List of film formats

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This list of film formats catalogues formats developed for shooting or viewing motion pictures, ranging from the Chronophotographe format from 1888, to mid-20th century formats such as the 1953 CinemaScope format, to more recent formats such as the 1992 IMAX HD format. To be included in this list, the formats must all have been used in the field or for test shooting, and they must all use photochemical images that are formed or projected on a film base, a transparent substrate which supports the photosensitive emulsion.

As well, the formats must have been used to make more than just a few test frames. The camera must be fast enough (in frames per second) to create an illusion of motion consistent with the persistence of vision phenomenon. The format must be significantly unique from other listed formats in regard to its image capture or image projection. The format characteristics should be clearly definable in several listed parameters (e. g., film gauge, aspect ratio, etc.).

Legend

- **Format** is the name of the process; some formats may have multiple names in common usage.
- **Creator** is the individual or company most directly attributable as the developer of the system.
- **Year created** usually refers to the earliest date that the system was used to completion (i.e. projection), but may refer to when it was developed if no known film was made.
- **First known film** is the first film (not including tests) made with the format and intended for release.
- **Negative gauge** is the film gauge (width) used for the original camera negative.
- **Negative aspect ratio** is the image ratio determined by the ratio of the gate dimensions multiplied by the anamorphic power of the camera lenses (1x in the case of spherical lenses).[1]
- **Gate dimensions** are the width and height of the camera gate aperture, and by extension the film negative frame.
- **Negative pulldown** describes the film perforations per frame, the direction of film transport, and standard frame speed. Film transport is assumed to be vertical unless otherwise noted, and standard frame speed is assumed to be 24 frames per second unless the film is otherwise noted or has no standard. Silent film has no standard speed; many amateur formats have several common speeds, but no standard.
- **Negative lenses** indicates whether spherical (normal) or anamorphic lenses are used on the original camera negative, and if anamorphic lenses, what anamorphic power is used.
- **Projection gauge** is the film gauge (width) used for the release print.
- **Projection aspect ratio** is the image ratio determined by the ratio of the projection dimensions multiplied by the anamorphic power of the projection lenses (1x in the case of spherical lenses). This is also known as the intended theatrical aspect ratio.[1]
- **Projection dimensions** are the width and height of the projector aperture plate, and by extension the film frame area which is projected. The aperture plate always very slightly crops the frame.
- **Projection lenses** indicates whether spherical (normal) or anamorphic lenses are used on the projector, and if anamorphic lenses, what anamorphic power is used.

Formats are listed in chronological order and by release date in the case of multiple formats within one year, if this can be determined. Undated formats are listed at the bottom in alphabetical order.

Film formats

Format	Creator	Est.	First known work	Negative gauge	Negative A/R[1]	Gate dims	Negative pulldown	Negative lenses	Projection gauge	Projection A/R[1]	Projection dims	Projection lenses
Chronophotographe [2]	Étienne-Jules Marey	1888	motion analysis studies	90 mm	1.00	3.543" x 3.543"	unperforated	spherical				
Paperfilm[3]	Louis Le Prince	1888	*Roundhay Garden Scene*	54 mm or 63.5 mm	1.00		perforated	spherical	54 mm or 63.5 mm	1.00		spherical
Théâtre Optique	Émile Reynaud	1888	*Pauvre Pierrot*				perforated	spherical				spherical
Chronophotographic	Wm. Friese-Greene	1889		54 mm			irregular perfs	spherical				
Kinesigraph	Wordsworth Donisthorpe	1889	view of Trafalgar Square	68 mm	1.00?		unperforated	spherical				
Kinetoscope cylinder	Wm. Dickson & T. Edison	1889 or 1890	*Monkeyshines, No. 1*	strip rolled around a cylinder			unperforated	spherical	strip rolled around a cylinder			spherical
Kinetoscope horizontal	Wm. Dickson & William Heise	1891	*Dickson Greeting*	19 mm			1 perf, 1 side, horizontal	spherical	19 mm, horizontal			spherical
Silent film standard	Wm. Dickson & T. Edison	1892	*Blacksmith Scene*	35 mm	1.33	0.980" x 0.735"	4 perf, 2 sides	spherical	35 mm	1.33	0.931" x 0.698"	spherical
Bioskop	Max Skladanowsky	1892	footage of Emil Skladanowsky	54 mm			unperforated (camera); 4 perf, 2 sides (projection)	spherical	54 mm (two strips interleaved)			spherical

