

G-Cell confocal high content imager specification

1	Imaging System	Confocal imaging, widefield imaging, switchable
2	Confocal Type	Single spinning-disk
3	Confocal Disk	Pinhole-type confocal disk with 50µm aperture
4	Imaging Types	Brightfield, color brightfield, and fluorescence imaging
5	Objective Turret	4-position objective turret
6	Objectives	4x plan fluor, UPLFLN4x, NA 0.13, WD=17mm, FN 26.5 10x plan fluor, UPLFLN10x2, NA 0.3, WD=10mm, FN 26.5 20x plan fluor, UPLFLN20x, NA 0.5, WD=2.1mm, FN 26.5 20x Plan Apo, UPLXAPO20x, NA 0.8, WD=0.6mm, FN 26.5 40x plan fluor, UPLFLN40x, NA 0.75, WD=0.51mm, FN 26.5 40x Plan Apo, UPLXAPO40x, NA 0.95, WD=0.18mm, FN 26.5
7	Transmitted Light Source (Brightfield)	White LED illumination source with independent R, G, B channels
8	Fluorescence Light Source	Five-color laser light source with excitation wavelengths: 405 nm, 488 nm, 561 nm, 638 nm, and 730 nm
9	Camera Type	Research-grade deep-cooled CMOS camera (sCMOS)
10	Camera Specifications	Sony IMX571 back-illuminated large-pixel sensor; resolution ≥ 26 megapixels; sensor size 1.8" (23.48x15.67 mm); pixel size 3.76 µm x 3.76 µm; 16-bit pixel depth; Frame rate: 37fps @ 3104x2084 / 110fps @ 2064x1386; Dynamic range: 82.14dB (HCG) / 84.35dB(LCG); Signal-to-noise ratio: 42.23dB (HCG) / 47.05dB (LCG); Supports the Binning function; Gain adjustment range 1~50x.
11	Fluorescence Channels	5 fluorescence channels 1) 405 nm excitation: Excitation filter band: 357-405 nm, Emission filter band: 412-450 nm; 2) 488 nm excitation: Excitation filter band: 461-488 nm, Emission filter band: 498-531 nm; 3) 561 nm excitation: Excitation filter band: 543-566 nm,

		Emission filter band: 578-612 nm; 4) 638 nm excitation: Excitation filter band: 625-646 nm, Emission filter band: 660-702 nm; 5) 730 nm excitation: Excitation filter band: 719-750 nm, Emission filter band: 766-849 nm;
12	Stage	Travel range: X 120mm, Y 80 mm, Z 6 mm, motorized with automated control; Repeatability: X/Y axes 0.4µm, Z axis 0.1µm; Max speed: X/Y 50 mm/s
13	Field of View Area	0.8 mm x 0.8 mm @ 20x
14	Imaging Speed	In widefield mode with laser autofocus, for a 96-well plate, single field of view per well: Total imaging time for 2 channels ≤ 2.5 min; total imaging time for 5 channels ≤ 3 min
15	Consumables Compatibility	Consumables compliant with SBS standards: 6- to 1536-well flat-bottom plates, culture dishes, slides, etc.; Supports flexible configuration of consumable dimensions and parameters