

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**

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

**List of Exhibits**

<b>Exhibit No.</b>	<b>Description of Document</b>
<b>1013</b>	U.S. Patent No. 7,212,343 B1 to Chun He et al. (filed July 11, 2003; published May 1, 2007) (“ <b>He</b> ”)
<b>1014</b>	U.S. Patent No. 5,835,517 to Vijaysekhar Jayaraman et al. (filed October 4, 1996; published November 10, 1998) (“ <b>Jayaraman</b> ”)
<b>1015</b>	U.S. Patent No. 6,201,908 B1 to Eric B. Grann (filed July 2, 1999; published March 13, 2001) (“ <b>Grann</b> ”)
<b>1016</b>	U.S. Patent No. 6,542,306 B2 to Timothy D. Goodman (filed March 16, 2001; published April 1, 2003) (“ <b>Goodman</b> ”)
<b>1017</b>	Listing of Challenged Claims
<b>1018</b>	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
<b>1019</b>	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)
<b>1020</b>	<i>Reserved</i>
<b>1021</b>	<i>Reserved</i>
<b>1022</b>	<i>Reserved</i>
<b>1023</b>	Steve Wasserman, <i>Geometrical optics and ray tracing</i> , Course Wiki (August 27, 2019)
<b>1024</b>	<i>Reserved</i>

**List of Exhibits**

<b>Exhibit No.</b>	<b>Description of Document</b>
<b>1025</b>	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
<b>1026</b>	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
<b>1027</b>	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
<b>1028</b>	<i>Reserved</i>
<b>1029</b>	<i>Reserved</i>
<b>1030</b>	Rochelle A. Diamond, <i>Chapter 8: Quality Control Guidelines for Research Flow Cytometry</i> , In Living Color, pp. 98-105 (2000)
<b>1031</b>	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) (“ <b>Doornbos</b> ”)
<b>1032</b>	SensL SPMMini High Gain APD (Oct. 2007)
<b>1033</b>	Menlo Systems APD210/310 High Sensitivity Detector Unit (Apr. 2021)
<b>1034</b>	Thorlabs.com – High-Sensitivity Avalanche Photodetectors website Overview, Specs and Documents & Drawings, (Aug. 31, 2011), <a href="https://web.archive.org/web/20110831115024/http://www.thorlabs.com/NewGroupPage9.cfm?ObjectGroup_ID=947">https://web.archive.org/web/20110831115024/http://www.thorlabs.com/NewGroupPage9.cfm?ObjectGroup_ID=947</a>
<b>1035</b>	World Patent No. WO 94/29695 to Oddbjørn Gjelsnes (filed June 8, 1993; published December 22, 1994) (“ <b>Gjelsnes</b> ”)

**List of Exhibits**

<b>Exhibit No.</b>	<b>Description of Document</b>
<b>1036</b>	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) (“ <b>Stewart</b> ”)
<b>1037</b>	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) (“ <b>Lawrence</b> ”)
<b>1038</b>	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) (“ <b>Lawrence 2008</b> ”)
<b>1039</b>	Shutao Zhao et al., <i>High gain avalanche photodiode (APD) arrays in flow cytometer optical [sic] system</i> , IEEE (2011) (“ <b>Zhao</b> ”)
<b>1040</b>	U.S. Patent No. 8,188,438 B2 to Dongqing Li (filed Mar. 8, 2010; published May 29, 2012) (“ <b>Li-438</b> ”)
<b>1041</b>	Canadian Patent No. 2 771 324 to Paul Patt (filed Aug. 20, 2010; published June 21, 2016) (“ <b>Patt-324</b> ”)
<b>1042</b>	U.S. Patent No. 7,580,120 B2 to Yuichi Hamada et al. (filed Apr. 6, 2006; published Aug. 25, 2009) (“ <b>Hamada</b> ”)
<b>1043</b>	World Patent No. 98/59233 to Van S. Chandler (filed June 22, 1998; published Dec. 30, 1998) (“ <b>Chandler-233</b> ”)
<b>1044</b>	U.S. Patent No. 7,523,637 B2 to Wayne D. Roth et al. (filed Nov. 29, 2007; published Apr. 28, 2009) (“ <b>Roth-637</b> ”)
<b>1045</b>	U.S. Patent No. 7,505,131 B2 to Wayne D. Roth (filed Mar. 6, 2008; published Mar. 17, 2009) (“ <b>Roth-131</b> ”)