Format	Creator	Est.	First known work	Negative gauge	Negative A/R[1]	Gate dims	Negative pulldown	Negative lenses	Projection gauge	Projection A/R[1]	Projection dims	Projection lenses
Acres 70[4]	Birt Acres	1894	The Henley Royal Regatta of 1894	70 mm	1.38	2.750" x 2.000"		spherical	70 mm			spherical
Eidoloscope[5]	Woodville Latham	1895	*Griffo-Barnett Prize Fight*	51 mm	1.85	1.457" x 0.787"	4 perf, 2 sides	spherical	51 mm	1.85		spherical
Cinematographe	Lumière Brothers	1895	*La Sortie des Usines Lumiere*	35 mm	1.33	0.980" x 0.735"	1 perf, 2 sides (rounded)	spherical	35 mm	1.33		spherical
Biograph	Herman Casler	1895	*Sparring Contest at Canastota*	68 mm	1.35	2.625" x 1.938"	1 perf, 2 sides (punched in-camera)	spherical	68 mm			spherical
Joly-Normandin	Henri Joly	1895		60 mm			5 perf, 2 sides	spherical	60 mm			spherical
Biographe	Demeny-Gaumont	1896		60 mm	1.40	1.750" x. 1.250"	unperforated	spherical	60 mm	1.40		spherical
Chronophotographe	Demeny-Gaumont	1896		60 mm	1.40	1.750" x. 1.250"	4 perf, 2 sides	spherical	60 mm	1.40		spherical
Sivan-Dalphin	Casimir Sivan and E. Dalphin	1896		38 mm			2 perf, 2 sides	spherical	38 mm			spherical
Veriscope	Enoch Rector	1897	Corbett-Fitzsimmons fight	63 mm	1.66	1.875" x 1.125"	5 perf, 2 sides	spherical	63 mm			spherical
Viventoscope	Thomas Henry Blair	1897		48 mm	1.50	1.500" x 1.000"	1 perf?	spherical	48 mm			spherical
Birtac	Birt Acres	1898	unknown (amateur format)	17.5 mm			2 perf, 1 side	spherical	17.5 mm			spherical
Biokam	T. C. Hepworth	1899	unknown (amateur format)	17.5 mm	1.60	0.630" x 0.394"	1 perf, center	spherical	17.5 mm			spherical
Prestwich 13 mm	John Alfred Prestwich	1899	unknown (amateur format)	13 mm				spherical	13 mm			spherical
Mirograph	Reulos, Goudeau & Co	1900	unknown (amateur format)	21 mm			1 notch, 2 sides	spherical	21 mm			spherical

Format	Creator	Est.	First known work	Negative gauge	Negative A/R[1]	Gate dims	Negative pulldown	Negative lenses	Projection gauge	Projection A/R[1]	Projection dims	Projection lenses
Lumiere Wide	Lumière Brothers	1900		75 mm	1.33	2.362" x 1.772"	8 perf, 2 sides	spherical	75 mm	1.33		spherical
Cinéorama	R. Grimoin-Sanson	1900	*Cinéorama*	70 mm x 10 cameras (360°)			4 perf?	spherical	70 mm x 10 projectors (360°)			spherical
La Petite (Hughes)	W.C. Hughes	1900	unknown (amateur format)	17.5 mm	1.60	0.630" x 0.394"	1 perf, center (smaller and less rectangular than Biokam)	spherical	17.5 mm			spherical
Pocket Chrono	Gaumont Demeny	1900	unknown (amateur format)	15 mm			1 perf, center	spherical	15 mm			spherical
Vitak	William Wardell	1902	unknown (amateur format)	no standard	no standard	no standard	1 perf, center	spherical	11 mm			spherical
Home Kinetoscope	Edison	1912	unknown (amateur format)	no standard	no standard	no standard	no standard	spherical	22 mm, 2 perf (on frameline between frame rows)	1.5	0.236" x 0.157" (three frames across width)	spherical
Pathe Kok	Pathé	1912	unknown (amateur format)	28 mm	1.36	0.748" x 0.551"	3 perf on one side, 1 perf on the other	spherical	28 mm			spherical
Duoscope	Alexander F. Victor	1912	unknown (amateur format)	17.5 mm			2 perfs, center	spherical	17.5 mm			spherical
Panoramico[4]	Filoteo Alberini	1914	*Il sacco di Roma*	70 mm	2.52		5 perf, 2 sides	spherical	70 mm			spherical
Split Duplex	Duplex Corporation	1915		35 mm	1.33	0.980" x 0.735"	4 perf, 2 sides (shooting)	spherical	35 mm	1.87	0.735" x 0.394"	spherical (split image 90° rotated)
11 mm	(American)	1916	unknown (amateur format)	11 mm			1 perf, center	spherical	11 mm			spherical
Movette	Movette Camera Company	1917	unknown (amateur format)	17.5 mm			2 perfs, 2 sides (rounded)	spherical	17.5 mm			spherical

