

BD FACSCelesta™ Flow Cytometer Configuration Sheet

Blue-Violet (BV) Laser Configuration



The BD FACSCelesta™ flow cytometer is designed to simplify the use of multicolor flow cytometry and allow researchers to benefit from new innovations in instrument and reagent technology. This platform offers multiple configurations to meet varied application needs.

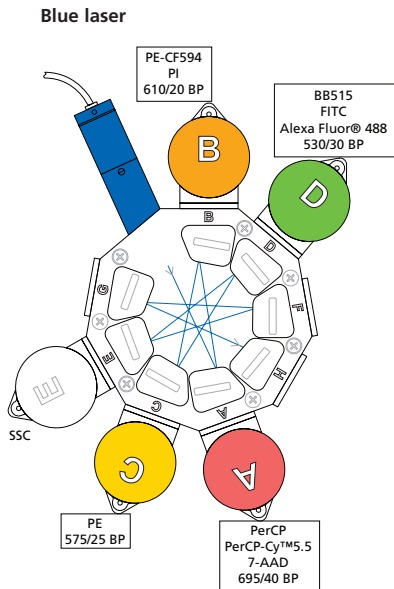
The BV configuration of the BD FACSCelesta includes blue and violet lasers, optimized to get the most out of the legacy fluorochromes, viability dyes, and BD Horizon Brilliant™ dyes shown in the optical path diagrams. While a blue laser has long been standard in flow cytometry, the violet laser is gaining popularity as more bright violet-excited fluorochromes, such as BD Horizon Brilliant™ Violet reagents, are introduced and enthusiastically adopted.

Multicolor flow cytometry panel design has presented challenges for researchers, such as varying marker expression, varying dye brightness, and significant emission spillover between fluorescence channels. The combination of bright, narrow-spectrum, BD Horizon Brilliant fluorochromes and sensitive optics results in panels that can readily resolve even dim populations, yet are easy to use and compensate. The system

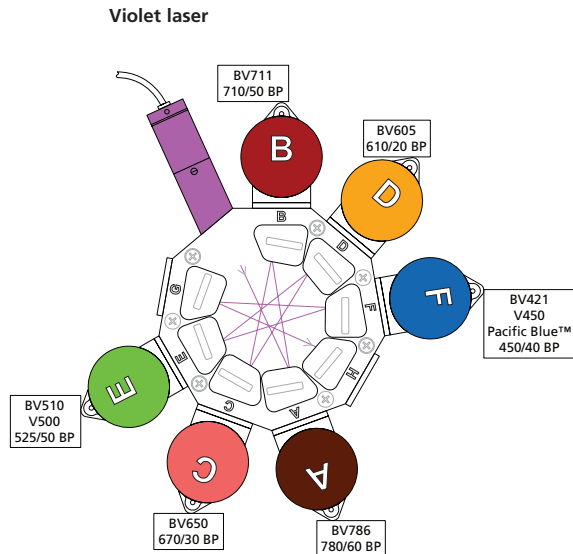
operates with BD FACSDiva™ software, a collection of convenient and easy-to-use tools for flow cytometer and application setup, data acquisition, and data analysis.

Optical path diagrams and fluorochrome support

Laser polygons show fluorochromes, mirrors, filters, and optical paths for the BD FACSCelesta BV configuration.

