

Spec. Number      BD-1  
Date  
Revision

## Beam Dividers

Beam Dividers are typically designed for a 45° angle of incidence. Since they are essentially non-selective with respect to wavelength over the visible spectrum, both beams appear neutral in color. It is possible to produce beams of equal intensity or beams of varying intensity. Since there is virtually no light loss due to absorption, the sum of the reflected and transmitted beam intensities will equal that of the incident beam. These films share many characteristics with other thin films; high efficiency, durability and versatility.

Characteristic	Test/Attribute	Indication
Visible wavelength Reflection/Transmission	Typically 50%/50%	How much visible light is "divided".
Angle of Incidence	Typically 45°	
Coating Uniformity	Will vary with substrate geometry	N.A.
Adhesion	Tape test	How well the film adheres to the substrate
Heat Testing	550°C for 12 minutes	Ability of the film to withstand heat
Operating Temperature	Oven test	How well the film will withstand operating temperatures
Thermal Shock	20°C water / 400°C oven cycle 3 times	Ability of film to withstand fast temperature changes
Humidity	24 hours at 120 +/-4 °F, RH of 95 to 100%.	Indicates resistance to heat and moisture combination
Substrate Specifications	Customer specific	
Cosmetics Specifications	Customer specific	
Abrasion Test	1 lb. Force for 50 strokes with cheesecloth.	Cleanability and resistance to abrasion