

application for measurement of printer or monitor systems

www.ps.bam.de/YE86/L86E00N1.PS/.TXT; start output  
N: No Output Linearization (OL) data in File (F), Startup (S) or Device (D)

Hexagon colour metric based on 3 elementary colours RGB%  
 $0 \leq R\%, G\%, B\% \leq C_{RGB}^{\max} = 77$  for standard device SRS18  
 $R\% = R_{RGB}/C_{RGB}^{\max}$   
 $G\% = G_{RGB}/C_{RGB}^{\max}$   
 $B\% = B_{RGB}/C_{RGB}^{\max}$

maximum colour R with 0% N,W; linear relation lab<sup>+</sup>rgb<sub>-3</sub> - lab<sup>+</sup>nctue<sup>+</sup>

chroma  $C_{RGB}^{\max} = \max(R\%, G\%, B\%) - \min(R\%, G\%, B\%)$

blackness  $N\%_{RGB} = 1 - \max(R\%, G\%, B\%)$

triangle brightness  $T\%_{RGB} = 1 - N\%_{RGB} - 0.5 C_{RGB}^{\max}$

RG-chroma  $A^*_{RGB} = \cos(30^\circ)R\%_3 + \cos(150^\circ)G\%_3$

JB-chroma  $B^*_{RGB} = \sin(30^\circ)R\%_3 + \sin(150^\circ)G\%_3 + \sin(270^\circ)B\%_3$

hue angle  $H^*_{RGB} = \arctan(B^*_{RGB}/A^*_{RGB})$

YE860-1

Maximum colour R with 0% N,W; linear relation lab<sup>+</sup>rgb<sub>-3</sub> - lab<sup>+</sup>nctue<sup>+</sup>

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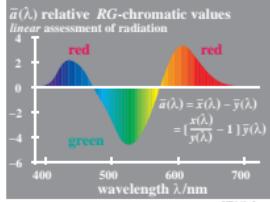
triangle brightness  $T\%_{RGB} = 1 - N\%_{RGB} - 0.5 C_{RGB}^{\max}$

RG-chroma  $A^*_{RGB} = \cos(30^\circ)R\%_3 + \cos(150^\circ)G\%_3$

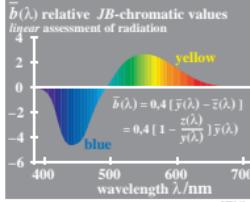
JB-chroma  $B^*_{RGB} = \sin(30^\circ)R\%_3 + \sin(150^\circ)G\%_3 + \sin(270^\circ)B\%_3$

hue angle  $H^*_{RGB} = \arctan(B^*_{RGB}/A^*_{RGB})$

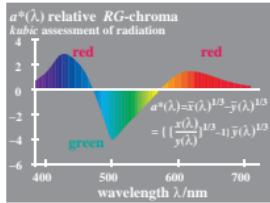
YE860-2



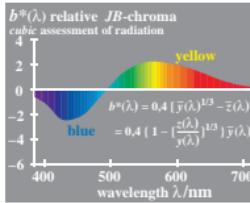
YE860-3



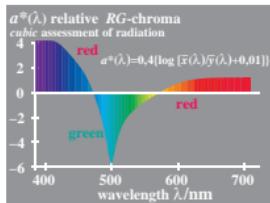
YE860-4



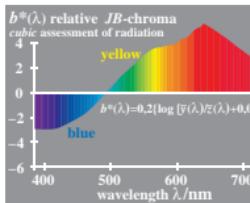
YE860-5



YE860-6



YE860-7



YE860-8

Hexagon colour metric based on 3 elementary colours RGB%  
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blackness  $N\%_{RGB} = 1 - \max(R\%, G\%, B\%)$

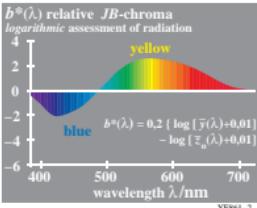
triangle brightness  $T\%_{RGB} = 1 - N\%_{RGB} - 0.5 C_{RGB}^{\max}$

RG-chroma  $A^*_{RGB} = \cos(30^\circ)R\%_3 + \cos(150^\circ)G\%_3$

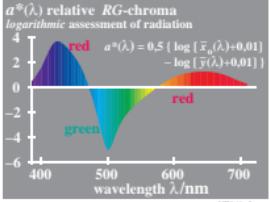
JB-chroma  $B^*_{RGB} = \sin(30^\circ)R\%_3 + \sin(150^\circ)G\%_3 + \sin(270^\circ)B\%_3$

hue angle  $H^*_{RGB} = \arctan(B^*_{RGB}/A^*_{RGB})$

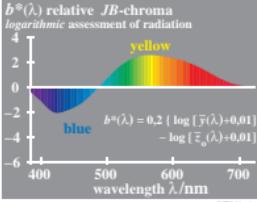
YE861-1



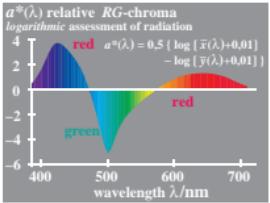
YE861-2



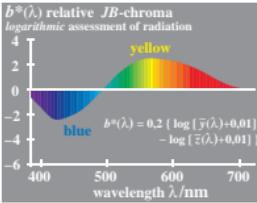
YE861-3



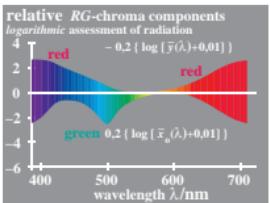
YE861-4



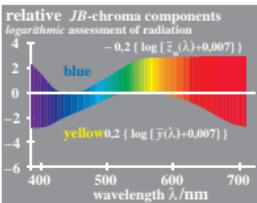
YE861-5



YE861-6



YE861-7



YE861-8

input: `rgb setrgbcolor`  
output: no change compared to input