Format	Creator	Est.	First known work	Negative gauge	Negative A/R[1]	Gate dims	Negative pulldown	Negative lenses	Projection gauge	Projection A/R[1]	Projection dims	Projection lenses
28 mm safety standard	Alexander Victor	1918	unknown (amateur format)	28 mm	1.36	0.748" x 0.551"	3 perf, 2 sides	spherical	28 mm			spherical
Clou	(Austrian)	1920	unknown (amateur format)	17.5 mm			2 perf, 2 sides	spherical	17.5 mm			spherical
26 mm	(French)	1920	unknown (amateur format)	26 mm			1 perf, 1 side	spherical	26 mm			spherical
9.5 mm	Pathé	1922	unknown (amateur format)	9.5 mm	1.31	0.335" x 0.256"	1 perf, center	spherical	9.5 mm	1.31	0.315" x 0.242"	spherical
Phonofilm	Lee De Forest	1922	*Barking Dog* and *Flying Jenny Airplane*	35 mm	1.33	0.980" x 0.735"	4 perf, 2 sides	spherical	35 mm	1.17	0.826" x 0.708"	spherical
Widescope[6]	John D. Elms & George W. Bingham	1922		35 mm x 2 (both in same camera)	0.980" x 0.735"	1.33 x 2 negatives	4 perf, 2 sides	spherical (one lens per strip)	35 mm x 2 projectors	2.66	0.931" x 0.698"	spherical
Cinebloc	Ozaphan	1922	unknown (amateur format)	22 mm			2 perf, 2 sides	spherical	22 mm			spherical
Tri-Ergon soundfilm[6]	Tri-Ergon	1922		35 mm	1.33	0.980" x 0.735"	4 perf, 2 sides	spherical	42 mm	1.33	0.931" x 0.698"	spherical
16 mm[7]	Eastman Kodak	1923	unknown (amateur format)	16 mm	1.37	0.404" x 0.295"	1 perf, 1 or 2 sides	spherical	16 mm	1.37	0.378" x 0.276"	spherical
Duplex	G.J. Bradley	1923	unknown (amateur format)	11 mm			2 perf, 2 sides (rounded)	spherical	11.5 mm			spherical
Alberini-Hill	Corrado Cerqua	1924		35 mm	1.66	1.575" x 0.945" (curved)	10 perf, 2 sides, horizontal	spherical, on 65° revolving drum	35 mm			spherical
Cinelux	Ozaphan	1924	unknown (amateur format)	24 mm				spherical	24 mm			spherical
48 mm	J.H. Powrie	1924		48 mm	1.32	1.969" x 1.496"	horizontal	spherical	35 mm	1.33	0.931" x 0.698"	spherical

Format	Creator	Est.	First known work	Negative gauge	Negative A/R[1]	Gate dims	Negative pulldown	Negative lenses	Projection gauge	Projection A/R[1]	Projection dims	Projection lenses
Natural Vision[8]	George K. Spoor & P. John Berggren	1925	*Niagara Falls* and *Rollercoaster Ride*	63.5 mm	1.84	2.060" x 1.120"	6 perf, 2 sides, 20 frame/s	spherical	63.5 mm	2.00		spherical
13 mm	(French)	1925	unknown (amateur format)	13 mm			4 perf, center	spherical	13 mm			spherical
18 mm	(Russian)	1925	unknown (amateur format)	18 mm			1 perf, 2 sides	spherical	18 mm			spherical
Pathe Rural	Pathé	1926	unknown (amateur format)	17.5 mm	1.35 (silent); 1.30 (sound)	0.516" x 0.382" (silent); 0.445" x 0.343" (sound)	1 perf, 2 sides	spherical	17.5 mm	1.33 (silent); 1.26 (sound)	0.472" x 0.354" (silent); 0.445" x 0.343" (sound)	spherical
Widevision[6]	John D. Elms & George W. Bingham	1926	*Natural Vision Pictures*	57 mm			5 perf, 2 sides	spherical	57 mm			spherical
Magnascope[4]	Lorenzo del Riccio	1926	*Old Ironsides*	35 mm	1.33	0.980" x 0.735"	4 perf, 2 sides	spherical	35 mm	1.33	0.931" x 0.698"	spherical (selected scenes projected using a wider lens for larger picture)
Fox Movietone	F. H. Owens, T. Case, Tri-Ergon	1927	*Sunrise*	35 mm	1.33	0.980" x 0.735"	4 perf, 2 sides	spherical	35 mm	1.17	0.826" x 0.708"	spherical
Polyvision[9]	Abel Gance	1927	*Napoléon*	35 mm x 3 cameras	1.33 x 3 negatives	0.980" x 0.735"	4 perf, 2 sides	spherical	35 mm x 3 projectors	4.00	0.931" x 0.698"	spherical
Hypergonar	Henri Chrétien	1927	*Pour construire un feu*	35 mm	2.66	0.980" x 0.735"	4 perf, 2 sides	2x anamorphic	35 mm	2.66	0.931" x 0.698"	2x anamorphic
Magnafilm[10]	Lorenzo del Riccio	1929	*You're in the Army Now*	56 mm	2.19	1.620" x 0.740"	4 perf, 2 sides	spherical	56 mm	2.00		spherical
Fox Grandeur[10]	Fox Film Corporation	1929	*Fox Grandeur News* and *Fox Movietone Follies of 1929*	70 mm	2.07	1.890" x 0.913"	4 perf, 2 sides, 20 frame/s (before 1930)	spherical	70 mm	2.00	1.768" x 0.885"	spherical

