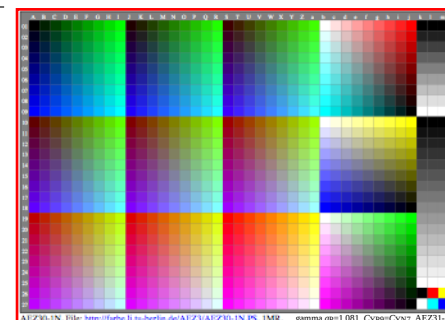
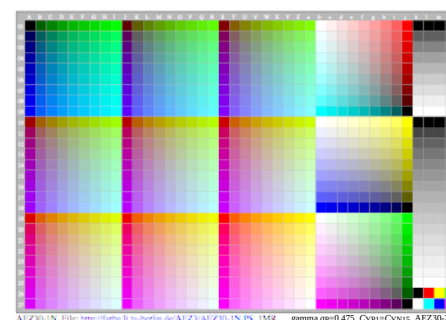
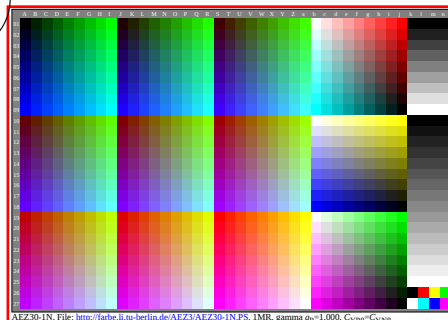


http://farbe.li.tu-berlin.de/AEZ3/AEZ3L0NP.PDF /.PS; frame and text file in VG; start output
N: no 3D-linearization (OL) in file (F) or PS-startup (S), page 1/1

see similar files: <http://farbe.li.tu-berlin.de/AEZ3/AEZ3L0NP.PDF> / .PS
technical information: <http://farbe.li.tu-berlin.de> or <http://130.149.60.45/~farbmetrik>

TUB registration: 20200201-AEZ3/AEZ3L0NP.PDF /.PS
application for evaluation and measurement of display or print output

TUB material: code=rha4ta



VG → PG
←

Original VG with standard gamma $g_p=1,000$

File	graphic	ISO step	gamma g_p
AEZ31-1N	PG	$C_{YP8}=C_{YN8}$	1,000

Application: luminance contrast of sRGB displays:
 $Y_W : Y_N = 90 : 0,31 = 288 : 1$ according to ISO 9241-306.
(contrast without display reflection of room light)

Ergonomics of human-system interaction ISO 9241-306:2018

Part 306: Field assessment methods for electronic visual displays
For test charts see
<http://standards.iso.org/iso/9241/306/ed-2/index.html>

For similar ISO-test charts in A4 size see
<http://standards.iso.org/iso/9241/306/ed-2/AE49/AE49.HTM>

For similar ISO-test charts with output questions see
<http://standards.iso.org/iso/9241/306/ed-2/AE49/AE49F0PX.PDF>

For similar ISO/IEC-test charts according to ISO/IEC 15775,
and ISO/IEC TR 24705 see
<http://farbe.li.tu-berlin.de/A/24705TE.html>

For the relation and links to many other standards see
<http://farbe.li.tu-berlin.de/EE68/EE68L0NP.PDF>

AEZ31-2N

↑ VG → VG

Original VG with standard gamma $g_p=1,000$

File	graphic	ISO step	gamma g_p
AEZ30-1N	VG	$C_{YP8}=C_{YN8}$	1,000

Application: luminance contrast of sRGB displays:
 $Y_W : Y_N = 90 : 0,31 = 288 : 1$ according to ISO 9241-306.
(contrast without display reflection of room light)

AEZ30-3N

↑ VG → PG

Change of original VG with gamma $g_p=0,475$

File	graphic	ISO step	gamma g_p
AEZ30-2N	PG	$C_{YP1}=C_{YN15}$	0,475

Application: Low luminance contrast of projectors:
 $Y_W : Y_N = 90 : 40 = 2,15 : 1$ according to ISO 9241-306.

AEZ30-4N

Output test of colour devices at the work places

The visual colours change by the software and:
on displays with the reflection of the room light.
in print with the printer driver and the workflow.

The luminance contrast ratio between White W and Black N determine,
if the 9 gray steps between N and W appear equally spaced.
Equal spacing shall appear for the intended device output:
on displays for the output within the broken red rectangle,
in print for the output within the continuous red rectangle.

