up to 30 °C without condensation
	Storage Environment	Temperature: 1 to 40 °C Relative humidity: 80% maximum
	Power Requirements	100 to 240 VAC, 50 to 60 Hz
	Power Usage	xCELLigence RTCA HT Analyzer: 100 W maximum HT Station: 15 W maximum BioSpa: 250 W maximum
Regulatory Compliance	Indoor and Outdoor Use	Indoor
	Overvoltage Category	Class II
	Pollution Degree of the Intended Environment	2
	Degree of Ingress Protection	IPX0
E-Plate 384	Footprint	Compliance with ANSI/SBS 1-2004 requirements
	Dimensions (W x D x H)	12.77 cm x 8.55 cm x 1.75 cm (with lid) 12.77 cm x 8.55 cm x 1.435 cm (without lid)
	Spacing	The spacing of the wells is 4.5 mm center-to-center as per ANSI/SBS 4-2004 standard for 384-well microplates
	Volume	95 ±5 µL
	Well Bottom Dimension	(2.5 ±0.1 mm) x (2.5 ±0.1 mm)
	Electrical Interface	Interface with HT Station
	Sensor Impedance	112 ±22 Ω at 10 kHz, when measured with a 1x PBS solution
	Material	Biocompatible surfaces
	Operating Environment	Temperature: +15 to +40 °C Relative humidity: 98% maximum without condensation
	Storage Conditions	Room temperature
RTCA Resistor Plate 384	Dimension (W x D x H)	12.77 cm x 8.55 cm x 1.75 cm
	Resistor Values	37.4 Ω, 100 Ω, 150 Ω, 200 Ω, 499 Ω, ±0.5% precision
	Operating Environment	Temperature: +15 to +40 °C Relative humidity: 98% maximum without condensation
	Storage Conditions	Room temperature

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