Format	Creator	Est.	First known work	Negative gauge	Negative A/R[1]	Gate dims	Negative pulldown	Negative lenses	Projection gauge	Projection A/R[1]	Projection dims	Projection lenses
Fearless Super Pictures[11]	Ralph G. Fear	1929		35 mm	2.27	1.813" x 0.800"	10 perfs, 2 sides, horizontal	spherical	35 mm, horizontal			spherical
Fearless Super-Film / Magnifilm / Fox Vitascope[12]	Ralph G. Fear	1930	*Kismet*	65 mm	2.00	1.811" x 0.906"	5 perf, 2 sides	spherical	65 mm	2.05	1.772" x 0.866"	spherical
Realife[11]	MGM	1930	*Billy the Kid*	70 mm	2.07	1.890" x 0.913"	4 perf, 2 sides	spherical	35 mm	1.75	0.904" x 0.517"	spherical
50 mm[13]	Fox Film Corporation & SMPE	1930		50 mm	1.80	1.325" x 0.735"		spherical	50 mm	1.80	1.305" x 0.725"	spherical
17 mm sound	(French)	1930	unknown (amateur format)	17 mm			1 perf, 1 side	spherical	17 mm			spherical
Giant Expanding Pictures	George Palmer	1930		35 mm	1.33	0.980" x 0.735"	4 perf, 2 sides	spherical	35 mm	1.17	0.826" x 0.708"	spherical (with a special projection zoom lens zooming wider and opening masking for key sequences)
Kodel Kemco Homovie	Clarence Ogden	1931	unknown (amateur format)	16 mm		4 sequential images per frame	1 perf, 2 sides	spherical	16 mm			spherical
Academy format[14]	AMPAS	1932		35 mm	1.37	0.866" x 0.630"	4 perf, 2 sides	spherical	35 mm	1.37	0.825" x 0.602"	spherical
8 mm	Eastman Kodak	1932	unknown (amateur format)	16 mm	1.32	0.192" x 0.145"	1 perf, 1 side (using 16 mm film with twice as many perfs)	spherical	8 mm	1.33	0.172" x 0.129"	spherical
Straight 8	Bell & Howell	1935	unknown (amateur format)	8 mm	1.32	0.192" x 0.145"	1 perf, 1 side	spherical	8 mm	1.33	0.172" x 0.129"	spherical
Vitarama	Fred Waller	1939		16 mm x 11 cameras	1.37 x 11 negatives	0.404" x 0.295"	1 perf, 2 sides	spherical	16 mm x 11 projectors	hemispherical view	0.378" x 0.276"	spherical

Format	Creator	Est.	First known work	Negative gauge	Negative A/R[1]	Gate dims	Negative pulldown	Negative lenses	Projection gauge	Projection A/R[1]	Projection dims	Projection lenses
Waller Flexible Gunnery Trainer	Fred Waller	1943	US Air Force interactive training exercise	35 mm x 5 cameras	1.37 x 5 negatives	0.866" x 0.630"	4 perf, 2 sides	spherical	35 mm x 5 projectors	hemispherical view	0.825" x 0.602"	spherical
Cinerama[15]	Fred Waller	1952	*This is Cinerama*	35 mm x 3 cameras	2.59 (3 x negatives)	0.996" x 1.116"	6 perf, 2 sides at 26 frame/s	spherical	35 mm x 3 projectors, with 6 perf pulldown	2.59, with 146° curved screen	0.985" x 1.088"	spherical
Matted 1.66[14]	Paramount	1953	*Shane*	35 mm	1.37	0.866" x 0.630"	4 perf, 2 sides	spherical	35 mm	1.66	0.825" x 0.497"	spherical
Matted 1.85[14]	Universal	1953	*Thunder Bay*	35 mm	1.37	0.866" x 0.630"	4 perf, 2 sides	spherical	35 mm	1.85	0.825" x 0.446"	spherical
Matted 1.75	MGM	1953	*Arena*	35 mm	1.37	0.866" x 0.630"	4 perf, 2 sides	spherical	35 mm	1.75	0.825" x 0.471"	spherical
Cinemascope[16]	20th Century Fox	1953	*The Robe*	35 mm	2.55 (1953–57); 2.35 (1957–67)	0.937" x 0.735" (1953–57); 0.868" x 0.735" (1957–67)	4 perf, 2 sides	2x anamorphic	35 mm	2.55 (1953–57); 2.35 (1957–67)	0.912" x 0.715" (1953–57); 0.839" x 0.715" (1957–67)	2x anamorphic
Arnoldscope[17]	John Arnold	1953		35 mm			10 perf, 2 sides, horizontal	spherical				
VistaVision[18]	Paramount	1954	*White Christmas*	35 mm	1.51	1.495" x 0.991"	8 perf, 2 sides, horizontal	spherical	35 mm, 4 perf, vertical	1.85	0.825" x 0.446"	spherical
VistaVision Large Area[18][19]	Paramount	1954	*White Christmas*	35 mm	1.51	1.495" x 0.991"	8 perf, 2 sides, horizontal	spherical	35 mm, 8 perf, horizontal	1.96	1.418" x 0.723"	spherical
Superscope[20]	Tushinsky Brothers	1954	*Vera Cruz*	35 mm	1.33	0.980" x 0.735"	4 perf, 2 sides	spherical	35 mm	2.00	0.715" x 0.715"	2x anamorphic
Circarama[21]	Disney	1955	*A Tour of the West*	16 mm x 11 cameras	1.37 x 11 negatives	0.404" x 0.295"	1 perf, 2 sides	spherical	16 mm x 11 projectors	360°	0.378" x 0.276"	spherical
Todd-AO[22][23]	Michael Todd	1955	*Oklahoma*	65 mm	2.29	2.072" x 0.906"	5 perfs, 2 sides, at 30 frame/s	spherical	70 mm	2.21, with 120° curved screen	1.912" x 0.870"	spherical
CinemaScope 55[24]	20th Century Fox	1955	*Carousel*	55 mm	2.55	1.824" x 1.430"	8 perfs, 2 sides	2x anamorphic	35 mm	2.55	0.912" x 0.715"	2x anamorphic

