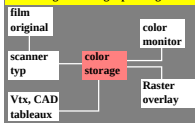
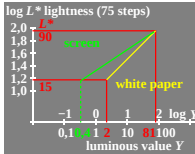


diagram for interfaces in the area image handling - printing



NE250-1, B6_28



NE250-3, B6_30

linear scan area	Y	lightness- O* L* V*	lightness- L* h* n. d	color area
76,6 ... 85,5	87,5 ... 92,4	90	FFF	4095
60,1 ... 68,1	77,5 ... 82,4	80	DDD	3549
45,6 ... 52,5	67,5 ... 72,4	70	BBB	3003
33,1 ... 39,0	57,5 ... 62,4	60	999	2457
22,6 ... 27,5	47,5 ... 52,4	50	777	1911
14,1 ... 18,0	37,5 ... 42,4	40	555	1365
7,6 ... 10,5	27,5 ... 32,4	30	333	819
3,1 ... 5,0	17,5 ... 22,4	20	111	273
1,6 ... 3,0	12,5 ... 17,4	15	000	0

NE250-5, B6_32

colorness O* L* V*	black- ness Y*	luminous value Y	coverage b
15,15,15	0	81 Y _{max}	0,00
15,15,13	2		0,22
15,15,11	4		0,41
15,15, 9	6		0,57
15,15, 7	8		0,71
15,15, 5	10		0,83
15,15, 3	12		0,91
15,15, 1	14		0,98
15,15, 0	15	76 Y _{min}	1,00

NE250-7, B6_34

sensation scaling functions lightness L* and luminous value Y

adaptation on surround white:
 $L^* = 100 (Y / 100)^{1/2,0}$

adaptation on surround gray:
 $L^* = 100 (Y / 100)^{1/2,4}$

description with CIELAB 1976:
 $L^* = 116 (Y / 100)^{1/3,0} - 16$

adaptation on surround black:
 $L^* = 100 (Y / 100)^{1/3,0}$

NE250-2, B6_29

colorness N*	luminous value Y	coverage b
0	90 81 Y _{max}	81,0 Y _{normalized} (=Y _{paper})
2	80 64	56,9
4	70 49	38,1
6	60 36	24,0
8	50 25	13,9
10	40 16	7,1
12	30 9	3,0
14	20 4	0,9
15	15 2,25 Y _{min}	0,4

NE250-4, B6_31

colorness O* L* V*	black- ness N*	luminous value Y	coverage b
15,15,15	0	81 Y _{max}	0,00
13,13,13	2	64	0,22
11,11,11	4	49	0,41
9, 9, 9	6	36	0,57
7, 7, 7	8	25	0,71
5, 5, 5	10	16	0,83
3, 3, 3	12	9	0,91
1, 1, 1	14	4	0,98
0, 0, 0	15	2,25 Y _{min}	1,00

NE250-6, B6_33

interfaces in area of: color film original - color scanner - color storage - raster area coverage

1. color scanner with color measurement sensitivities = spectral values
2. minimum 12-Bit color image storage generates cubic screen and quadratic raster area function
3. minimum 8-bit resolution for linear photoelectric sensors

NE250-8, B6_35

point amount: $n = 16^2 - 15^2$ $= 31$



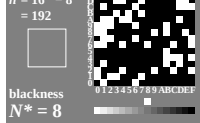
NE251-1, B6_36_1

point amount: $n = 16^2 - 2^2$ $= 252$



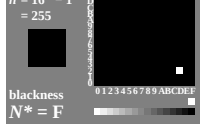
NE251-3, B6_36_3

point amount: $n = 16^2 - 8^2$ $= 192$



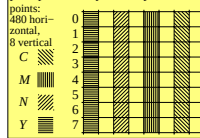
NE251-2, B6_36_2

point amount: $n = 16^2 - 1^2$ $= 255$



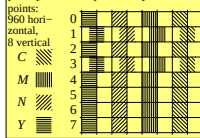
NE251-4, B6_36_4

print positions by matrix printer



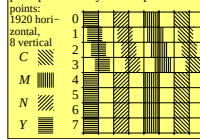
NE251-5, B7_01

print positions by matrix printer



NE251-6, B7_02_1

print positions by matrix printer



NE251-7, B7_02_2

colorness black- luminous O* L* V* ness N* value Y coverage b

colorness O* L* V*	black- ness N*	luminous value Y	coverage b
15,15,15	0	81 Y _{max}	0,00
13,13,13	2	64	0,22
11,11,11	4	49	0,41
9, 9, 9	6	36	0,57
7, 7, 7	8	25	0,71
5, 5, 5	10	16	0,83
3, 3, 3	12	9	0,91
1, 1, 1	14	4	0,98
0, 0, 0	15	2,25 Y _{min}	1,00

NE251-8, B7_03