

GUIDE TO THERMAL AND OPTICAL FACTORS

Thermal Factors

Thermal factors Relating to the fabric alone:

Ts Solar Transmittance:

This factor measures the proportion of solar energy transmitted through the fabric. A low percentage means the fabric performs well at reducing solar energy

Rs Solar Reflectance:

This factor measures the proportion of solar radiation reflected by the fabric. A high percentage means the fabric performs well at reflecting solar energy.

As Solar Absorbance:

This factor measures the proportion of solar radiation adsorbed by the fabric. A low percentage means the fabric absorbs little solar energy.

Solar radiation is always partially transmitted through, absorbed or reflected by the fabric. The sum of all 3 equals 100. $T_s + R_s + A_s = 100\%$ of solar energy.

g_{tot} Factor:

Solar energy which actually penetrates into a room through the blind and glazing. A low figure means good thermal performance
 $g_v = 0.72$. Double glazing with heat insulating coating

Optical Factors

T_v Visible Transmittance:

This factor measures the percentage of visible light coming through the fabric that can be seen by the naked eye. It is related to the amount of light (brightness) a person receives through a glazing system. A low figure shows a very efficient fabric.

Of Openness Factor:

This factor measures the proportion of holes in a woven fabric. This parameter, together with other technical properties of the fabric, should be considered when determining the degree of visibility and heat and glare control, that the fabric offers. The openness factor can vary slightly from colour to colour in the same fabric and is often expressed as an average OF. A low OF indicates that the fabric has a very close weave.