Format	Creator	Est.	First known work	Negative gauge	Negative A/R[1]	Gate dims	Negative pulldown	Negative lenses	Projection gauge	Projection A/R[1]	Projection dims	Projection lenses
9.5 Duplex[25]	Pathé Fréres	1955	?	9.5 mm	1.51	4.1 mm x 6.2 mm	2 central perforations in a 9.5mm film	spherical	4.75 mm			spherical, rotated 90°
8 mm Panoramic[26]	Dimaphot, Paris	1955	?	16 mm	1.5	5 mm x 7.5 mm	1 perf, 2 sides	spherical	8 mm			spherical, rotated 90°
Emel Panoscope[27]	Emel, Paris	1955	?	16 mm	2.7	3.5 mm x 9.6 mm	2 perf, 2 sides	spherical	16 mm			spherical
Technirama[28]	Technicolor	1956	*The Monte Carlo Story*	35 mm	2.26	1.496" x 0.992"	8 perf, 2 sides, horizontally	1.5x anamorphic	35 mm, 4 perf vertical	2.35	0.839" x 0.715"	2x anamorphic
Technirama Large Area[28]	Technicolor	1956	*The Monte Carlo Story*	35 mm	2.26	1.496" x 0.992"	8 perf, 2 sides, horizontally	1.5x anamorphic	35 mm, 8 perf horizontal	1.421" x 0.881"	2.42	1.5x anamorphic
Dynamic Frame[29]	Glenn Alvey	1956	*The Door in the Wall*	35 mm	1.3, 1.6, and 2.5	variable aperture plates	8 perf, 2 sides, horizontally	spherical	35 mm, 4 perf, vertical	1.3, 1.5, and 2.5		spherical
Superscope 235[20]	Superscope Inc.	1956	*Run for the Sun*	35 mm	1.33	0.980" x 0.735"	4 perf, 2 sides	spherical	35 mm	2.35	0.839" x 0.715"	2x anamorphic
Thrillarama[30]	Albert H. Reynolds	1956	*Thrillarama Adventure*	35 mm x 2 cameras	1.78 x 2 negatives		3 perf, 2 sides?	spherical	35 mm x 2 projectors	3.55, with a curved screen		spherical
Magirama[9]	Abel Gance	1956	*Magirama*	35 mm x 3 cameras (sides bounced off mirrors)	1.33 x 3 negatives	0.980" x 0.735"	4 perf, 2 sides	spherical	35 mm x 3 projectors (sides bounced off mirrors)	4.00	0.931" x 0.698"	spherical
MGM Camera 65	Panavision	1957	*Raintree County*	65 mm	2.76	2.072" x 0.906"	5 perf, 2 sides	1.25x anamorphic	70 mm	2.76	1.912" x 0.870"	1.25x anamorphic
Ultra Panavision[31]	Panavision	1962	*Mutiny on the Bounty*	65 mm	2.76	2.072" x 0.906"	5 perf, 2 sides	1.25x anamorphic	70 mm	2.76	1.912" x 0.870"	1.25x anamorphic
Cinestage[32]	Mike Todd	1957	*Around the World in 80 Days*	65 mm	2.29	2.072" x 0.906"	5 perfs, 2 sides	spherical	35 mm (1 mm shaved off for UK prints)	2.12	0.912" x 0.675"	1.567x anamorphic
Rank VistaVision	J. Arthur Rank Organization	1957		35 mm	1.51	1.495" x 0.991"	8 perf, 2 sides, horizontally	spherical	35 mm, 4 perf, vertical	1.82	0.825" x 0.602"	1.33x anamorphic

