Data Sheet

Agilent
Trusted Answers

Agilent BioTek Cytation C10 Confocal Imaging Reader

Technical details

General	
Detection Modes	UV-Vis absorbance Fluorescence intensity Luminescence
Read Methods	End point, kinetic, spectral scanning, well-area scanning
Microplate Types	Monochromator: 6- to 384-well plates Imaging: 6- to 1536-well plates
Other Labware Supported	Microscope slides, Petri and cell culture dishes, cell culture flasks (T25), and counting chambers (hemocytometer) Agilent BioTek Take3 microvolume plates
Temperature Control	4-Zone Incubation to 45 °C with Condensation Control
Shaking	Linear, orbital, double orbital
Software	Agilent BioTek Gen5 microplate reader and imager software included Agilent BioTek Gen5 Secure software enables 21 CFR Part 11 compliance (option) Agilent BioTek Gen5 Image+ and Image Prime software available for full image analysis (option)
Automation	Agilent BioTek BioStack microplate stacker and third-party automation compatible Agilent BioTek BioSpa 8 automated incubator compatible
CO_2 and O_2 Control (Option)	Range: 0–20% (CO_2); 1–19% (O_2), with optional Gas Controller Models for both CO_2/O_2, or CO_2 only, are available
Imaging–Confocal Microscope	
Imaging Modes	Fluorescence
Image Processing	Z-projection, digital phase contrast, stitching
Camera	Hamamatsu Orca sCMOS, 16-bit grayscale camera or Sony CMOS 16-bit grayscale camera
Objective Capacity	Six-position automated turret for user-replaceable objectives
Objectives Available	Air: 20x, 40x, 60x Water immersion: 40x, 60x
Imaging Filter Cube Capacity	Four user-replaceable fluorescence cubes
Imaging Filter Cubes Available	CFP, CY5, DAPI, GFP, RFP, TRITC, brightfield
Laser	6-line
Automated Functions	Autofocus, user-trained autofocus, auto-exposure, autoLED intensity
Autofocus Method	Image-based autofocus User-trained autofocus Laser autofocus (option)
Positional Controls	Software control Joystick controller (option)
Imaging Methods	Single color, multicolor, time lapse, montage, Z-stacking, Z-stack montage
Field of View	Hamamatsu sCMOS: 0.65 mm ± 5% at 20x magnification Sony CMOS: 0.70 mm ± 5% at 20x magnification
Image Collection Rate	Laser autofocus, 0 ms delay, 96 wells: 8 mins, 9 secs Software autofocus, 0 ms delay, 96 wells: 12 mins, 1 sec

Imaging–Widefield Microscope	
Imaging Mode	Fluorescence, phase contrast, color brightfield, user-selectable brightfield/high-contrast brightfield
Imaging Method	Single color, multicolor, time lapse, montage, Z-stacking, Z-stack montage
Image Processing	Z-projection, digital phase contrast, stitching
Camera	Hamamatsu Orca sCMOS, 16-bit grayscale camera or Sony CMOS 16-bit grayscale camera
Objective Capacity	Six-position automated turret for user-replaceable objectives
Objectives Available	Air: 1.25x, 2x, 2.5x, 4x, 10x, 20x, 40x, 60x Water immersion: 40x, 60x
Phase Objectives Available	4x, 10x, 20x, 40x
Imaging Filter Cube Capacity	Four user-replaceable fluorescence cubes, plus brightfield channel
Imaging Filter Cubes Available	DAPI, CFP, GFP, YFP, RFP, Texas Red, CY5, CY7, acridine orange, CFP-FRET, CFP-YFP FRET, chlorophyll, phycoerythrin (PE), propidium iodide, CY5.5, TagBFP, Tag BFP-FRET, GFP (Ex)-CY5 (Em), RFP (Ex)-CY5 (Em), Alexa 568, Ex 377/Em 647, oxidized roGFP2, TRITC
Imaging LED Cubes Available	365, 390, 465, 505, 523, 554, 590, 623, 655, and 740 nm
Automated Functions	Autofocus, auto-exposure, autoLED intensity
Autofocus Method	Image-based autofocus User-trained autofocus Laser autofocus (option)
Positional Controls	Software control Joystick controller (option)
Image Collection Rate	Image-based autofocus: 96 wells, 1 color (DAPI), 4x, 6 min Laser autofocus: 6 wells, 1 color (DAPI), 4x, < 3 min
Image Analysis Software Option	Agilent BioTek Gen5 Image+ software: image analysis Agilent BioTek Gen5 Image Prime software: advanced image analysis Agilent BioTek Gen5 Secure software: enables 21 CFR Part 11 compliance
Fluorescence Intensity	
Light Source	Xenon flash
Detector	PMT
Wavelength Selection	Quad monochromators (top/bottom)
Wavelength Range	250–700 nm (900 nm option)
Monochromator Bandwidth	Variable, from 9–50 nm in 1 nm increments
Dynamic Range	7 decades
Reading Speed (Kinetic)	96 wells, sweep mode: 10 s; 384 wells, sweep mode: 20 s
Luminescence	
Wavelength Range	300–700 nm
Dynamic Range	> 6 decades
Absorbance	
Light Source	Xenon flash
Detector	Photodiode
Wavelength Selection	Monochromator
Wavelength Range	230–999 nm, 1 nm increment
Monochromator Bandwidth	4 nm (230–285 nm), 8 nm (> 285 nm)
Dynamic Range	0–4.0 OD
Resolution	0.0001 OD
Pathlength Correction	Yes
Monochromator Wavelength Accuracy	± 2 nm
Monochromator Wavelength Repeatability	± 0.2 nm

OD Accuracy	< 1% at 3.0 OD
OD Linearity	< 1% from 0 to 3.0 OD
OD Repeatability	< 0.5% at 2.0 OD
Stray Light	0.03% at 230 nm
Reading Speed (Kinetic)	96 wells: 10 s; 384 wells: 20 s
Reagent Injectors (Optional)	
Supported Detection Modes	All modes
Number	2 syringe pumps
Supported Labware	6- to 384-well plates, Petri and cell culture dishes
Dead Volume	1.1 mL, with backflush
Dispense Volume	5–1,000 µL in 1 µL increments
Plate Geometry	6- to 384-well microplates
Dispense Accuracy	± 1 µL or 2%
Dispense Precision	≤ 2% at 50–200 µL
Physical Characteristics	
Power	Instrument: external 250 W (minimum), 24 VDC power supply, compatible with 100–240 VAC at 50–60 Hz Optional six-channel laser light source: external 250 W power supply, compatible with 100–240 VAC at 50–60 Hz Optional Hamamatsu scientific camera: external 75 W power supply, compatible 100–240 VAC at 50–60 Hz
Dimensions	27" W x 18.5" H x 20" D (68.6 x 45.72 x 50.8 cm)
Weight	122 lb (53.3 kg)

Configurations

Part Number	C10IPW	C10IPWC	C10MIPW	C10MIPWC	C10IPHC2	C10MIPHC2
Confocal (60 µm Disk)		•		•	•	•
Confocal (60 µm Disk and either 40 µm Disk or Deep-Sectioning Disk)					•	•
Hamamatsu sCMOS					•	•
FLIR CMOS	•	•	•	•		
Multimode Detection (Monochromator)			•	•		•

www.agilent.com/lifesciences/biotek

DE06382888

This information is subject to change without notice.

Printed in the USA, October 13, 2023
5994-3589EN

Agilent
Trusted Answers