Two-component microinjection moulding for MID fabrication

Moulded interconnect devices (MIDs) are plastic substrates with electrical infrastructure. The fabrication of MIDs is usually based on injection moulding, and different process chains may be identified from this starting point. The use of MIDs has been driven primarily by the automotive sector, but recently, the medical sector seems more and more interested. In particular, the possibility of miniaturisation of three-dimensional components with electrical infrastructure is attractive. The present paper describes possible manufacturing routes and challenges of miniaturised MIDs based on two-component injection moulding and subsequent metallisation. This technology promises cost effective and convergent manufacturing approaches for both macro- and microapplications. This paper presents the results of industrial MID production based on two-component injection moulding and discusses the important issues for MID production that can modulate the qualities of final MID. The results and discussion presented here can be a valuable user guide for mass production of moulded interconnect devices. © 2010 Maney Publishing.