

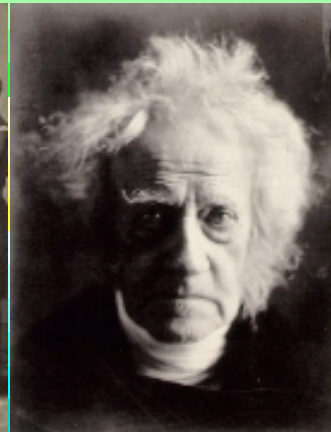
PHOTOGRAPHIC PLATE, FILM & SENSOR COMPARATIVE SENSITIVITIES

EXPOSURE VALUE Ev	-21	-20	-19	-18	-17	-16	-15	-14
ISO / ASA	1/65536	1/32768	1/16384	1/8192	1/4096	1/2048	1/1024	1/256
DIN								
SCHEINER								
US SCHEINER								
BS log								
GE								
WESTON								
ILFORD_DRY PLATE								
COMPASS_DRY PLATE								
H&D EUROPEAN_FILM & DRY PLATE								
H&D ENGLISH_FILM & DRY PLATE								
H&D ENGLISH_FILM & DRY PLATE								
SMETHURST_DRY PLATE								
WARNERKE								
SMITH_DRY PLATE								
WELLCOME								
WYNNE_NITRATE FILM & GELATINE DRY PLATE								
WATKINS_NITRATE FILM & GELATINE DRY PLATE								
SCOT ARCHER_COLLODION WET PLATE						-10 stops	-9 stops	-8 stops
DAGUERREOTYPE	-15 stops	-14 stops	-13 stops	-12 stops	-11 stops			
TIMELINE	1840						1850	



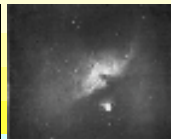
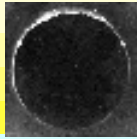
PHOTOGRAPHIC PLATE, FILM & SENSOR COMPARATIVE SENSITIVITIES

EXPOSURE VALUE Ev	-13	-12	-11	-10	-9	-8	-7
ISO / ASA	1/128	1/64	1/32	1/16	1/8	1/4	1/2
DIN							
SCHEINER							
US SCHEINER							
BS log							
GE							
WESTON							
ILFORD_DRY PLATE							
COMPASS_DRY PLATE							
H&D EUROPEAN_FILM & DRY PLATE							
H&D ENGLISH_FILM & DRY PLATE							12
H&D ENGLISH_FILM & DRY PLATE							
SMETHURST_DRY PLATE							
WARNERKE							13
SMITH_DRY PLATE							6
WELLCOME							
WYNNE_NITRATE FILM & GELATINE DRY PLATE					9	16	25
WATKINS_NITRATE FILM & GELATINE DRY PLATE					2	6	15
SCOT ARCHER_COLLODION WET PLATE	-7 stops	-6 stops	-5 stops	-4 stops	-3 stops	-2 stops	-1 stops
DAGUERREOTYPE							
TIMELINE	1860						



PHOTOGRAPHIC PLATE, FILM & SENSOR COMPARATIVE SENSITIVITIES

EXPOSURE VALUE Ev	-6			-5				
ISO / ASA	1	2	3	4	5	6	8	10
DIN	4	5	6	7	8	9	10	11
SCHEINER	9	12	14	15	16	17	18	19
US SCHEINER	6	9	11	12	13	14	15	16
BS log	8	11	13	14	15	16	17	18
GE								12
WESTON								
ILFORD_DRY PLATE			A	A			B	
COMPASS_DRY PLATE			6					
H&D EUROPEAN_FILM & DRY PLATE	60	150	210	270	360	450	750	1000
H&D ENGLISH_FILM & DRY PLATE	20	50	70	90	120	150	200	250
H&D ENGLISH_FILM & DRY PLATE								
SMETHURST_DRY PLATE			1			2		
WARNERKE	16	19	21			24		
SMITH_DRY PLATE	7	9.....1011	12	13	14		15
WELLCOME	2	1	2/32/3	1/2	1/3	1/4	
WYNNE_NITRATE FILM & GELATINE DRY PLATE		29	35	43	50	60	70	
WATKINS_NITRATE FILM & GELATINE DRY PLATE		20	30	45	60	90	120	
SCOT ARCHER_COLLODION WET PLATE	0 stops							
DAGUERREOTYPE								
TIMELINE	1870				1880			




