

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CYTEK BIOSCIENCES, INC.,
Petitioner

v.

BECKMAN COULTER, INC.
Patent Owner

Case No. PGR2025-00084
U.S. Patent No. 12,174,106 B2
Issue Date: December 24, 2024

Title: FLOW CYTOMETER

PETITIONER UPDATED EXHIBIT LIST

List of Exhibits

Exhibit No.	Description of Document
1001	U.S. Patent No. 12,174,106 B2 to Yong Qin Chen (filed December 22, 2021, issued December 24, 2024) (“ 106 patent ”)
1002	Declaration of Fedor A. Ilkov, Ph.D.
1003	Prosecution History of U.S. Patent No. 12,174,106 B2
1004	Nigel P. Carter and Michael G. Ormerod, <i>Chapter 1, Introduction to the Principles of flow cytometry</i> , Flow Cytometry, pp. 1-22 (3rd ed. 2000)
1005	U.S. Patent No. 6,683,314 B2 to Clifford A. Oostman, Jr. et al. (filed August 28, 2001; published January 27, 2004) (“ Oostman ”)
1006	U.S. Patent No. 5,317,162 to Bertram G. Pinsky et al. (filed September 9, 1992; published May 31, 1994) (“ Pinsky ”)
1007	Excerpts of Howard M. Shapiro, Practical Flow Cytometry (4th ed. 2003) (“ Shapiro ”)
1008	World Patent No. WO 2010/101623 A1 to Michael Thomas (filed March 2, 2010; published September 10, 2010) (“ Thomas ”)
1009	U.S. Patent No. 8,284,402 B2 to Erich Frazier et al. (filed February 26, 2010; published October 9, 2012) (“ Frazier ”)
1010	U.S. Patent No. 4,244,045 to Kiyoshi Nosu et al. (filed January 31, 1979; published January 6, 1981) (“ Nosu ”)
1011	U.S. Patent No. 8,537,468 B1 to Xuan Wang et al. (filed June 10, 2011; published September 17, 2013) (“ Wang ”)
1012	U.S. Patent No. 6,198,864 B1 to Brian E. Lemoff et al. (filed November 24, 1998; published March 6, 2001) (“ Lemoff ”)

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1013	U.S. Patent No. 7,212,343 B1 to Chun He et al. (filed July 11, 2003; published May 1, 2007) (“ He ”)
1014	U.S. Patent No. 5,835,517 to Vijaysekhar Jayaraman et al. (filed October 4, 1996; published November 10, 1998) (“ Jayaraman ”)
1015	U.S. Patent No. 6,201,908 B1 to Eric B. Grann (filed July 2, 1999; published March 13, 2001) (“ Grann ”)
1016	U.S. Patent No. 6,542,306 B2 to Timothy D. Goodman (filed March 16, 2001; published April 1, 2003) (“ Goodman ”)
1017	Listing of Challenged Claims
1018	Joint Claim Construction Chart including Exhibit A Parties Agreed and Proposed Constructions filed in <i>Beckman Coulter, Inc. v. Cytek Biosciences, Inc.</i> , C.A. No. 24-945 (D. Del. May 28, 2025), D.I. 89 & 89-1
1019	Plaintiff’s Disclosure of Asserted Claims and Infringement Contentions [Redacted Version], served in <i>Beckman Coulter, Inc. v. Cytek Biosciences, Inc.</i> , C.A. No. 24-945 (D. Del. Feb. 14, 2025)
1020	<i>Reserved</i>
1021	<i>Reserved</i>
1022	<i>Reserved</i>
1023	Steve Wasserman, <i>Geometrical optics and ray tracing</i> , Course Wiki (August 27, 2019)
1024	<i>Reserved</i>

