unravel

Aspect ratio cheat sheet

Find active picture dimensions for common aspect ratios and frame sizes. Widths and heights are rounded down to the nearest even pixel for video encoding compatibility.

4K UHD

3840 × 2160 container

Aspect ratio	Framing	Resolution
1.33 (4:3)	Pillarbox	2880 × 2160
1.375 (Academy)	Pillarbox	2970 × 2160
1.50 (3:2)	Pillarbox	3240 × 2160
1.66 (5:3)	Pillarbox	3600 × 2160
1.78 (16:9)	Exact match	3840 × 2160
1.85 (DCI Flat)	Letterbox	3840 × 2074
1.90	Letterbox	3840 × 2024
2.00	Letterbox	3840 × 1920
2.20	Letterbox	3840 × 1744
2.35	Letterbox	3840 × 1634
2.37	Letterbox	3840 × 1620
2.39 (DCI Scope)	Letterbox	3840 × 1608
2.40	Letterbox	3840 × 1600
2.55	Letterbox	3840 × 1504
2.66	Letterbox	3840 × 1442
2.76	Letterbox	3840 × 1390

1080p

1920 × 1080 container

Aspect ratio	Framing	Resolution
1.33 (4:3)	Pillarbox	1440 × 1080
1.375 (Academy)	Pillarbox	1484 × 1080
1.50 (3:2)	Pillarbox	1620 × 1080
1.66 (5:3)	Pillarbox	1800 × 1080
1.78 (16:9)	Exact match	1920 × 1080
1.85 (DCI Flat)	Letterbox	1920 × 1036
1.90	Letterbox	1920 × 1012
2.00	Letterbox	1920 × 960
2.20	Letterbox	1920 × 872
2.35	Letterbox	1920 × 816
2.37	Letterbox	1920 × 810
2.39 (DCI Scope)	Letterbox	1920 × 804
2.40	Letterbox	1920 × 800
2.55	Letterbox	1920 × 752
2.66	Letterbox	1920 × 720
2.76	Letterbox	1920 × 694

DCP 4K Flat (1.85)

3996 × 2160 container

Aspect ratio	Framing	Resolution
1.33 (4:3)	Pillarbox	2880 × 2160
1.375 (Academy)	Pillarbox	2970 × 2160
1.50 (3:2)	Pillarbox	3240 × 2160
1.66 (5:3)	Pillarbox	3600 × 2160
1.78 (16:9)	Pillarbox	3840 × 2160
1.85 (DCI Flat)	Exact match	3996 × 2160
1.90	Letterbox	3996 × 2106
2.00	Letterbox	3996 × 1998
2.20	Letterbox	3996 × 1816
2.35	Letterbox	3996 × 1700
2.37	Letterbox	3996 × 1684
2.39 (DCI Scope)	Letterbox	3996 × 1674
2.40	Letterbox	3996 × 1664
2.55	Letterbox	3996 × 1566
2.66	Letterbox	3996 × 1502
2.76	Letterbox	3996 × 1446

DCP 2K Flat (1.85)

1998 × 1080 container

Aspect ratio	Framing	Resolution
1.33 (4:3)	Pillarbox	1440 × 1080
1.375 (Academy)	Pillarbox	1484 × 1080
1.50 (3:2)	Pillarbox	1620 × 1080
1.66 (5:3)	Pillarbox	1800 × 1080
1.78 (16:9)	Pillarbox	1920 × 1080
1.85 (DCI Flat)	Exact match	1998 × 1080
1.90	Letterbox	1998 × 1052
2.00	Letterbox	1998 × 998
2.20	Letterbox	1998 × 908
2.35	Letterbox	1998 × 850
2.37	Letterbox	1998 × 842
2.39 (DCI Scope)	Letterbox	1998 × 836
2.40	Letterbox	1998 × 832
2.55	Letterbox	1998 × 782
2.66	Letterbox	1998 × 750
2.76	Letterbox	1998 × 722

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DCP 4K Scope (2.39)

4096 × 1716 container

Aspect ratio	Framing	Resolution
1.33 (4:3)	Pillarbox	2288 × 1716
1.375 (Academy)	Pillarbox	2358 × 1716
1.50 (3:2)	Pillarbox	2574 × 1716
1.66 (5:3)	Pillarbox	2860 × 1716
1.78 (16:9)	Pillarbox	3050 × 1716
1.85 (DCI Flat)	Pillarbox	3174 × 1716
1.90	Pillarbox	3254 × 1716
2.00	Pillarbox	3432 × 1716
2.20	Pillarbox	3774 × 1716
2.35	Pillarbox	4032 × 1716
2.37	Pillarbox	4066 × 1716
2.39 (DCI Scope)	Exact match	4096 × 1716
2.40	Letterbox	4096 × 1706
2.55	Letterbox	4096 × 1606
2.66	Letterbox	4096 × 1538
2.76	Letterbox	4096 × 1484

