

Abstrat of Disclosure

This invention discloses broad bandwidth optical fibers which have a broad bandwidth suitable for data-communication, are free from fiber cracking or chipping if a crimp-type connector is attached with sufficient pulling resistant force to hold the fiber firmly, minimize the connection loss through a small crimping optical loss and a accurate axial alignment, facilitate connection with existing GI quartz optical fibers, which have a fiber diameter of 125 μm , and offer excellent compatibility with such existing GI quartz optical fibers.

Broad bandwidth optical fibers pertaining to this invention are graded index broad bandwidth optical fibers fabricated from a core made of quart-based glass with a graded refractive index profile, a quartz glass cladding provided over said core, and polymer covering layer provided over said cladding, with said polymer covering layer made of a UV-cured hard polymer with a Shore hardness of D 55 or more and a thickness of 5 μm or more. Jacketed optical fiber units are then produced by providing a primary coating over an optical fiber and a secondary coating over a primary-coated optical fiber or fibers. Finally optical fiber cords are produced by providing a polymer sheath around a jacketed optical fiber unit.