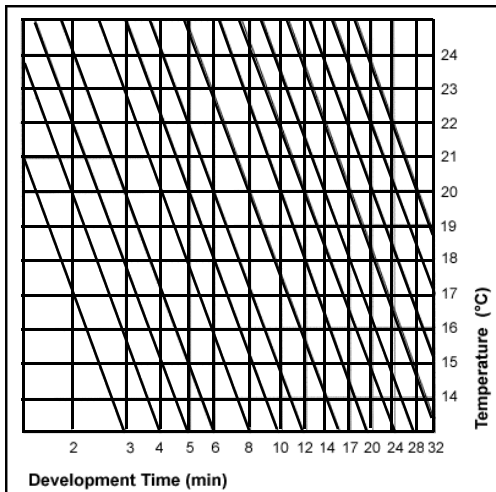


PHOTO WAREHOUSE FILM DEVELOPMENT CHART

	68° D-76 or Ultrafine Powder Dev.	68° D-76 or Ultrafine Powder Dev. 1:1	68° F60 1:9	68° Ultrafine Liquid Dev. 1:4	68° HC-110 Dil. B	68° T-Max Dev.
Ultrafine B&W 125	6-8	10	5 ½	8 ½	5	5 ½
Ultrafine B&W 400	7 ½	13	7	11	6	8
Ultramax T-Grain 400	6	10	9	12 ½	5	8
Ultrafine B&W 400 Plus	7 ½	13	7	8	5	6 ½
Agfa APX ISO 400	10	11	8	8	6	7
Kodak Plus-X Pan ISO 125	5 ½	8 ½	5 ½	7	3 ½	5 ¾
Kodak T-Max 100	9	12	7	7	7	7 ½
Kodak T-Max 400	8	12 ½	6 ¾	8	6	7
Kodak T-Max 3200	14	--	11 ½	--	10 ½	9 ½ (75°)
Kodak Tri-X Pan ISO 400	6 ¾	9 ¾	9 ¼	8	6	6
Pro Pan Film 125 Sheet Film	8 ½	11	5 ½	7	9	6 ½
Pro Pan Film 400 Sheet Film	7 ½	13	7	8	5	6 ½
Ilford Delta ISO 100	8 ½	11	7	7	6	7
Ilford Delta ISO 400	9 ½	14	7 ½	8	7 ½	6 ½
Ilford FP4 Plus	8 ½	11	5 ½	7	9	6 ½
Ilford HP5 Plus	7 ½	13	7	8	5	6 ½
Silvertone ISO 100	9	13 ½	9	7	7	6 ½
Silvertone ISO 400	10	11	8	8	6	7

These times are a guide. A test roll should be developed prior to actual production.
120 roll film required approximately 10% more developing time.

Ortho Litho Film - A&B 1:3 2 ¼ - 3 ½ MIN @ 68°



Conversion Chart Instructions

Locate the point on the grid where the recommended time and temp intersect. From that point follow the diagonal line up or down to the desired temperature and then read the new time from the bottom row. This chart is based on the Ilford Time/Temp Chart, which can be downloaded in pdf or text format directly from [ilford](http://www.ilford.com).

PUSH PROCESSING (B/W)

These are general guidelines when no published development times are available. To use this chart multiply the published time at recommended ASA by the factor in parenthesis (ie. If Tri-X rated at 400ASA is normally developed for 6 minutes in a standard developer, then when Tri-X is pushed three stops to 3200ASA development would be: 6 x 2 = 12 minutes). **Please use these recommendations as starting points only.** In many cases these times will prove excessive, but when all else fails they can be a good guideline. Please note separate data for Tmax films.

Standard Developer

- 1 stop push = (x1.25)
- 2 stop push = (x1.5)
- 3 stop push = (x2.0)

Compensating Developer

- 1 stop push = (x1.4)
- 2 stop push = (x1.85)
- 3 stop push = (x2.5)

TMax Films

- 1 stop push = no change
- 2 stop push = (x1.33)
- 3 stop push = (x1.66)

Celsius		Fahrenheit
18	=	64.4
19	=	66.2
20	=	68.0
21	=	69.8
22	=	71.6
23	=	73.4
24	=	75.2
25	=	77.0
26	=	78.8

*Compensating developers include Microphen, TMax, and any other developers which are specifically formulated for push processing.

Photo Warehouse
121 Lombard Street
Oxnard, CA 93030
800/922-5484

www.ultrafineonline.com