Format	Creator	Est.	First known work	Negative gauge	Negative A/R[1]	Gate dims	Negative pulldown	Negative lenses	Projection gauge	Projection A/R[1]	Projection dims	Projection lenses
Modern anamorphic[33]	Panavision	1958	*The Female Animal*	35 mm	2.37	0.866" x 0.732"	4 perf, 2 sides	2x anamorphic	35 mm	2.35 (1957–70); 2.39 (1970–present)	0.839" x 0.715" (1957–70); 0.838" x 0.7" (1970–93); 0.825" x 0.690" (1993–present)	2x anamorphic
Kinopanorama[34]	NIKFI	1958	*Great Is My Country*	35 mm x 3 cameras	0.91 x 3 negatives	1.014" x 1.116"	6 perf, 2 sides, at 25 frame/s	spherical	35 mm x 3 projectors	2.72	0.985" x 1.088"	spherical
70 mm[22][35]	American Optical Company	1958	*South Pacific*	65 mm	2.28	2.066" x 0.906"	5 perfs, 2 sides	spherical	70 mm	2.21	1.912" x 0.87"	spherical
Cinemiracle[36]	National Theatres	1958	*Windjammer*	35 mm x 3 cameras (sides bounced off mirrors)	0.89 x 3 negatives	0.996" x 1.116"	6 perf, 2 sides at 26 frame/s	spherical	35 mm x 3 projectors (sides bounced off mirrors), with 6 perf pulldown	2.59, with 120° curved screen	0.985" x 1.088"	spherical
Super Technirama[28]	Technicolor	1959	*Sleeping Beauty*	35 mm	2.26	1.496" x 0.992"	8 perf, 2 sides, horizontally	1.5x anamorphic	70 mm	2.21	1.912" x 0.816"	spherical
Smith-Carney System[37]	Rowe E. Carney Jr. and Tom F. Smith	1959	Missouri travelogue	35 mm	4.69	0.839" x 0.370" (bottom half) and 0.449" x 0.370" (top quarters)	4 perf, 2 sides	spherical x 3	35 mm	4.69	three sub-frames projected to one 180° image	spherical x 3
Circular Kinopanorama / Circlorama[38]	E. Goldovsky	1959	*The Path of Spring*	35 mm x 11 cameras	1.37 x 11 negatives	0.866" x 0.630"	4 perf, 2 sides	spherical	35 mm x 11 projectors	360°	0.825" x 0.602"	spherical
Varioscope[39]	Jan Jacobsen	1959	*Flying Clipper*	65 mm	2.28	2.066" x 0.906"	5 perfs, 2 sides	spherical	70 mm	variable framing run through control signal	1.912" x 0.87"	spherical
Quadravision[40]	Ford Motor Company	1959	*Design for Suburban Living* showtent	? mm x 4 cameras	? x 4 negatives			spherical	? mm x 4 projectors	? (4 images in 2x2 configuration)		spherical
Techniscope[41]	Technicolor	1960	*The Pharaoh's Woman*	35 mm	2.33	0.868" x 0.373"	2 perf, 2 sides	spherical	35 mm	2.39	0.838" x 0.7"	2x anamorphic

Format	Creator	Est.	First known work	Negative gauge	Negative A/R[1]	Gate dims	Negative pulldown	Negative lenses	Projection gauge	Projection A/R[1]	Projection dims	Projection lenses
Wonderama (Arc 120)[42]	Leon W. Wells	1960	*Honeymoon*	no standard	no standard	no standard	no standard	no standard	35 mm	2.50 with a 120° curved screen	0.931" x 0.698", with two half-images turned 90° and placed side-by-side	spherical x 2
Cine System 3[43][44]	Eric Berndt	1960	USAF and NASA usage	3 mm			1 perf, centered	spherical				
Grandeur 70[45]	20th Century Fox	1961	*The King and I* (re-release)	55 mm	2.55	1.824" x 1.430"	8 perfs, 2 sides	2x anamorphic	70 mm	2.21	1.912" x 0.87"	spherical
Cinerama 360[42]	Cinerama Corporation	1962	*Journey to the Stars*	65 mm	1.00 (circle)	2.25" diameter circular image	10 perf, 2 sides	fisheye	70 mm	1.00 (circle)	2.25" diameter circular image	spherical
Super 8	Eastman Kodak	1965	unknown (amateur format)	8 mm	1.48	0.245" x 0.166"	1 perf, 1 side	spherical	8 mm	1.36	0.215" x 0.158"	spherical
Real Sound[46]	Kenner	1965		no standard	no standard	no standard	1 perf, 1 side	spherical	11.5 mm	1.33	0.172" x 0.129"	spherical
Double Super 8[47]	Eastman Kodak	1965	unknown (amateur format)	16 mm	1.48	0.245" x 0.166"	1 perf, 1 side (using 16 mm film with twice as many perfs)	spherical	8 mm	1.36	0.215" x 0.158"	spherical
Single-8[48]	Fujifilm	1966	unknown (amateur format)	8 mm	1.36	0.224" x 0.164"	1 perf, 1 side	spherical	8 mm	1.35	0.213" x 0.157"	spherical
Dimension 150[49]	American Optical Company	1966	*The Bible: In the Beginning*	65 mm	2.28	2.066" x 0.906"	5 perfs, 2 sides	spherical	70 mm	2.21, with 150° curved screen	1.912" x 0.87", optically curved to compensate for the screen	spherical
Circle Vision 360[38]	Disney	1967	*America the Beautiful*	35 mm x 9 cameras	1.37 x 9 negatives	0.866" x 0.630"	4 perf, 2 sides	spherical	35 mm x 9 projectors	360°	0.825" x 0.602"	spherical
8.75 mm[50]	Shanghai Film Projection Equipment Factory	1968	unknown (amateur format)				1 perf	spherical	8.75 mm			spherical
Astrovision[51]	Goto Optical	1969		65 mm			10 perf, 2 sides	spherical or fish-eye	70 mm			fish-eye (dome projection)