PHOTOGRAPHIC PLATE, FILM & SENSOR COMPARATIVE SENSITIVITIES

EXPOSURE VALUE Ev	-4	-2	-1				
ISO / ASA	12	16	20	25	32	40	50
DIN	12	13	14	15	16	17	18
SCHEINER	20	21	22	23	24	25	26
US SCHEINER	17	18	19	20	21	22	23
BS log	19	20	21	22	23	24	25
GE				32			64
WESTON	8	12	16	20	24	32	40
ILFORD_DRY PLATE		C			D		
COMPASS_DRY PLATE	2			0			-2
H&D EUROPEAN_FILM & DRY PLATE	640	1200	1600	1875	2400		
H&D ENGLISH_FILM & DRY PLATE	320	400	500	625	800		
H&D ENGLISH_FILM & DRY PLATE							
SMETHURST_DRY PLATE	4	5			10		
WARNERKE							
SMITH_DRY PLATE	16		17				
WELLCOME	1/6				1/16		
WYNNE_NITRATE FILM & GELATINE DRY PLATE	86				140		
WATKINS_NITRATE FILM & GELATINE DRY PLATE	180				480		
SCOT ARCHER_COLLODION WET PLATE							
DAGUERREOTYPE							
TIMELINE	1890	1900	1920	1940			



PHOTOGRAPHIC PLATE, FILM & SENSOR COMPARATIVE SENSITIVITIES

EXPOSURE VALUE Ev		0				1		
ISO / ASA		64	80	100	125	160	200	250
DIN		19	20	21	22	23	24	24
SCHEINER		27	28	29	30	31	32	33
US SCHEINER		24	25	26	27	28	29	29
BS log		26	27	28	29	30	31	32
GE		80		125	160	200		320
WESTON		50	64	80	100	125	160	200
ILFORD_DRY PLATE		E			F			G
COMPASS_DRY PLATE				-4			-6	
H&D EUROPEAN_FILM & DRY PLATE		4800			9600			19200
H&D ENGLISH_FILM & DRY PLATE		1600			3200			6400
H&D ENGLISH_FILM & DRY PLATE								
SMETHURST_DRY PLATE		20			40			
WARNERKE								
SMITH_DRY PLATE								
WELLCOME		1/32			1/64			1/128
WYNNE_NITRATE FILM & GELATINE DRY PLATE								
WATKINS_NITRATE FILM & GELATINE DRY PLATE								
SCOT ARCHER_COLLODION WET PLATE								
DAGUERREOTYPE								
TIMELINE		1960				1970		



PHOTOGRAPHIC PLATE, FILM & SENSOR COMPARATIVE SENSITIVITIES

EXPOSURE VALUE Ev	2		3				
ISO / ASA	320	400	500	650	800	1000	1250
DIN	25	26	27	28	29	30	31
SCHEINER	34	35					
US SCHEINER	30	31					
BS log	33	34	35	36	37		
GE		500			1000		
WESTON	250	320	400	500	650		
ILFORD_DRY PLATE			H				
COMPASS_DRY PLATE							
H&D EUROPEAN_FILM & DRY PLATE	24000		40000				
H&D ENGLISH_FILM & DRY PLATE	8000		13000				
H&D ENGLISH_FILM & DRY PLATE							
SMETHURST_DRY PLATE							
WARNERKE							
SMITH_DRY PLATE							
WELLCOME			1/256				
WYNNE_NITRATE FILM & GELATINE DRY PLATE							
WATKINS_NITRATE FILM & GELATINE DRY PLATE							
SCOT ARCHER_COLLODION WET PLATE							
DAGUERREOTYPE							
TIMELINE							1980



PHOTOGRAPHIC PLATE, FILM & SENSOR COMPARATIVE SENSITIVITIES

EXPOSURE VALUE Ev	4			5		
ISO / ASA	1600	2000	2500	3200	4000	5000
DIN	32	33	34	35	36	37
SCHEINER						
US SCHEINER						
BS log						
GE						
WESTON						
ILFORD_DRY PLATE						
COMPASS_DRY PLATE						
H&D EUROPEAN_FILM & DRY PLATE						
H&D ENGLISH_FILM & DRY PLATE						
H&D ENGLISH_FILM & DRY PLATE						
SMETHURST_DRY PLATE						
WARNERKE						
SMITH_DRY PLATE						
WELLCOME						
WYNNE_NITRATE FILM & GELATINE DRY PLATE						
WATKINS_NITRATE FILM & GELATINE DRY PLATE						
SCOT ARCHER_COLLODION WET PLATE						
DAGUERREOTYPE						
TIMELINE				2000		