DCP 2K Scope (2.39)

2048 × 858 container

Aspect ratio	Framing	Resolution
1.33 (4:3)	Pillarbox	1144 × 858
1.375 (Academy)	Pillarbox	1178 × 858
1.50 (3:2)	Pillarbox	1286 × 858
1.66 (5:3)	Pillarbox	1430 × 858
1.78 (16:9)	Pillarbox	1524 × 858
1.85 (DCI Flat)	Pillarbox	1586 × 858
1.90	Pillarbox	1626 × 858
2.00	Pillarbox	1716 × 858
2.20	Pillarbox	1886 × 858
2.35	Pillarbox	2016 × 858
2.37	Pillarbox	2032 × 858
2.39 (DCI Scope)	Exact match	2048 × 858
2.40	Letterbox	2048 × 852
2.55	Letterbox	2048 × 802
2.66	Letterbox	2048 × 768
2.76	Letterbox	2048 × 742

8K DCI

8192 × 4320 container

Aspect ratio	Framing	Resolution
1.33 (4:3)	Pillarbox	5760 × 4320
1.375 (Academy)	Pillarbox	5940 × 4320
1.50 (3:2)	Pillarbox	6480 × 4320
1.66 (5:3)	Pillarbox	7200 × 4320
1.78 (16:9)	Pillarbox	7680 × 4320
1.85 (DCI Flat)	Pillarbox	7992 × 4320
1.90	Exact match	8192 × 4320
2.00	Letterbox	8192 × 4096
2.20	Letterbox	8192 × 3722
2.35	Letterbox	8192 × 3484
2.37	Letterbox	8192 × 3456
2.39 (DCI Scope)	Letterbox	8192 × 3432
2.40	Letterbox	8192 × 3412
2.55	Letterbox	8192 × 3212
2.66	Letterbox	8192 × 3078
2.76	Letterbox	8192 × 2968

8K UHD (4320p)

7680 × 4320 container

Aspect ratio	Framing	Resolution
1.33 (4:3)	Pillarbox	5760 × 4320
1.375 (Academy)	Pillarbox	5940 × 4320
1.50 (3:2)	Pillarbox	6480 × 4320
1.66 (5:3)	Pillarbox	7200 × 4320
1.78 (16:9)	Exact match	7680 × 4320
1.85 (DCI Flat)	Letterbox	7680 × 4150
1.90	Letterbox	7680 × 4050
2.00	Letterbox	7680 × 3840
2.20	Letterbox	7680 × 3490
2.35	Letterbox	7680 × 3268
2.37	Letterbox	7680 × 3240
2.39 (DCI Scope)	Letterbox	7680 × 3216
2.40	Letterbox	7680 × 3200
2.55	Letterbox	7680 × 3010
2.66	Letterbox	7680 × 2886
2.76	Letterbox	7680 × 2782

6K
6144 × 3232 container

Aspect ratio	Framing	Resolution
1.33 (4:3)	Pillarbox	4308 × 3232
1.375 (Academy)	Pillarbox	4444 × 3232
1.50 (3:2)	Pillarbox	4848 × 3232
1.66 (5:3)	Pillarbox	5386 × 3232
1.78 (16:9)	Pillarbox	5744 × 3232
1.85 (DCI Flat)	Pillarbox	5978 × 3232
1.90	Pillarbox	6128 × 3232
2.00	Letterbox	6144 × 3072
2.20	Letterbox	6144 × 2792
2.35	Letterbox	6144 × 2614
2.37	Letterbox	6144 × 2592
2.39 (DCI Scope)	Letterbox	6144 × 2574
2.40	Letterbox	6144 × 2560
2.55	Letterbox	6144 × 2408
2.66	Letterbox	6144 × 2308
2.76	Letterbox	6144 × 2226

5K
5120 × 2700 container

Aspect ratio	Framing	Resolution
1.33 (4:3)	Pillarbox	3600 × 2700
1.375 (Academy)	Pillarbox	3712 × 2700
1.50 (3:2)	Pillarbox	4050 × 2700
1.66 (5:3)	Pillarbox	4500 × 2700
1.78 (16:9)	Pillarbox	4800 × 2700
1.85 (DCI Flat)	Pillarbox	4994 × 2700
1.90	Exact match	5120 × 2700
2.00	Letterbox	5120 × 2560
2.20	Letterbox	5120 × 2326
2.35	Letterbox	5120 × 2178
2.37	Letterbox	5120 × 2160
2.39 (DCI Scope)	Letterbox	5120 × 2144
2.40	Letterbox	5120 × 2132
2.55	Letterbox	5120 × 2006
2.66	Letterbox	5120 × 1924
2.76	Letterbox	5120 × 1854

