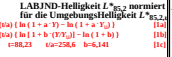
LABJND-Helligkeit $L^*_{85,2}$ normiert für die UmgebungsHelligkeit $L^*_{85,2,u}$

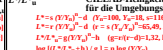
$L^*/L^*_u = (t/a)\ (\ln(1+a\cdot Y) - \ln(1+a\cdot Y_u))$ [1a]
$L^*/L^*_u = (t/a)\ (\ln(1+b\cdot|Y|) - \ln(1+b))$ [1b]
a=-0,3411 t=88,23 t/a=-258,6 b=6,141 [1c]



hgp00-1a

CIELAB-Helligkeit L^* normiert für die UmgebungsHelligkeit L^*_u

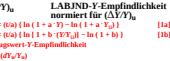
$L^* = s\ (Y/Y_n)^{0,33} - d$ (Y_n=100, Y_o=18, s=116, n=1/3, d=16) [1a]
$L^* = s\ (Y/Y_n)^{0,33} - d$ ($r = s\cdot(Y_o/Y_n)^{0,33} - d$=65,49, $L^*_o = r - d$) [1b]
$L^*/L^*_u = g(Y/Y_n)^{1/h} - b$ (g=s/(r−d)=1,32, b=d/(r−d)=0,32) [1c]
$\log((L^*/L^*_u + b)/g) = \log(Y/Y_n)$ [1d]
$\ln((L^*/L^*_u + b)/g) = \ln(10)\cdot\log(Y/Y_n)$ [1e]
$(L^*/L^*_u + b)/g = e^{\ln(10)\cdot\log(Y/Y_n)}$ [1f]



hgp00-2a

LABJND-Y-Empfindlichkeit normiert für $(\Delta Y/Y)_u$

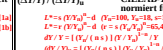
$L^*/L^*_u = (t/a)\ (\ln(1+a\cdot Y) - \ln(1+a\cdot Y_u))$ [1a]
$L^*/L^*_u = (t/a)\ (\ln(1+b\cdot|Y|) - \ln(1+b))$ [1b]
Heiligungswert-Y-Empfindlichkeit
$(dY/Y)\ /\ (dY_u/Y_u)$
$= |(1+a\cdot Y)\cdot Y| \ /\ |(1+a\cdot Y_u)\cdot Y_u|$ [3f]



hgp01-1a

CIELAB-Y-Empfindlichkeit normiert für $(\Delta Y/Y)_u$

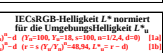
$L^* = s\ (Y/Y_n)^{0,33} - d$ (Y_n=100, Y_o=18, s=116, n=1/3, d=16) [1a]
$L^* = s\ (Y/Y_n)^{0,33} - d$ ($r = s\cdot(Y_o/Y_n)^{0,33} - d$=65,49, $L^*_o = r - d$) [1b]
$dY/Y = |(Y_u/(n\circ))\ |Y/Y_u|^{1-n}/Y$ [3c]
$(dY/Y)_u = |(Y_u/(n\circ))\ |Y_u/Y_u|^{1-n}/Y_u$ [3d]
$(dY/Y)\ /\ (dY_u/Y_u) = (Y/Y_u)^{1-n}/Y_u$ [3e]
$\log[(dY/Y)\ /\ (dY_u/Y_u)] = (-n)\log(Y/Y_u)$ [3f]



hgp01-2a

IECsRGB-Helligkeit L^* normiert für die UmgebungsHelligkeit L^*_u

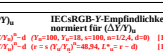
$L^* = s\ (Y/Y_n)^{0,33} - d$ (Y_n=100, Y_o=18, s=116, n=1/3, d=16) [1a]
$L^* = s\ (Y/Y_n)^{0,33} - d$ ($r = s\cdot(Y_o/Y_n)^{0,33} - d$=47,48, $L^*_o = r - d$) [1b]
$L^*/L^*_u = (Y/Y_n)^{1/h}$ [1c]
$\log(L^*/L^*_u) = s\log(Y/Y_n)$ [1d]
$\ln(L^*/L^*_u) = \ln(10)\cdot s\log(Y/Y_n)$ [1e]
$L^*/L^*_u = e^{\ln(10)\cdot s\log(Y/Y_n)}$ [1f]



