

### percieved color terms (colorness: cube root coordinates)

percieved color terms	name and relationship with standard chromaticity values	notes:
<b>lightness</b>	$L^* = 116 (Y/100)^{1/3} - 16$ Aproximation: $L^* = 100 (Y/100)^{1/3}$	definition 1976 in: CIELUV, CIELAB
<b>chromaticness</b>	for linear chromatic value diagram (AT, B)	
red-green	$a^* = 500 [(X/X_n)^{1/3} - (Y/Y_n)^{1/3}]$ $= 500 (a' - a'_n) Y^{1/3}$	definition 1976 in: CIELAB
yellow-blue	$b^* = 200 [(Y/Y_n)^{1/3} - (Z/Z_n)^{1/3}]$ $= 500 (b' - b'_n) Y^{1/3}$	$n=D65$ (surround)
radial	$C^* = [a^{*2} + b^{*2}]^{1/2}$	
<b>saturation</b>	= chromaticness / lightness	definition
red-green	$S_a^* = a^* / [100 (Y/100)^{1/3}]$ $= 21,6 (a' - a'_n)$	for: CIELAB 1976
yellow-blue	$S_b^* = b^* / [100 (Y/100)^{1/3}]$ $= 21,6 (b' - b'_n)$	
radial	$S_c^* = C^* / [100 (Y/100)^{1/3}]$ $= 21,6 [(a' - a'_n)^2 + (b' - b'_n)^2]^{1/2}$	
<b>chromaticity</b>	for nonlinear chromaticity diagram ( $a'$ , $b'$ ) definition	
red-green	$a' = (1/X_n)^{1/3} (x/y)^{1/3}$	opponent color system
yellow-blue	$= 0,2191 (x/y)^{1/3}$ for D65	
radial	$b' = -0,4 (1/Z_n)^{1/3} (z/y)^{1/3}$ $= -0,08376 (z/y)^{1/3}$ for D65	
	$c' = [(a' - a'_n)^2 + (b' - b'_n)^2]^{1/2}$	

1-003000-L0

ME961-7N, B79\_10

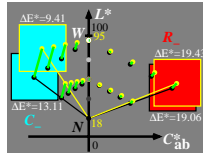
### three surface colours



colours: white  $W_d$  (I), red  $R_d$  (II)  
and fluorescent red  $R_{df}$  (III)

1-003000-L0

ME961-1N, B2\_33



1-003000-L0

ME961-1N

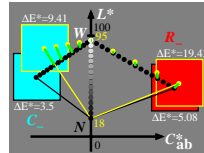
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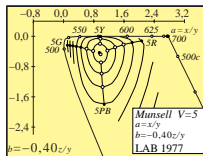
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ME961-2N, B3\_33



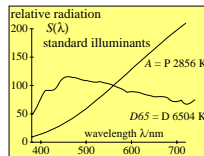
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ME961-4N



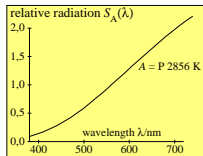
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ME961-5N, B4\_17\_1



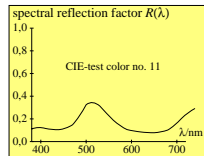
1-003000-L0

ME961-6N, B1\_08



1-003000-L0

ME961-7N, B3\_09\_1



1-003000-L0

ME961-8N, B1\_09\_2