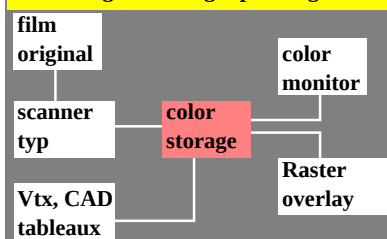


http://130.149.60.45/~farbmetrik/NE25/NE25L0NA.TXT /PS; start output
N: No Output Linearization (OL) data in File (F), Startup (S) or Device (D)

diagram for interfaces in the area image handling – printing



NE250-1, B6_28

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

log L^* lightness (75 steps)



NE250-3, B6_30

colorness	luminous value
N^*	$Y = (L^*/10)^2 Y = (L^*/10)^3 / 9$

0	90	81 Y_{max}	81,0 $Y_{normalized}$
2	80	64	56,9 (= Y_{paper})
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

linear scan area	lightness- area	lightness color
Y	L^*	h^* no. d

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	black-ness	luminous value	coverage
$O^* L^* V^*$	N^*	Y	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

colorness	yellow-ness	luminous value	coverage
$O^* L^* V^*$	Y^*	Y	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

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



blackness
 $N^* = 1$

NE251-1, B6_36_1

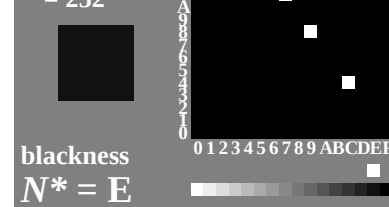
point amount:
 $n = 16^2 - 8^2$
 $= 192$



blackness
 $N^* = 8$

NE251-2, B6_36_2

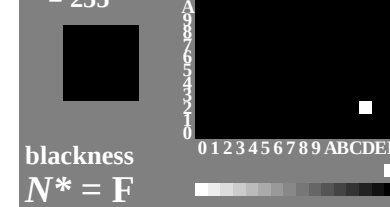
point amount:
 $n = 16^2 - 2^2$
 $= 252$



blackness
 $N^* = E$

NE251-3, B6_36_3

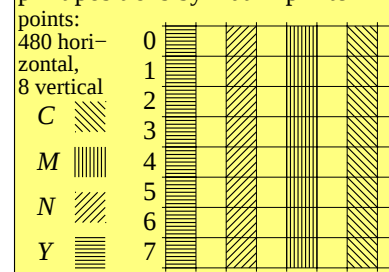
point amount:
 $n = 16^2 - 1^2$
 $= 255$



blackness
 $N^* = F$

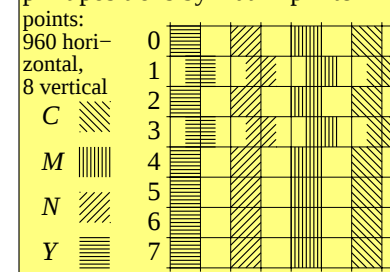
NE251-4, B6_36_4

print positions by matrix printer



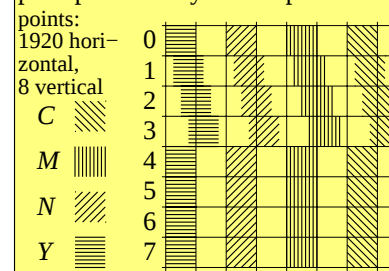
NE251-5, B7_01

print positions by matrix printer



NE251-6, B7_02_1

print positions by matrix printer



NE251-7, B7_02_2

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

TUB-test chart NE25; Richter: Computer graphics, colorimetry
Colour book series: Colour order and reproduction no. 7

input: *rgb setrgbcolor*
output: no colour data change

TUB registration: 20101101-NE25/NE25L0NA.TXT /PS
application for measurement of printer or monitor systems

TUB material: code=rha4ta