

DIN EN 14501:2021-09 (E)

Blinds and shutters - Thermal and visual comfort - Performance characteristics and classification

Contents	Page
European foreword.....	4
Introduction	5
1 Scope.....	6
2 Normative references.....	6
3 Terms, definitions and symbols.....	7
4 Notations used.....	9
4.1 General.....	9
4.2 Visual or solar properties	9
4.3 Geometry of the radiation.....	10
4.4 Optical factors	11
5 Thermal comfort	11
5.1 General.....	11
5.2 Control of solar gains – Total solar energy transmittance g_{tot}	11
5.3 Secondary heat gains – Secondary heat transfer factor $q_{i,tot}$	13
5.4 Protection from direct transmission – Normal/normal solar transmittance $\tau_{e,n-n}$	14
6 Visual comfort	14
6.1 General.....	14
6.2 Darkening performance	16
6.3 Glare control	17
6.4 Night privacy	19
6.5 Visual contact with the outside	20
6.6 Daylight utilization	21
6.7 Rendering of colours.....	21
Annex A (normative) Reference glazing	22
A.1 General.....	22
A.2 Reference glazing with integrated data only	22
A.2.1 Glazing A.....	22
A.2.2 Glazing B.....	22
A.2.3 Glazing C	23
A.2.4 Glazing D.....	24
A.2.5 Glazing E	24
A.3 Reference glazing with spectral data.....	25
A.3.1 General.....	25
A.3.2 Glazing F	25
A.3.3 Glazing G	26
A.3.4 Glazing H.....	26
A.3.5 Spectral data for the panes	26
A.3.5.1 Pane 1: clear single pane (4 mm)	26

A.3.5.2 Pane 2: pane with low emissivity coating (4 mm)	28
A.3.5.3 Pane 3: solar control pane (6 mm)	30
Annex B (informative) The meaning of the secondary internal heat transfer factor $q_{i,tot}$	33
Annex C (informative) Example of performance presentation.....	34
C.1 Thermal comfort.....	34
C.2 Visual comfort.....	34
Annex D (informative) Daylight Glare Probability	36
D.1 General	36
D.2 Glare	36
D.3 Daylight Glare Probability.....	36
D.3.1 General	36
D.3.2 Annual evaluation	37
D.3.3 Simplified annual glare evaluation	38
D.3.3.1 General	38
D.3.3.2 Solar protection device being opaque in the extended and closed position.....	39
D.3.3.3 Solar protection device where the curtain is made of textile, film or perforated opaque material.....	40
D.3.3.4 Sunshine zones	42
Annex E (normative) Opacity performance of curtain material.....	44
Bibliography	45