

CIELAB 1976 $L^*a^*b^*$ -color space definition and reversal

$$L^* = 116 (Y/Y_n)^{1/3} - 16$$

$$a^* = 500 [(X/X_n)^{1/3} - (Y/Y_n)^{1/3}]$$

$$b^* = 200 [(Y/Y_n)^{1/3} - (Z/Z_n)^{1/3}]$$

$$X = X_n [(L^* + 16) / 116 + a^*/500]^3$$

$$Y = Y_n [(L^* + 16) / 116]^3$$

$$Z = Z_n [(L^* + 16) / 116 - b^*/200]^3$$

AI870-1N

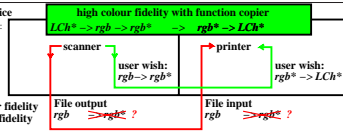
Q -function changes; transition
 from light- to color metrics
 scaling function of light metrics:
 $Q[k(x-u) = Q[k(\log L - \log L_u)]$
 $\log L \rightarrow \log P$ for color metrics:
 $Q[k(\log P - \log L_u)]$
 $= Q[k(\log L - \log L_u + \log P - \log L)]$
 with saturation $p = \log P - \log L$
 for color metrics: $Q[k(x-u+p)]$

AI870-2N

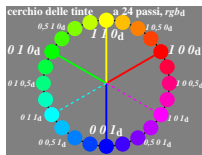
Multifunctional device

with the following modes:

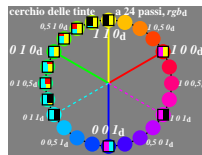
- copier
- scanner
- printer



AI870-3N



AI870-5N



AI870-6N

Offset rgb^* input data and LCh^* output data

Color	rgb^*	LCh^*
R_e elementary red	1 0 0	47, 74, 26
Y_e elementary yellow	1 1 0	86, 88, 92
G_e elementary green	0 1 0	53, 57, 164
B_e elementary blue	0 0 1	42, 45, 271
N black	0 0 0	18, 0, 0
W white	1 1 1	95, 0, 0

Data according to test chart DIN 33872-2, p.9-12

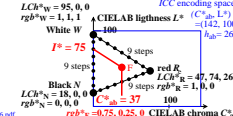
http://farbe.li.it-berlin.de/AI87/AI87L0N1.TXT /PS

http://farbe.li.it-berlin.de/AI87/AI87L0N1.TXT /PS

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http://farbe.li.it-berlin.de/AI87/AI87L0N1.TXT /PS

9 step offset colours in CIELAB colour space



ICC encoding space

$LCh^*_W = 95, 0, 0$

$rgb^*_W = 1, 1, 1$

$LCh^*_R = 47, 74, 26$

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$LCh^*_G = 53, 57, 164$

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$LCh^*_B = 42, 45, 271$

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