

综述

塑料光纤(POF)的发展及其应用

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摘要

阐述了阶跃型塑料光纤和渐变型塑料光纤的发展过程及其国内外研究现状,介绍了塑料光纤在局域网、汽车工业、传感器等领域的应用.通过对石英光纤、金属电缆与塑料光纤的性能进行比较,得到了塑料光纤具有芯径大、柔韧性好、价格低廉、制作简单等特点.就塑料光纤在局域网、汽车工业、传感器等领域的应用进行了分析、总结,结果表明降低塑料光纤的传输损耗可以进一步扩大其应用领域.最后分析了我国塑料光纤的研究、生产现状与国际水平的差距,并提出了提高国产塑料光纤技术水平的建议.

关键词 [塑料光纤](#) [阶跃型塑料光纤](#) [渐变型塑料光纤](#) [局域网](#)

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Development and Application of Plastic Optical Fiber

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Abstract

In that paper,I expatiated on the course of development and status quo of SIPOF and GIPOF at home and abroad,and introduced the application in LAN,CAN and OFS.As a guided-wave media,plastic optical fiber(POF) has gained an increasing attention in the world for its unexampled merits(easy fabrication, low cost, high plasticity and so on), comparing with silicon optical fiber and cable.Applications of POF in LAN,CAN and OFS were analyzed and summarized.The result indicates that applications of POF are limited by its transmission loss. The advice for how to raise the technical level of POF in China was brought forward at the end of the paper.

Key words [POF](#) [SIPOF](#) [GIPOF](#) [LAN](#)

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