4K DCI
4096 × 2160 container

Aspect ratio	Framing	Resolution
1.33 (4:3)	Pillarbox	2880 × 2160
1.375 (Academy)	Pillarbox	2970 × 2160
1.50 (3:2)	Pillarbox	3240 × 2160
1.66 (5:3)	Pillarbox	3600 × 2160
1.78 (16:9)	Pillarbox	3840 × 2160
1.85 (DCI Flat)	Pillarbox	3996 × 2160
1.90	Exact match	4096 × 2160
2.00	Letterbox	4096 × 2048
2.20	Letterbox	4096 × 1860
2.35	Letterbox	4096 × 1742
2.37	Letterbox	4096 × 1728
2.39 (DCI Scope)	Letterbox	4096 × 1716
2.40	Letterbox	4096 × 1706
2.55	Letterbox	4096 × 1606
2.66	Letterbox	4096 × 1538
2.76	Letterbox	4096 × 1484

3K
3072 × 1620 container

Aspect ratio	Framing	Resolution
1.33 (4:3)	Pillarbox	2160 × 1620
1.375 (Academy)	Pillarbox	2226 × 1620
1.50 (3:2)	Pillarbox	2430 × 1620
1.66 (5:3)	Pillarbox	2700 × 1620
1.78 (16:9)	Pillarbox	2880 × 1620
1.85 (DCI Flat)	Pillarbox	2996 × 1620
1.90	Exact match	3072 × 1620
2.00	Letterbox	3072 × 1536
2.20	Letterbox	3072 × 1396
2.35	Letterbox	3072 × 1306
2.37	Letterbox	3072 × 1296
2.39 (DCI Scope)	Letterbox	3072 × 1286
2.40	Letterbox	3072 × 1280
2.55	Letterbox	3072 × 1204
2.66	Letterbox	3072 × 1154
2.76	Letterbox	3072 × 1112

2K DCI

2048 × 1080 container

Aspect ratio	Framing	Resolution
1.33 (4:3)	Pillarbox	1440 × 1080
1.375 (Academy)	Pillarbox	1484 × 1080
1.50 (3:2)	Pillarbox	1620 × 1080
1.66 (5:3)	Pillarbox	1800 × 1080
1.78 (16:9)	Pillarbox	1920 × 1080
1.85 (DCI Flat)	Pillarbox	1998 × 1080
1.90	Exact match	2048 × 1080
2.00	Letterbox	2048 × 1024
2.20	Letterbox	2048 × 930
2.35	Letterbox	2048 × 870
2.37	Letterbox	2048 × 864
2.39 (DCI Scope)	Letterbox	2048 × 858
2.40	Letterbox	2048 × 852
2.55	Letterbox	2048 × 802
2.66	Letterbox	2048 × 768
2.76	Letterbox	2048 × 742

720p

1280 × 720 container

Aspect ratio	Framing	Resolution
1.33 (4:3)	Pillarbox	960 × 720
1.375 (Academy)	Pillarbox	990 × 720
1.50 (3:2)	Pillarbox	1080 × 720
1.66 (5:3)	Pillarbox	1200 × 720
1.78 (16:9)	Exact match	1280 × 720
1.85 (DCI Flat)	Letterbox	1280 × 690
1.90	Letterbox	1280 × 674
2.00	Letterbox	1280 × 640
2.20	Letterbox	1280 × 580
2.35	Letterbox	1280 × 544
2.37	Letterbox	1280 × 540
2.39 (DCI Scope)	Letterbox	1280 × 536
2.40	Letterbox	1280 × 532
2.55	Letterbox	1280 × 500
2.66	Letterbox	1280 × 480
2.76	Letterbox	1280 × 462

A little clarity on framing

Letterbox: black bars above and below. Pillarbox: bars at the sides. Exact match: the target ratio matches the container. Tables assume square pixels.

DCI Scope uses 2048:858 (about 2.38695:1). The 2.35 and 2.40 targets are different. The 2.20 and 2.76 targets use 11:5 and 69:25. Even-pixel rounding can slightly change the final picture ratio.

Need another ratio or a frame guide? Use the online calculator for custom decimals, exact fractions and downloadable PNG masks. Always check your delivery requirements.

Open the calculator