**List of Exhibits**

<b>Exhibit No.</b>	<b>Description of Document</b>
<b>1046</b>	U.S. Patent Application Publication No. 2008/0305481 A1 to Douglas F. Whitman et al. (filed Dec. 13, 2007; published Dec. 11, 2008) (“ <b>Whitman</b> ”)
<b>1047</b>	U.S. Patent Application Publication No. 2007/0269345 A1 to Adam Richard Schilffarth et al. (filed May 17, 2007; published Nov. 22, 2007) (“ <b>Schilffarth-345</b> ”)
<b>1048</b>	U.S. Patent Application Publication No. 2007/0207513 A1 to Keld Sorensen et al. (filed Mar. 5, 2007; published Sept. 6, 2007) (“ <b>Sorensen</b> ”)
<b>1049</b>	U.S. Patent Application Publication No. 2009/0071225 A1 to Adam Richard Schilffarth (filed Sept. 17, 2008; published Mar. 19, 2009) (“ <b>Schilffarth-225</b> ”)
<b>1050</b>	U.S. Patent Application Publication No. 2009/0237658 A1 to Edward Calvin et al. (filed Apr. 9, 2009; published Sept. 24, 2009) (“ <b>Calvin</b> ”)
<b>1051</b>	U.S. Patent No. 6,139,800 to Van S. Chandler (filed June 22, 1998; published October 31, 2000) (“ <b>Chandler</b> ”)
<b>1052</b>	Luminex 100™ IS User Manual Version 2.3 (Oct. 2005)
<b>1053</b>	Luminex FlexMap 3D® User Manual (Jan. 2019)
<b>1054</b>	BD Biosciences Immunocytometry Systems Technical Specifications BD FACSAarray (Oct. 2003)
<b>1055</b>	<i>Reserved</i>
<b>1056</b>	<i>Reserved</i>
<b>1057</b>	<i>Reserved</i>

**List of Exhibits**

<b>Exhibit No.</b>	<b>Description of Document</b>
<b>1058</b>	<i>Reserved</i>
<b>1059</b>	<i>Reserved</i>
<b>1060</b>	Hamamatsu Si APD S5343 to S5345, S9073 to S9075, Short wavelength type APD (Apr. 2004)
<b>1061</b>	Hamamatsu Si APD S8890 series, Long wavelength type APD (June 2010)
<b>1062</b>	Hamamatsu Si APD S2381 to S2385, S5139, S8611, S3884, S4315 series, Low bias operation, for 800 nm band (May 2010)
<b>1063</b>	<i>Reserved</i>
<b>1064</b>	<i>Reserved</i>
<b>1065</b>	<i>Reserved</i>
<b>1066</b>	<i>Reserved</i>
<b>1067</b>	<i>Reserved</i>
<b>1068</b>	<i>Reserved</i>
<b>1069</b>	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
<b>1070</b>	U.S. Patent No. 9,746,412 B2 to Yong Qin Chen (filed Nov. 26, 2014; published Aug. 29, 2017) (“ <b>412</b> ”)
<b>1071</b>	Prosecution History of PCT/US2013/043453 (the “ <b>PCT App.</b> ”)
<b>1072</b>	2.3: Spherical Mirrors, Bowdoin College, Phys1140: Introductory Physics II: Part 2,

**List of Exhibits**

<b>Exhibit No.</b>	<b>Description of Document</b>
	<a href="https://phys.libretexts.org/Courses/Bowdoin_College/Phys1140:_Introductory_Physics_II:_Part_2/02:_Geometric_Optics_and_Image_Formation/2.03:_Spherical_Mirrors">https://phys.libretexts.org/Courses/Bowdoin_College/Phys1140:_Introductory_Physics_II:_Part_2/02:_Geometric_Optics_and_Image_Formation/2.03:_Spherical_Mirrors</a>
<b>1073</b>	Michael W. Davidson, Molecular Expressions, Optical Microscopy Primer, Physics of Light and Color, Florida State University (Nov. 13, 2015), <a href="https://micro.magnet.fsu.edu/primer/lightandcolor/mirrorsintro.html">https://micro.magnet.fsu.edu/primer/lightandcolor/mirrorsintro.html</a>
<b>1074</b>	<i>Reserved</i>
<b>1075</b>	U.S. Patent No. 11,703,443 B2 to Yong Qin Chen (filed Nov. 4, 2022; published July 18, 2023) (“ <b>443</b> ”)
<b>1076</b>	Prosecution history of EP24151670
<b>1077</b>	Optics: Concave and Convex Mirrors and Lenses, ScienceReady (2025), <a href="https://scienceready.com.au/pages/mirrors-and-lenses">https://scienceready.com.au/pages/mirrors-and-lenses</a>
<b>1078</b>	U.S. Patent No. 11,255,772 B2 to Yong Qin Chen (filed June 30, 2017; published Feb. 22, 2022) (“ <b>772</b> ”)
<b>1079</b>	Definition of quantitate from Concise Oxford English Dictionary (12th ed. 2011)
<b>1080</b>	M. Salvato et al., <i>Time response in carbon nanotube/Si based photodetectors</i> , Sensors and Actuators A292: 71-76 (2019)
<b>1081</b>	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)