Format	Creator	Est.	First known work	Negative gauge	Negative A/R[1]	Gate dims	Negative pulldown	Negative lenses	Projection gauge	Projection A/R[1]	Projection dims	Projection lenses
IMAX[52]	IMAX Corporation	1970	*Tiger Child*	70 mm	1.34	2.772" x 2.072"	15 perf, 2 sides, horizontally	spherical	70 mm, horizontal	1.31	2.692" x 2.056"	spherical
Super 16 mm film[7]	Rune Ericson	1970	*Blushing Charlie*	16 mm	1.66	0.493" x 0.292"	1 perf, 1 side	spherical	no standard, but often blown up to 35 mm	no standard	0.463" x 0.279" (full frame); 0.463" x 0.251" (framed for 1.85)	spherical
Pik-a-Movie[53]	Leon W. Wells	1972		no standard	no standard	no standard	no standard	no standard	70 mm, horizontal, 1 perf, 2 sides	1.48	0.245" x 0.166", 12 rows high, underneath 12 rows of optical sound	spherical
OMNIMAX[54]	IMAX Corporation	1973	*Garden Isle*	70 mm	1.34	2.772" x 2.072"	15 perf, 2 sides, horizontally	special fish-eye lenses optically centered 0.37" above film horizontal center line	70 mm, horizontal	1.31	2.692" x 2.056"	spherical, projected elliptically on a dome screen, 20 degrees below and 110 degrees above perfectly centered viewers
8/70 (Dynavision, Iwerks 870)[55]	Dynavision	1973?		65 mm	1.37	2.031" x 1.484"	8 perf, 2 sides, 24 or 30 frame/s	spherical	70 mm	1.34	1.913" x 1.431"	spherical
Showscan[56]	Douglas Trumbull	1978	*Night of Dreams*	65 mm	2.28	2.066" x 0.906"	5 perfs, 2 sides, at 60 frame/s	spherical	70 mm, at 60 frame/s	2.21	1.912" x 0.87"	spherical
Polavision[57]	Polaroid Corporation	1978	unknown (amateur format)	8 mm	1.48	0.245" x 0.166"	1 perf, 1 side	spherical	8 mm	1.36	0.215" x 0.158"	spherical
Cinema 180[58]	Omni Films	1979	*Crazy Wheels*	65 mm	2.28	2.066" x 0.906"	5 perfs, 2 sides, 30 frame/s	fisheye	70 mm	180°, on a dome	1.912" x 0.87"	fisheye
Super 35[59]	Joe Dunton	1982	*Dance Craze*	35 mm	1.33	0.980" x 0.735"	4 perf, 2 sides	spherical	35 mm	no standard	no standard	no standard
Circle Vision 200[60]	Disney	1982	*Impressions de France*	35 mm x 5 cameras	1.37 x 5 negatives	0.866" x 0.630"	4 perf, 2 sides	spherical	35 mm x 5 projectors	6.85, on a 200° screen	0.825" x 0.602"	spherical
Swissorama 360 / Imagine 360[61]	Ernst A. Heiniger	1984	*Impressions of Switzerland*	65 mm	360°	1.91" (outer edge), 1.20" (inner edge)	10 perf, 2 sides	360° x 35° extreme fisheye	70 mm	360°		360° x 35° extreme fisheye