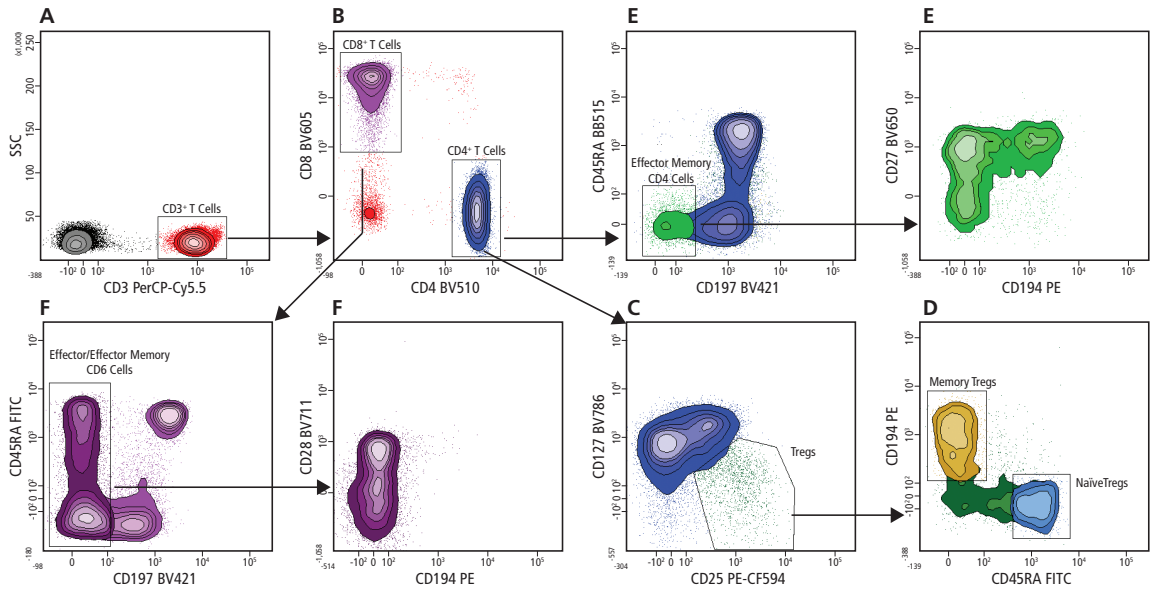


Other fluorochromes supported:
BD Horizon™ Fixable Viability Stain 520, 570, 620



Other fluorochromes supported:
BD Horizon™ Fixable Viability Stain 450, 510





10-color T-cell analysis on the BD FACSCelesta BV configuration.

This T-cell panel demonstrates the sensitivity and resolution of the BD FACSCelesta flow cytometer, even in detecting rare subpopulations using a 2-laser system. After normal human whole blood was washed and lysed, BD Horizon Brilliant and traditional dyes were used to identify rare T-cell and Treg subpopulations. **A.** Cells were gated to select the CD3⁺ T cells. **B.** CD3⁺ lymphocytes were gated to show the CD4⁺ helper T cells and CD8⁺ cytotoxic T cells. **C.** Gated on the CD4⁺ T cells, surface markers were used to identify CD25⁺CD127⁻ Tregs. **D.** Gated on Tregs, surface markers were used to identify memory and naïve Treg subsets (CD194, CD45RA). **E.** CD4⁺ helper T cells were analyzed for memory T-cell subsets using CD45RA and CD197. Memory subsets were further defined using CD27 and CD194 surface markers. **F.** CD8⁺ cytotoxic T cells were analyzed for memory T-cell subsets using CD45RA and CD197. Memory subsets were further defined using CD28 and CD194 surface markers.

Excitation Laser	Fluorochrome	Ex _{max}	Em _{max}	Relative Brightness
Violet (405 nm)	BD Horizon Brilliant™ Violet 786 (BV786)	407 nm	786 nm	■ ■ ■ ■ □
	BD Horizon Brilliant™ Violet 711 (BV711)	407 nm	711 nm	■ ■ ■ ■ ■
	BD Horizon Brilliant™ Violet 650 (BV650)	407 nm	650 nm	■ ■ ■ ■ ■
	BD Horizon Brilliant™ Violet 605 (BV605)	407 nm	602 nm	■ ■ ■ ■ □
	BD Horizon Brilliant™ Violet 510 (BV510)	405 nm	510 nm	■ ■ ■ ■ □
	BD Horizon Brilliant™ Violet 421 (BV421)	407 nm	421 nm	■ ■ ■ ■ ■
Blue (488 nm)	PerCP	482 nm	678 nm	■ □ □ □ □
	PerCP-Cy™5.5	482 nm	695 nm	■ ■ □ □ □
	BD Horizon™ PE-CF594	496 nm	612 nm	■ ■ ■ ■ ■
	PE	496 nm	578 nm	■ ■ ■ ■ □
	BD Horizon Brilliant™ Blue 515 (BB515)	490 nm	515 nm	■ ■ ■ ■ ■
	FITC	494 nm	520 nm	■ ■ ■ ■ □
	Alexa Fluor® 488	495 nm	519 nm	■ ■ ■ ■ □



Ordering Information

Description	Cat. No.
BD FACSCelesta™ Flow Cytometer, BV Configuration	660343
BD FACSCelesta™ High Throughput Sampler (HTS) Option	658946
BD FACFlow™ Supply System	649908
BD FACSCelesta™ Standard Workstation Bundle	660472

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 For Research Use Only. Not for use in diagnostic or therapeutic procedures.
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 CF™ is a trademark of Biotium, Inc.
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