hgp00-3a

IECsRGB-Y-Empfindlichkeit normiert für $(\Delta Y/Y)_u$

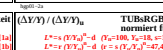
$L^* = s\ (Y/Y_n)^{0,33} - d$ (Y_n=100, Y_o=18, s=116, n=1/3, d=16) [1a]
$L^* = s\ (Y/Y_n)^{0,33} - d$ ($r = s\cdot(Y_o/Y_n)^{0,33} - d$=47,48, $L^*_o = r - d$) [1b]
$dY/Y = |(Y_u/(n\circ))\ |Y/Y_u|^{1-n}/Y$ [3c]
$(dY/Y)_u = |(Y_u/(n\circ))\ |Y_u/Y_u|^{1-n}/Y_u$ [3d]
$(dY/Y)\ /\ (dY_u/Y_u) = (Y/Y_u)^{1-n}$ [3e]
$\log[(dY/Y)\ /\ (dY_u/Y_u)] = (-n)\log(Y/Y_u)$ [3f]



hgp01-3a

TUBsRGB-Y-Empfindlichkeit normiert für $(\Delta Y/Y)_u$

$L^* = s\ (Y/Y_n)^{0,33} - d$ (Y_n=100, Y_o=18, s=100, n=1/3a(10), d=0) [1a]
$L^* = s\ (Y/Y_n)^{0,33} - d$ ($r = s\cdot(Y_o/Y_n)^{0,33} - d$=47,48, $L^*_o = r - d$) [1b]
$dY/Y = |(Y_u/(n\circ))\ |Y/Y_u|^{1-n}/Y$ [3c]
$(dY/Y)_u = |(Y_u/(n\circ))\ |Y_u/Y_u|^{1-n}/Y_u$ [3d]
$(dY/Y)\ /\ (dY_u/Y_u) = (Y/Y_u)^{1-n}$ [3e]
$\log[(dY/Y)\ /\ (dY_u/Y_u)] = (-n)\log(Y/Y_u)$ [3f]



hgp01-4a

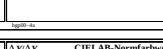
LABJND-Normfarbwertdifferenz ΔY normiert für ΔY_u

$L^*/L^*_u = (t/a)\ (\ln(1+a\cdot Y) - \ln(1+a\cdot Y_u))$ [1a]
$L^*/L^*_u = (t/a)\ (\ln(1+b\cdot|Y|) - \ln(1+b))$ [1b]
normierte Normfarbwert-Y-Differenz
$dY/dY_u = (1+a\cdot Y)\ /\ (1+a\cdot Y_u)$ [3d]

hgp00-5a

CIELAB-Normfarbwertdifferenz ΔY normiert für ΔY_u

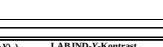
$L^* = s\ (Y/Y_n)^{0,33} - d$ (Y_n=100, Y_o=18, s=116, n=1/3, d=16) [1a]
$L^* = s\ (Y/Y_n)^{0,33} - d$ ($r = s\cdot(Y_o/Y_n)^{0,33} - d$=65,49, $L^*_o = r - d$) [1b]
$dY = |Y_u/(n\circ)|\ (Y/Y_u)^{1/n}$ [2c]
$dY_u = |Y_u/(n\circ)|\ (Y_u/Y_u)^{1/n} = 1,4602$ [2d]
$dY/dY_u = (Y/Y_u)^{1/n}$ [2e]
$\log(dY/dY_u) = (1/n)\log(Y/Y_u)$ [2f]



hgp00-6a

LABJND-Y-Kontrast normiert für $(Y/\Delta Y)_u$

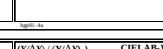
$L^*/L^*_u = (t/a)\ (\ln(1+a\cdot Y) - \ln(1+a\cdot Y_u))$ [1a]
$L^*/L^*_u = (t/a)\ (\ln(1+b\cdot|Y|) - \ln(1+b))$ [1b]
Heiligungswert-Y-Kontrast
$(Y/dY)\ /\ (Y_u/dY_u)$
$= |Y/(1+a\cdot Y)|\ /\ |Y_u/(1+a\cdot Y_u)|$ [4h]



