

TECHNICAL INFORMATION

Large Area Dielectric Beamsplitters

Product Specification 692-19

Construction

These high efficiency beamsplitters are manufactured by evaporating pure titanium oxide under very high vacuum on to one face of select quality float glass. The thickness of the film can be controlled to produce various ratios of Reflection to Transmission to meet the requirements of many system applications.

With some applications, particularly audio visual, it is recommended that the second face of the glass is anti-reflection coated to minimise secondary reflection (ghosting). This coating is deposited in a similar manner to the oxide coating and is provided with all beamsplitter material unless otherwise requested.

The major users of this type of beamsplitter are associated with the film, television, audio visual and simulation industries.

Glass

The glass used in the manufacture of beamsplitters is commercial float glass which is selected to ensure that it is free from scratch, stain, seeds and ripple.

Flatness of the glass is not guaranteed by the manufacturer but it is generally expected not to exceed 12 fringes per 25mm. A special 10mm thick glass is available having a flatness of around 4 fringes per 25mm but the glass is restricted to a maximum size of 1000 x 750mm.

The beamsplitters are normally manufactured up to a maximum size of 1000 x 1500mm for 2, 3 and 4mm thickness glass and 1500 x 3000mm for 6mm thickness.

All beamsplitters cut from stock glass have a cutting tolerance of +/-2mm unless otherwise stated. Thickness tolerance is +/-0.2mm.

Coating

The beamsplitter and anti reflection coatings are robust and durable and are designed to meet the requirements for abrasion resistance and film adhesion as specified by BS-G-211 and U.S. MIL-M-13508C.

Beamsplitter coatings can be manufactured to provide various ratios of Reflection: Transmission. The ratios are product-coded as follows:

Code	R%	T%	Tol
692-19/15	15	85	+/-3
692-19/20	20	80	+/-3
692-19/30	30	70	+/-3
692-19/35	35	65	+/-3

Notes:

1. 692-19/35 is restricted to size approx. 1200 x 1200mm.
2. Anti-reflection coating reduces the second surface reflectance to 1.4% +/-0.2.

Packaging

All beamsplitters are wrapped in acid free tissue and then overwrapped in either thick paper or corrugated paper dependent on size. Large beamsplitters will require wooden crates for transportation.

Please telephone to discuss any variations in standard coatings that you may require.

thinmetalfilms Ltd.
Precision Optical Coating Engineers



THIN METAL FILMS LTD. STROUDLEY ROAD, BASINGSTOKE, HANTS RG24 8UG
T 01256 840830 F 01256 840443 E sales@tmf.uk.com www.tmf.uk.com