



Eye Comfort

key performance parameters of user-friendly displays

2 PfG 2552 / 12.15

08.09.16

By Martin Eichenseder

Eye Comfort

The situation

Augenbrennen vorm Monitor

Welche Beschwerden gehen Ihres Wissens nach mit Bildschirmarbeit einher?

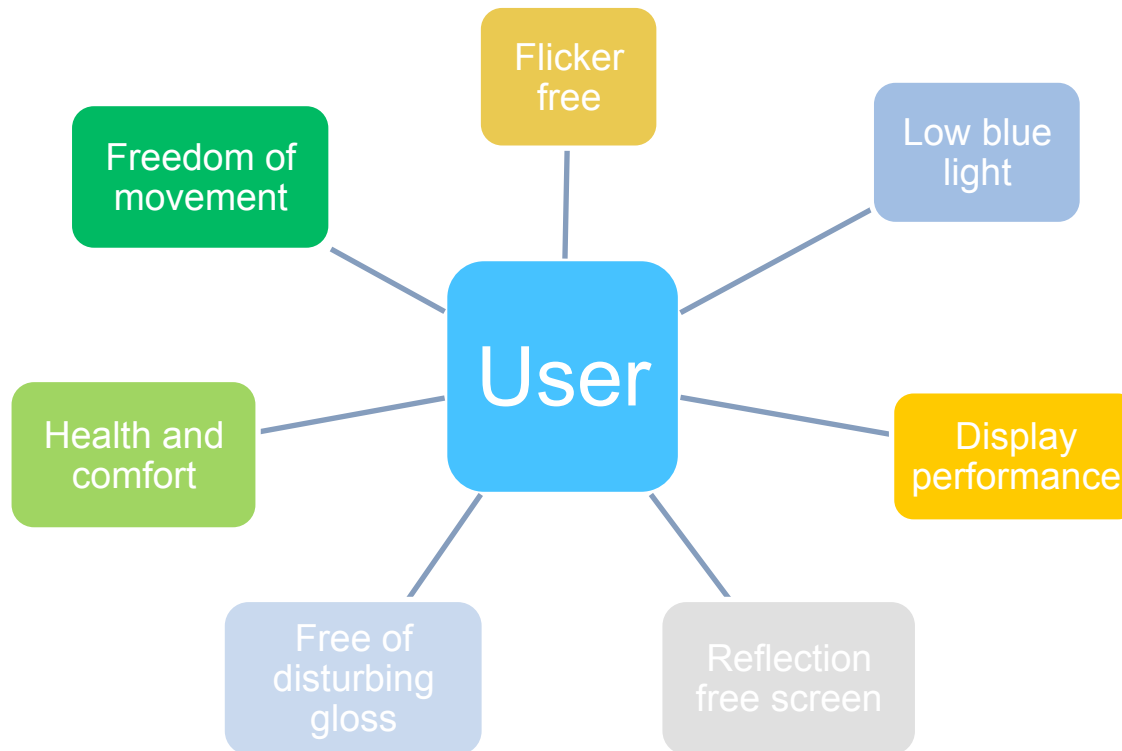


Quelle: TNS Emnid, Befragungszeitraum 11.03.2009/N = 202 • Grafik: djd/AMO • Foto: fotolia.com



Eye Comfort

What is TÜV Rheinland's Eye Comfort based on?



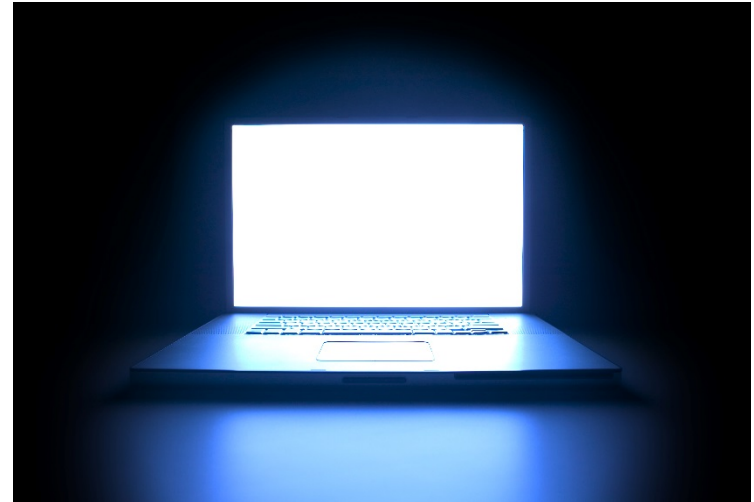
Eye Comfort

Reflection free screens and no disturbing gloss

- Reflections can be very disturbing for the user. Only products with
 - reflection class I/I (test report)

and

- gloss below 20
 - of surfaces in the direct view of the primary user or no disturbing reflections under work place lighting of 500 Lux [B].



