

Market response to low-E products, growing at an annual rate of about 5% of total sales, has been excellent. Representatives of Cardinal IG and Southwall Technology have indicated the importance of the DOE role in the development of low-E products. Stephen Selkowitz of Lawrence Berkeley Laboratory believes that the development and commercialization of low-E windows is one of the most successful undertakings of the Office of Buildings and Community Systems (Selkowitz, 1987).

#### 4.1.4 Market Penetration

Low-E windows were first introduced by Andersen in 1983. In 1983 and 1984 sales of low-E windows were between 1 and 3% of total sales (Fig. 4.1). By 1985 about 50 million square feet or over 5% of total sales had been captured. In 1986 over 20 manufacturers sold more than 70 million square feet of low-E windows - nearly 10% of total sales (Selkowitz, 1987). By 1987 about 15% of total residential windows sold had low-E coatings (Braun, 1987). Industry marketing and sales representatives estimate that 20% of the annual sales in 1988 will be of low-E windows (PPG, 1988). Andersen is now assembling more products with low-E than without, and a few Andersen distributors carry nothing but low-E products (Andrews, 1986). Marketing directors at several major glass companies estimate that penetration will reach 25-50% in 1990 (Brody, 1987).

Manufacturers agree that growth of the market so far has been solid, and that sales are likely to accelerate a great deal in the next few years. A marketing manager with PPG Industries Glass Group and an Executive Vice President with AFG Industries, Inc., both expect that the product life cycle of low-E windows will follow a path similar to that of double-glazed insulating (Swanson, 1986). Within ten years, low-E will be the industry standard (Hayes, 1987).