hgp01-5a

CIELAB-Y-Kontrast normiert für $(Y/\Delta Y)_u$

$L^* = s\ (Y/Y_n)^{0,33} - d$ (Y_n=100, Y_o=18, s=116, n=1/3, d=16) [1a]
$L^* = s\ (Y/Y_n)^{0,33} - d$ ($r = s\cdot(Y_o/Y_n)^{0,33} - d$=65,49, $L^*_o = r - d$) [1b]
$Y/dY = Y/|(Y_u/(n\circ))\ |Y/Y_u|^{1-n}|$ [4c]
$(Y/Y)_u = Y_u/|(Y_u/(n\circ))\ |Y_u/Y_u|^{1-n}|$ [4d]
$(Y/dY)\ /\ (Y/dY)_u = (Y/Y_u)^n$ [4e]
$\log[(Y/dY)\ /\ (Y/dY)_u] = (n)\log(Y/Y_u)$ [4f]



hgp01-6a

IECsRGB-Normfarbwertdifferenz ΔY normiert für ΔY_u

$L^* = s\ (Y/Y_n)^{0,33} - d$ (Y_n=100, Y_o=18, s=100, n=1/2,4, d=0) [1a]
$L^* = r\ (Y/Y_n)^{0,33} - d$ ($r = s\cdot(Y_o/Y_n)^{0,33}$=48,94, $L^*_o = r - d$) [1b]
$dY = |Y_u/(n\circ)|\ (Y/Y_u)^{1/n}$ [2c]
$dY_u = |Y_u/(n\circ)|\ (Y_u/Y_u)^{1/n} = 1,1746$ [2d]
$dY/dY_u = (Y/Y_u)^{1/n}$ [2e]
$\log(dY/dY_u) = (1/n)\log(Y/Y_u)$ [2f]

hgp00-7a

IECsRGB-Y-Kontrast normiert für $(Y/\Delta Y)_u$

$L^* = s\ (Y/Y_n)^{0,33} - d$ (Y_n=100, Y_o=18, s=100, n=1/2,4, d=0) [1a]
$L^* = r\ (Y/Y_n)^{0,33} - d$ ($r = s\cdot(Y_o/Y_n)^{0,33}$=48,94, $L^*_o = r - d$) [1b]
$Y/dY = Y/|(Y_u/(n\circ))\ |Y/Y_u|^{1-n}|$ [4c]
$(Y/Y)_u = Y_u/|(Y_u/(n\circ))\ |Y_u/Y_u|^{1-n}|$ [4d]
$(Y/dY)\ /\ (Y/dY)_u = (Y/Y_u)^n$ [4e]
$\log[(Y/dY)\ /\ (Y/dY)_u] = (n)\log(Y/Y_u)$ [4f]

hgp01-7a

TUBsRGB-Normfarbwertdifferenz ΔY normiert für ΔY_u

$L^* = s\ (Y/Y_n)^{0,33} - d$ (Y_n=100, Y_o=18, s=100, n=1/3a(10), d=0) [1a]
$L^* = r\ (Y/Y_n)^{0,33} - d$ ($r = s\cdot(Y_o/Y_n)^{0,33}$=47,48, $L^*_o = r - d$) [1b]
$dY = |Y_u/(n\circ)|\ (Y/Y_u)^{1/n}$ [2c]
$dY_u = |Y_u/(n\circ)|\ (Y_u/Y_u)^{1/n} = 1,0934$ [2d]
$dY/dY_u = (Y/Y_u)^{1/n}$ [2e]
$\log(dY/dY_u) = (1/n)\log(Y/Y_u)$ [2f]

hgp00-8a

TUBsRGB-Y-Kontrast normiert für $(Y/\Delta Y)_u$

$L^* = s\ (Y/Y_n)^{0,33} - d$ (Y_n=100, Y_o=18, s=100, n=1/3a(10), d=0) [1a]
$L^* = r\ (Y/Y_n)^{0,33} - d$ ($r = s\cdot(Y_o/Y_n)^{0,33}$=47,48, $L^*_o = r - d$) [1b]
$Y/dY = Y/|(Y_u/(n\circ))\ |Y/Y_u|^{1-n}|$ [4c]
$(Y/Y)_u = Y_u/|(Y_u/(n\circ))\ |Y_u/Y_u|^{1-n}|$ [4d]
$(Y/dY)\ /\ (Y/dY)_u = (Y/Y_u)^n$ [4e]
$\log[(Y/dY)\ /\ (Y/dY)_u] = (n)\log(Y/Y_u)$ [4f]

hgp01-8a