Eye Comfort

Freedom of movement and display adjustability

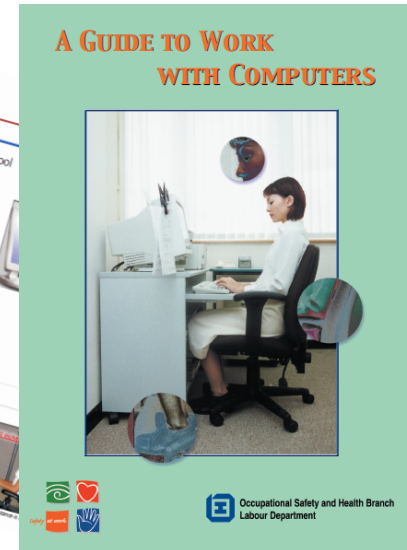
- In real life situations users move sideways and up-down.
- Depending on the panel type used, the angular dependence can be disturbing.
- Tilt must be adjustable for displays with a weight below 3 kg
- Height must be adjustable for monitors below 24 in



Eye Comfort

Health and comfort

- The purpose of this clause is to make information about improving the work place easily accessible to the buyer of the product.
- The user manual can be printed, on CD or online.
- The existence of the required content is checked according to specified additional requirements (safety requirements of UM according UM checklist).



Eye Comfort

Free of flicker

- 2PfG 1797 Flicker Free pass test report

Produkte
Monitore

TÜVRheinland®

Prüfbericht-Nr.: 37064128 001 Prüfungs-Nr.: 064000023 Seite 1 von 7
Test Report No.: Order No.: Page 1 of 7

Kunden-Referenz-Nr.: N/A Kunden-Referenz-Nr.: N/A
Client Reference No.: Client Reference No.:

Auftraggeber: LENOVO (BEIJING) LIMITED, No.6 Chang Yi Road, Shangai Information Industry Base, Haidian District, Beijing 100088 P.R. China
Client: Auftragdatum: 00/11/2018
Order date:

Prüfgegenstand: LCD Monitor
Test item:

Bezeichnung / Typ-Nr.: X5A
Identification / Type No.:

Auftragsinhalt:
Order content: Flicker free comfort approval

Prüfgrundlage:
Test specification: 2 PfG 058012-15 Eye Comfort - Evaluation

Wareneingangdatum: 00/11/2018
Date of receipt:

Prüfmuster-Nr.: A000285028-012
Test sample No.:

Prüfzeitraum: 03/12/2018 - 07/12/2018
Testing period:

Ort der Prüfung: TÜV Rheinland (Shenzhen) Co., Ltd.
Place of testing:

Prüflaboratorium: TÜV Rheinland (Shenzhen) Co., Ltd.
Testing laboratory:

Prüfresultat: Pass
Test result:

geprüft von / tested by: kontrolliert von / reviewed by:

IS 12/2018	ISO 9001:2015	ISO 14001:2015	IS 14/2018	ISO 14001:2015	ISO 45001:2018
Norm	Norm	Norm	Norm	Norm	Norm
Code	Code	Code	Code	Code	Code
0000000000	0000000000	0000000000	0000000000	0000000000	0000000000

Other: The tests performed with LCD panel: LG2019R5014Y (LST)

There are two alternative constructions for the model:

Bezeichnung	Material	Material	Material	Material	Material
Construction 1	Construction 2	Construction 3	Construction 4	Construction 5	Construction 6
0000000000	0000000000	0000000000	0000000000	0000000000	0000000000

This report is for the tests of construction A. Only the Port A used for the tests.

Zustand des Prüfgegenstandes bei Anlieferung: Prüfmuster vollständig und unbeschädigt
Condition of the test item at delivery: Test item complete and undamaged

Legende:
Pass: Analytisch / Analytisch
Fail: Analytisch / Analytisch
Pass: Analytisch / Analytisch
Fail: Analytisch / Analytisch

Dieser Prüfbericht bezieht sich nur auf den in der Prüfbeschreibung und dem Auftrag definierten Prüfgegenstand. Dieser Bericht beinhaltet nicht die Verantwortung des Prüfliefernenden.
This test report only refers to the in test sample. It does not include the responsibility of the test center or the test report or not permitted to be published in electronic. This test report does not extend to any other item.