**List of Exhibits**

<b>Exhibit No.</b>	<b>Description of Document</b>
<b>1082</b>	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)
<b>1083</b>	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)
<b>1084</b>	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)
<b>1085</b>	<i>Reserved</i>
<b>1086</b>	<i>Reserved</i>
<b>1087</b>	<i>Reserved</i>
<b>1088</b>	<i>Reserved</i>
<b>1089</b>	<i>Reserved</i>
<b>1090</b>	<i>Reserved</i>
<b>1091</b>	<i>Reserved</i>
<b>1092</b>	<i>Reserved</i>
<b>1093</b>	<i>Reserved</i>
<b>1094</b>	<i>Reserved</i>
<b>1095</b>	<i>Reserved</i>
<b>1096</b>	<i>Reserved</i>

**List of Exhibits**

<b>Exhibit No.</b>	<b>Description of Document</b>
<b>1097</b>	<i>Reserved</i>
<b>1098</b>	<i>Reserved</i>
<b>1099</b>	<i>Reserved</i>
<b>1100</b>	<i>Reserved</i>
<b>1101</b>	<i>Reserved</i>
<b>1102</b>	<i>Reserved</i>
<b>1103</b>	Markman Hearing Transcript from <i>Beckman Coulter, Inc. v. Cytek Biosciences, Inc.</i> , C.A. No. 24-945 (D. Del. August 21, 2025)
<b>1104</b>	<i>Reserved</i>
<b>1105</b>	<i>Reserved</i>
<b>1106</b>	<i>Reserved</i>
<b>1107</b>	<i>Reserved</i>
<b>1108</b>	Excerpts of the Prosecution history of U.S. Patent No. 9,746,412
<b>1109</b>	Cytek Biosciences Debuts New Advanced Flow Cytometry System, (June 7, 2017), <a href="https://cytekbio.com/blogs/news/cytek-biosciences-debuts-newadvanced-flow-cytometry-system">https://cytekbio.com/blogs/news/cytek-biosciences-debuts-newadvanced-flow-cytometry-system</a>
<b>1110</b>	Specification of U.S. Patent Application No. 61/653,328
<b>1111</b>	Specification of U.S. Patent Application No. 61/911,859
<b>1112</b>	<i>Reserved</i>
<b>1113</b>	<i>Reserved</i>
<b>1114</b>	<i>Reserved</i>

**List of Exhibits**

<b>Exhibit No.</b>	<b>Description of Document</b>
<b>1115</b>	<i>Reserved</i>
<b>1116</b>	Memorandum from John A Squires, Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office re Voluntary Search Disclosure Declarations as a Favorable Factor in Institution Decisions, dated November 17, 2025
<b>1117</b>	<i>Reserved</i>
<b>1118</b>	Amended Joint Claim Construction Chart including Exhibit A Parties Agreed Constructions filed in <i>Beckman Coulter, Inc. v. Cytek Biosciences, Inc.</i> , C.A. No. 24-945 (D. Del. Aug. 1, 2025), D.I. 131
<b>1119</b>	Order filed in <i>Beckman Coulter, Inc. v. Cytek Biosciences, Inc.</i> , C.A. No. 24-945 (D. Del. Feb. 24, 2026), D.I. 226
<b>1120</b>	Plaintiff Beckman Coulter, Inc.'s Second Election of Asserted Claims, served in <i>Beckman Coulter, Inc. v. Cytek Biosciences, Inc.</i> , C.A. No. 24-945 (D. Del. Oct. 1, 2025)
<b>1121</b>	Notice of Service filed in <i>Beckman Coulter, Inc. v. Cytek Biosciences, Inc.</i> , C.A. No. 24-945 (D. Del. Oct. 1, 2025), D.I. 181

Dated: March 6, 2026

Respectfully submitted,

COOLEY LLP  
ATTN: Patent Group  
1299 Pennsylvania Avenue NW  
Suite 700  
Washington, DC 20004  
Tel: (703) 456-8647  
Fax: (703) 456-8100

By: / Joseph Van Tassel /  
Joseph Van Tassel  
Reg. No. 74,136  
Counsel for Petitioner

**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 6th day of March, 2026, upon Patent Owner's counsel as follows:

Laura Macro	Laura.Macro@wilmerhale.com
Akkad Moussa	Akkad.Moussa@wilmerhale.com
Omar Khan	Omar.Khan@wilmerhale.com
Jeffrey Dennhardt	Jeffrey.Dennhardt@wilmerhale.com
Jennifer Graber	Jennifer.Graber@wilmerhale.com
Patrick Nyman	Patrick.Nyman@wilmerhale.com

DATED: March 6, 2026

*/ Joseph Van Tassel /*  
Joseph Van Tassel  
Reg. No. 74,136

COOLEY LLP  
1299 Pennsylvania Ave. NW,  
Suite 700  
Washington, D.C. 20004  
Tel: (703) 456-8647  
Fax: (703) 456-8100