If this is NOT the case, then determine visually with the next page
the ISO-contrast step which gives the intended result.
You may ask the device manufacturer for software solutions.
You may change the PDF-file gamma to produce the intended result.
Different gamma-change methods in VG or PG graphics are available.

AEZ31-3N

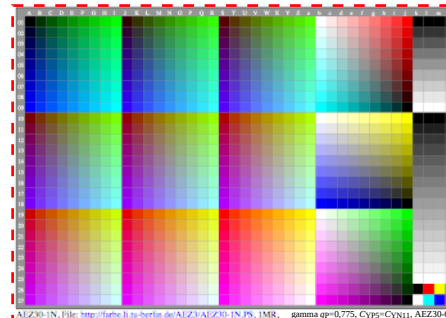
VG → PG
→

Change of original VG with gamma $g_p=0,775$

File	graphic	ISO step	gamma g_p
AEZ30-6N	PG	$C_{YP5}=C_{YN11}$	0,775

Application: office luminance contrast of displays:
 $Y_W : Y_N = 90 : 2,5 = 36 : 1$ according to ISO 9241-306.
(contrast of offset paper according to ISO/IEC 15775)

AEZ30-5N



PDF- and PS-test files for relative colour image reproduction according to DIN 33872-1 to -6:2010

These DIN-test charts serve for the colorimetric specification,
and the visual assessment of the display and print output.

For free download of the test charts see
<http://farbe.li.tu-berlin.de/A/33872E.html>

For similar DIN-test charts according to DIN 33866-1 to -5:2000 see
<http://farbe.li.tu-berlin.de/A/DE13/DE13.HTM>

For more test charts, standards and applications see
<http://farbe.li.tu-berlin.de/A/INFOALAE.html>

AEZ31-5N

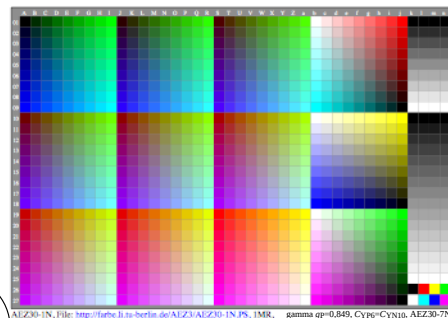
Ergonomic and colorimetric colour image reproduction

For the ergonomic and colorimetric colour image reproduction see
Richter, Klaus (2016), Output linearization method OLM16 for
displays, printers, and offset, 61 pages, 1,4MB.
http://farbe.li.tu-berlin.de/OUTLIN16_01.PDF
(Content similar to CIE R8-09:2015, free download for CIE-members.)

For a list of publications of Klaus Richter see
<http://farbe.li.tu-berlin.de/XY91FEN.html>

For basic information in 6 languages (EN, GE, FR, IT, SP, NO):
Klaus Richter (2015), Colour, colour vision, and elementary colours
in colour information technology, 86 pages, 2,2 MB, see
<http://standards.iso.org/iso/9241/306/ed-2/ES15.PDF>

AEZ31-6N



VG → PG
←

Change original VG with gamma $g_p=0,850$

File	graphic	ISO step	gamma g_p
AEZ30-7N	PG	$C_{YP6}=C_{YN10}$	0,850

Application: mean luminance contrast of displays:
 $Y_W : Y_N = 90 : 1,25 = 72 : 1$ according to ISO 9241-306.
(contrast higher offset paper according to ISO/IEC 15775)

AEZ30-8N

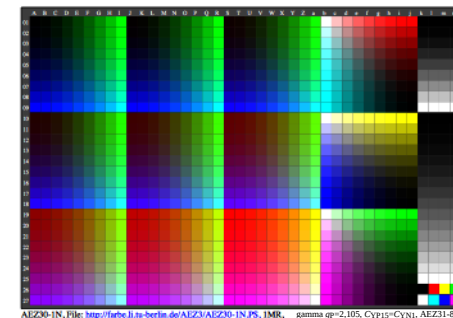
VG → PG
→

Change original VG with gamma $g_p=2,105$

File	graphic	ISO step	gamma g_p
AEZ31-8N	PG	$C_{YP15}=C_{YN1}$	2,105

Application: extrem luminance contrast of displays:
 $Y_W : Y_N = 90 : 0,002 = 36864 : 1$ according to ISO 9241-306.
(extrem high contrast not known by the visual system)

AEZ31-7N



TUB-test chart AEZ3; 5 of 6 colour figures in pixel graphic PG
1 VG[0-1], 5 PG gamma transfer, similar ISO 9241-306:AE49

input: w/rgb/cmyk → rgb (1MR)
output: change of gamma g_p