PHOTOGRAPHIC PLATE, FILM & SENSOR COMPARATIVE SENSITIVITIES

EXPOSURE VALUE Ev	6	7	8						
ISO / ASA	6400	8000	10000	12800	16000	20000	25600	32000	40000
DIN	38	39	40	41	42	43	44	45	46
NOTES:	Ev0 corresponds to an exposure time of 1 sec @ f/1 @ ISO100								
US SCHEINER	1EV increment = a doubling of sensitivity								
BS log	1 stop = an increase of light grasp by 2; 1 f/stop = an increment of root 2								
GE	ISO 102400 is 31 stops or 2 ³¹ times more sensitive than the Daguerreotype plate; a factor of 2,147,483,647 or ~ 2 billion								
WESTON	ISO 100 is 16 stops or 2 ¹⁶ times more sensitive than the slowest wet plate, a factor of 65,536 or ~ 65 thousand								
ILFORD_DRY PLATE	Dry Plates were generally marked X; XX; XXX, or Ordinary; Rapid; Extra Rapid.								
COMPASS_DRY PLATE	ISO 100 is 13 stops or 2 ¹³ times more sensitive than the slowest dry plate, a factor of 8,192 or ~ 8 thousand								
H&D EUROPEAN_FILM & DRY PLATE	Warnerke devised in 1880 was the first speed rating system for dry plates. Each number was a 1/3 increase in speed.								
H&D ENGLISH_FILM & DRY PLATE	H&D after Hurter & Driffield intro 1890. Used from 1892.								
H&D ENGLISH_FILM & DRY PLATE	European H&D = 3 x English H&D								
SMETHURST_DRY PLATE	Watkins intro 1890. Watkins 1 plate @ Ev14 required 2sec @ f/8 = H&D x 50/34								
WARNERKE	Wynne prior to 1901 = Square root Watkins x 6.4; after 1901 square Root Watkins x 8								
SMITH_DRY PLATE	Scheiner devised 1894, intro. 1899. Log scale, doubling speed corresponds to an increment of 3°								
WELLCOME	WESTON intro 1933; old WESTON = 0.8 x ASA until 1956								
WYNNE_NITRATE FILM & GELATINE DRY PLATE	DIN intro 1941. Log scale, doubling equals increase of 3BS.								
WATKINS_NITRATE FILM & GELATINE DRY PLATE	ASA intro 1943 & modified in 1962. Superseded by ISO 1974.								
SCOT ARCHER_COLLODION WET PLATE	APEX system intro 1961: based on lg Ev (log to base 2)								
DAGUERREOTYPE	Ev=Av + Tv = Bv + Sv; Av = 2lg f/#; Tv = -lg t; Bv = lg B*Pi; Sv = lg(ISO/Pi); lg = log Ev/log2								
TIMELINE	2005	B = Brightness value in Candles per square foot.			Can be used to construct nomogram or slide-rule				

PHOTOGRAPHIC PLATE, FILM & SENSOR COMPARATIVE SENSITIVITIES

EXPOSURE VALUE Ev	9			10	
ISO / ASA	51200	64000	80000	102400	
DIN	47	48	49	50	
SCHEINER				DIN = 10logASA+1	
US SCHEINER				SCHEINER = 10logASA+9	
BS log				US SCHEINER = 10logASA+6	
GE				BS log = 10logASA+8	
WESTON				GE = 5/4 x ASA	
ILFORD_DRY PLATE				WESTON = 4/5 x ASA	
COMPASS_DRY PLATE				ILFORD: logASA = (I+1)log2	
H&D EUROPEAN_FILM & DRY PLATE				COMPASS: logASA = log25 - 0.5Clog2	
H&D ENGLISH_FILM & DRY PLATE				Euro H&D = 3 x H&D	
H&D ENGLISH_FILM & DRY PLATE				H&D = 25 x ASA	
SMETHURST_DRY PLATE				SCHEINER ≈ 7logH&D	
WARNERKE				SMETHURST = 3 X ASA	
SMITH_DRY PLATE				WARNERKE = 9logASA+16	
WELLCOME				SMITH: logASA = log (3/64) + 0.5Slog2	
WYNNE_NITRATE FILM & GELATINE DRY PLATE				WELLCOME = 2/ASA	
WATKINS_NITRATE FILM & GELATINE DRY PLATE				WATKINS = 15 x ASA	
SCOT ARCHER_COLLODION WET PLATE				WYNNE = 96 x ASA	
DAGUERREOTYPE					



2010

TIMELINE