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1025	Complaint filed in <i>Beckman Coulter, Inc. v. Cytek Biosciences, Inc.</i> , C.A. No. 1:24-cv-00945 (D. Del. Aug. 14, 2024), D.I. 1
1026	Summons in a Civil Action to Cytek Biosciences, Inc. c/o Cogency Global, Inc. served on August 15, 2024, filed in <i>Beckman Coulter, Inc. v. Cytek Biosciences, Inc.</i> , C.A. No. 1:24-cv-00945 (D. Del. Aug. 16, 2024), D.I. 5
1027	Stipulation and Order Amending Scheduling Order filed in <i>Beckman Coulter, Inc. v. Cytek Biosciences, Inc.</i> , C.A. No. 1:24-cv-00945 (D. Del. March 4, 2025), D.I. 55
1028	<i>Reserved</i>
1029	<i>Reserved</i>
1030	Rochelle A. Diamond, <i>Chapter 8: Quality Control Guidelines for Research Flow Cytometry</i> , In Living Color, pp. 98-105 (2000)
1031	R.M.P. Doornbos et al., <i>White Blood Cell Differentiation Using a Solid State Flow Cytometer</i> , <i>Cytometry</i> 14:589-594 (1993) (“ Doornbos ”)
1032	SensL SPMMini High Gain APD (Oct. 2007)
1033	Menlo Systems APD210/310 High Sensitivity Detector Unit (Apr. 2021)
1034	Thorlabs.com – High-Sensitivity Avalanche Photodetectors website Overview, Specs and Documents & Drawings, (Aug. 31, 2011), https://web.archive.org/web/20110831115024/http://www.thorlabs.com/NewGroupPage9.cfm?ObjectGroup_ID=947
1035	World Patent No. WO 94/29695 to Oddbjørn Gjelsnes (filed June 8, 1993; published December 22, 1994) (“ Gjelsnes ”)

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1036	Carleton C. Stewart et al., <i>Flow Cytometer in the Infrared: Inexpensive Modifications to a Commercial Instrument</i> , Cytometry Part A, 67A:104-111 (2005) (“ Stewart ”)
1037	William G. Lawrence et al., <i>A 16-channel avalanche photodiode detector array for visible and near-infrared flow cytometry</i> , Imaging, Manipulation, and Analysis of Biomolecules, Cells, and Tissues IV, Proc. of SPIE, Vol. 6088, 60880T, (2006) (“ Lawrence ”)
1038	William G. Lawrence et al., <i>A Comparison of Avalanche Photodiode and Photomultiplier Tube Detectors for Flow Cytometry</i> , Imaging, Manipulation, and Analysis of Biomolecules, Cells, and Tissues VI, Proc. of SPIE Vol. 6859, 68590M, (2008) (“ Lawrence 2008 ”)
1039	Shutao Zhao et al., <i>High gain avalanche photodiode (APD) arrays in flow cytometer optical [sic] system</i> , IEEE (2011) (“ Zhao ”)
1040	U.S. Patent No. 8,188,438 B2 to Dongqing Li (filed Mar. 8, 2010; published May 29, 2012) (“ Li-438 ”)
1041	Canadian Patent No. 2 771 324 to Paul Patt (filed Aug. 20, 2010; published June 21, 2016) (“ Patt-324 ”)
1042	U.S. Patent No. 7,580,120 B2 to Yuichi Hamada et al. (filed Apr. 6, 2006; published Aug. 25, 2009) (“ Hamada ”)
1043	World Patent No. 98/59233 to Van S. Chandler (filed June 22, 1998; published Dec. 30, 1998) (“ Chandler-233 ”)
1044	U.S. Patent No. 7,523,637 B2 to Wayne D. Roth et al. (filed Nov. 29, 2007; published Apr. 28, 2009) (“ Roth-637 ”)
1045	U.S. Patent No. 7,505,131 B2 to Wayne D. Roth (filed Mar. 6, 2008; published Mar. 17, 2009) (“ Roth-131 ”)

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1046	U.S. Patent Application Publication No. 2008/0305481 A1 to Douglas F. Whitman et al. (filed Dec. 13, 2007; published Dec. 11, 2008) (“ Whitman ”)
1047	U.S. Patent Application Publication No. 2007/0269345 A1 to Adam Richard Schilffarth et al. (filed May 17, 2007; published Nov. 22, 2007) (“ Schilffarth-345 ”)
1048	U.S. Patent Application Publication No. 2007/0207513 A1 to Keld Sorensen et al. (filed Mar. 5, 2007; published Sept. 6, 2007) (“ Sorensen ”)
1049	U.S. Patent Application Publication No. 2009/0071225 A1 to Adam Richard Schilffarth (filed Sept. 17, 2008; published Mar. 19, 2009) (“ Schilffarth-225 ”)
1050	U.S. Patent Application Publication No. 2009/0237658 A1 to Edward Calvin et al. (filed Apr. 9, 2009; published Sept. 24, 2009) (“ Calvin ”)
1051	U.S. Patent No. 6,139,800 to Van S. Chandler (filed June 22, 1998; published October 31, 2000) (“ Chandler ”)
1052	Luminex 100™ IS User Manual Version 2.3 (Oct. 2005)
1053	Luminex FlexMap 3D® User Manual (Jan. 2019)
1054	BD Biosciences Immunocytometry Systems Technical Specifications BD FACSAarray (Oct. 2003)
1055	<i>Reserved</i>
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1057	<i>Reserved</i>