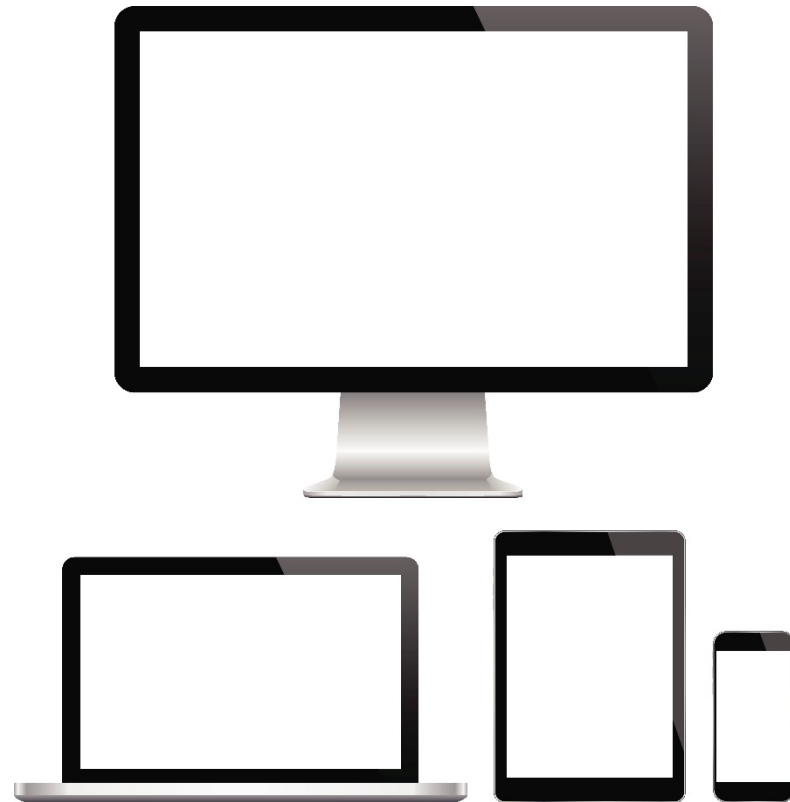
TÜV Rheinland (Shenzhen) Co., Ltd. Bei der TÜV, FZ - FZ, Building 1, Canteen Technology Building, No. 4 Langkang 1 Road, Haidian District, Shenzhen, P.R. China



Eye Comfort

Display performance

- GS Mark or
- Ergo-mark or
- 'ISO 9241-307/308/309' mark



Eye Comfort

Low blue light

- 2PFG 2383 Low Blue Light Content pass test report

Produkte
Products

TÜVRheinland®

Prüfer-Nr.: 17064122-001 Auftrags-Nr.: 16405023 Seite 1 von 7
Test Report No.: Order No.: Page 1 of 7

Kunden-Referenz-Nr.: N/A Kunden-Referenz-Nr.: N/A Auftragsdatum: 30.11.2015
Client Reference No.: Client Reference No.: Order date:

Auftraggeber: SENVO (BEIJING) LIMITED No. 5, Chuang Ye Road, Shanghai Information Industry Base, Haidian District, Beijing 100085, P.R. China
Client:

Prüfgegenstand: LCD Monitor
Test item:

Bezeichnung / Typ-Nr.: X16
Identification / Type No.:

Auftragsinhalt: Filtere/computerscreen
Order content:

Prüfungstage: 2 PFG 2383/15 Eye Comfort-Evaluation
Test specification:

Wareneingangdatum: 30.11.2015
Date of receipt:

Prüfmuster-Nr.: A00028035-002
Test sample No.:

Prüfzeitraum: 03.12.2015 - 07.12.2015
Testing period:

Ort der Prüfung: TÜV Rheinland (Shanghai) Co., Ltd.
Place of testing:

Prüflaboratorium: TÜV Rheinland (Shanghai) Co., Ltd.
Testing laboratory:

Prüfingenieur: Pass
Test result:

geprüft von / tested by: kontrolliert von / reviewed by:

Prüfer	Prüfung	Prüfung	Prüfung	Prüfung	Prüfung
Name	Role / Position	Name	Role / Position	Name	Role / Position

Sonstige / Other: The tests performed with LCD panel: LAG/TOUR/9-TAI (L&T)
There are two alternative constructions for the model:

Item	ACDC-wireless	Man board	Base	Wire	Other feature
Construction A	2016.4.24	2016.4.24	2016.4.24	2016.4.24	2016.4.24
Construction B	2016.4.24	2016.4.24	2016.4.24	2016.4.24	2016.4.24

This report is for the tests of construction A. Display Port is used for the tests.

Zustand des Prüfgegenstandes bei Anlieferung: Prüfmuster vollständig und unbeschädigt
Condition of the test item at delivery: Test item complete and undamaged

Legende: * = vorhanden ** = vorhanden *** = vorhanden **** = vorhanden
Legend: * = available ** = available *** = available **** = available

Überprüfen Sie bitte auch Ihre Prüfpläne. Prüfbefehle sind ohne Genehmigung der Prüfstelle nicht auszuführen.
Please check your test plans. Test instructions are to be followed without permission of the test center.
The test report may not be altered.
Without permission of the test center the test report is not permitted to be disclosed in any way.
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Eye Comfort

Market acceptance

ID No. 000049065: LENOVO (BEIJING) LIMITED

LCD Monitor



Eye Comfort

www.tuv.com
ID 000049065

Lenovo™



Test Summary: | [Eye Comfort](#)

Consumer Information

- Safe with tested quality;
- Low Blue-light content tested;
- No noticeable flicker for reduced eye tiredness;
- No disturbing reflections distracting from the monitor;
- Reflection class I/I, also with GS Mark or TÜV Ergonomic Mark;
- Low viewing angel dependency for accurate colors and freedom of user movement;

Eye Comfort

Contact

Martin Eichenseder

Director | Global Technical Competence Center – Display
Electrical Greater China

Tel. : +86 755 82681557
Fax : +86 755 25980321
Mobile: +86 18681501293

TÜV Rheinland (Shenzhen) Co., Ltd.
3&4 F, Cybio Technology Building No. 1, Langshan No. 2 Road South, 5th
Industrial Area, High-Tech Industry Park North, Nanshan District, Shenzhen,
China

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