Format	Creator	Est.	First known work	Negative gauge	Negative A/R[1]	Gate dims	Negative pulldown	Negative lenses	Projection gauge	Projection A/R[1]	Projection dims	Projection lenses
Super Duper 8 / Max 8 / Super 8B[62][63]	Mitch Perkins & Greg Miller	mid-1980s	*Sleep Always* (2002)	8 mm	1.51	0.250" x 0.166"	1 perf, 1 side	spherical	8 mm	no standard	no standard	spherical
3-perf[64]	Rune Ericson	1987	*Pirates of the Lake*	35 mm	1.79	0.980" x 0.546"	3 perf, 2 sides	spherical	35 mm	no standard	no standard	no standard
Super VistaVision[65]	Paramount	1989	*The Ten Commandments* (re-release)	35 mm	1.51	1.495" x 0.991"	8 perf, 2 sides, horizontal	spherical	70 mm	2.21	1.912" x 0.87"	spherical
Kinoton HDFS[66]	Kinoton	1990		no standard	no standard	no standard	no standard	no standard	35 mm	2.00	0.931" x 0.698"	1.5x anamorphic
IMAX Magic Carpet[67]	IMAX Corporation	1990	*Flowers in the Sky*	70 mm x 2 cameras	1.34	2.772" x 2.072"	15 perf, 2 sides, horizontally	spherical	70 mm, horizontal x 2 projectors	1.31 x 2 screens (one in front, one below)	2.692" x 2.056"	spherical
Iwerksphere[68]	Iwerks	1991		65 mm	1.37	2.031" x 1.484"	8 perf, 2 sides, 24 or 30 frame/s	fisheye	70 mm	1.34	1.913" x 1.431"	fisheye
IMAX HD[69]	IMAX Corporation	1992	*Asteroid Adventure*	70 mm	1.34	2.772" x 2.072"	15 perf, 2 sides, horizontally, 48 frame/s	spherical	70 mm, horizontal	1.31	2.692" x 2.056"	spherical
Hexiplex [70]	(Australian)	1992	Expo '92 demo	35 mm x 6 cameras	1.37 x 6 negatives	0.866" x 0.630"	4 perf, 2 sides	spherical	35 mm x 6 projectors	360°, with rotating screens and projectors	0.825" x 0.602"	spherical
Ultra Toruscope[71]	Mac McCarney	1992		35 mm x 3 cameras	1.37 x 3 negatives	0.866" x 0.630"	4 perf, 2 sides, at 30 frame/s	spherical	70 mm x 3 projectors, at 30 frame/s	360°	1.912" x 0.87"	spherical
Imagination FX 7012 [13]	Geo-Odyssey	1992?		35 mm	2.08	2.040" x 0.980"	12 perf, 2 sides, horizontal	spherical	70 mm	2.21	1.912" x 0.87"	spherical
Univisium[72]	Vittorio Storaro	1998	*Tango*	35 mm	2.00	0.945" x 0.472"	3 perf, 2 sides at 25 frame/s	spherical	35 mm	2.00		spherical
Maxivision[73]	Dean Goodhill	1999		35 mm	1.79	0.980" x 0.546"	3 perf, 2 sides	spherical	35 mm, 3 perf	1.85		spherical
Maxivision 48[73]	Dean Goodhill	1999		35 mm	1.79	0.980" x 0.546"	3 perf, 2 sides, 48 frame/s	spherical	35 mm, 3 perf, 48 frame/s	1.85		spherical

Format	Creator	Est.	First known work	Negative gauge	Negative A/R[1]	Gate dims	Negative pulldown	Negative lenses	Projection gauge	Projection A/R[1]	Projection dims	Projection lenses
Super Dimension 70[74]	Robert Weisgerber	1999		65 mm	2.28	2.066" x 0.906"	5 perfs, 2 sides, at 48 frame/s	spherical	70 mm, at 48 frame/s	2.21	1.912" x 0.87"	spherical
FuturVision 360[51]				65 mm	1.52	2.066" x 0.906"	5 perfs, 2 sides, 30 frame/s	1.5x vertical anamorphic	70 mm	1.47	1.912" x 0.87"	1.5x vertical anamorphic
Mini-Max[75]	Vistascope			35 mm	2.66		2 perf, 2 sides, 30 frame/s	spherical	35 mm	2.66		spherical
MotionMaster[76]	Omni Films			65 mm	2.28	2.066" x 0.906"	5 perfs, 2 sides, 30 frame/s	spherical	70 mm	2.21, on a curved screen	1.912" x 0.87"	spherical
Row-film[77]	R. Thun			35 mm		20 rows of images wide		spherical				spherical
Septorama[51]				? mm x 7 cameras	1.33 x 7 negatives			spherical	? mm x 7 projectors	hemispherical view		spherical
Single Cinerama[78]	Fred Waller			35 mm		curved gate	16 perf, 2 sides, horizontal	spherical	35 mm, horizontal	curved screen		spherical
Soviet 10[79]				65 mm			10 perf, 2 sides	2x anamorphic	70 mm	2.09	1.890" x 1.811"	2x anamorphic
Vario-35[79]				35 mm				spherical	35 mm	variable framing run through control signal	0.835" x 0.713" (full); 0.835" x 0.453" (1.84); 0.709" x 0.524" (1.35); 0.614" x 0.614" (1.00); 0.535" x 0.713" (0.75)	spherical
Vario-70[79]				65 mm			10 perfs, 2 sides	spherical	70 mm	variable framing run through control signal	1.890" x 1.811" (full); 1.890" x 0.803" (2.35); 1.673" x 0.906" (1.85); 1.441" x 1.051" (1.37); 1.232" x 1.232" (1.00); 1.063" x 1.429" (0.74); 0.945" x 1.604" (0.59); 0.839" x 1.811" (0.46)	spherical