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1058	<i>Reserved</i>
1059	<i>Reserved</i>
1060	Hamamatsu Si APD S5343 to S5345, S9073 to S9075, Short wavelength type APD (Apr. 2004)
1061	Hamamatsu Si APD S8890 series, Long wavelength type APD (June 2010)
1062	Hamamatsu Si APD S2381 to S2385, S5139, S8611, S3884, S4315 series, Low bias operation, for 800 nm band (May 2010)
1063	<i>Reserved</i>
1064	<i>Reserved</i>
1065	<i>Reserved</i>
1066	<i>Reserved</i>
1067	<i>Reserved</i>
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1069	Joint Claim Construction Brief filed in <i>Beckman Coulter, Inc. v. Cytex Biosciences, Inc.</i> , C.A. No. 1:24-cv-00945 (D. Del. July 27, 2025), D.I. 114
1070	U.S. Patent No. 9,746,412 B2 to Yong Qin Chen (filed Nov. 26, 2014; published Aug. 29, 2017) (“ 412 ”)
1071	Prosecution History of PCT/US2013/043453 (the “ PCT App. ”)
1072	2.3: Spherical Mirrors, Bowdoin College, Phys1140: Introductory Physics II: Part 2,

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	https://phys.libretexts.org/Courses/Bowdoin_College/Phys1140:_Introductory_Physics_II:_Part_2/02:_Geometric_Optics_and_Image_Formation/2.03:_Spherical_Mirrors
1073	Michael W. Davidson, Molecular Expressions, Optical Microscopy Primer, Physics of Light and Color, Florida State University (Nov. 13, 2015), https://micro.magnet.fsu.edu/primer/lightandcolor/mirrorsintro.html
1074	<i>Reserved</i>
1075	U.S. Patent No. 11,703,443 B2 to Yong Qin Chen (filed Nov. 4, 2022; published July 18, 2023) (“ 443 ”)
1076	Prosecution history of EP24151670
1077	Optics: Concave and Convex Mirrors and Lenses, ScienceReady (2025), https://scienceready.com.au/pages/mirrors-and-lenses
1078	U.S. Patent No. 11,255,772 B2 to Yong Qin Chen (filed June 30, 2017; published Feb. 22, 2022) (“ 772 ”)
1079	Definition of quantitate from Concise Oxford English Dictionary (12th ed. 2011)
1080	M. Salvato et al., <i>Time response in carbon nanotube/Si based photodetectors</i> , Sensors and Actuators A292: 71-76 (2019)
1081	Declaration of Dr. David Schaafsma, Ph.D. in Support of Beckman Coulter’s Opening Claim Construction Brief, dated June 5, 2025, filed in <i>Beckman Coulter, Inc. v. Cytek Biosciences, Inc.</i> , C.A. No. 1:24-cv-00945 (D. Del. July 27, 2025)

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1082	Xiaolu Xia et al., <i>Emerging optoelectronic architectures in carbon nanotube photodetector technologies</i> , <i>Fundamental Research</i> , 5:1153-1168 (available online in 2023, in print in 2025)
1083	Xiang Cai et al., <i>Recent progress of photodetector based on carbon nanotube film and application in optoelectronic integration</i> , <i>Nano Research Energy</i> 2:e9120058:1-18 (2023)
1084	Yue Wang et al., <i>Advancement in Carbon Nanotubes Optoelectronic Devices for Terahertz and Infrared Applications</i> , <i>Advanced Electronic Materials</i> , 10:2400124:1-31 (2024)
1085	<i>Reserved</i>
1086	<i>Reserved</i>
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1103	Markman Hearing Transcript from <i>Beckman Coulter, Inc. v. Cytek Biosciences, Inc.</i> , C.A. No. 24-945 (D. Del. August 21, 2025)
1104	<i>Reserved</i>
1105	<i>Reserved</i>
1106	<i>Reserved</i>
1107	<i>Reserved</i>
1108	Excerpts of the Prosecution history of U.S. Patent No. 9,746,412

Dated: November 26, 2025

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify, pursuant to 37 C.F.R. § 42.6 that I caused a true and correct copy of the foregoing **PETITIONER UPDATED EXHIBIT LIST** to be served via electronic mail on the 26th day of November, 2025, upon Patent Owner's counsel as follows:

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