

The world's fastest* Plastic Optical Fiber for Consumer use
Easy handling and Best fit for High-speed optical transmission

AGC

Plastic Optical Fiber

FONTEX[™]
FONTEX



Achieve a perfect combination of characteristics; High-Speed, Easy-handling, and High-reliability

Plastic Optical Fiber

FONTEX[™] is:
FONTEX

FONTEX (which stand for the fount of the light) is the new plastic optical fiber (POF) developed with AGC's technology platform of POF and fluorine.

FONTEX is fully compatible with next-generation AV data communication due to its high-speed characteristics at 10Gbps and above. In addition, **FONTEX** is able to function even when knotted or bent while existing silica optical fibers is not able to. Therefore, **FONTEX** is the reliable, safe optical fiber for next-generation household electronic appliances which is capable of stable high-speed data transmission with a certain level of rough treatment.

Plastic Optical Fiber

FONTEX[™] Characteristics
FONTEX

☆ Advantage over existing copper cables

- high-speed at 10Gbps and above
- Low power consumption, Low emission
- Free of electrodynamic noise, Available for medical use
- Light weight cable, less than 1/3 of copper cable
- Thin cable for better design.

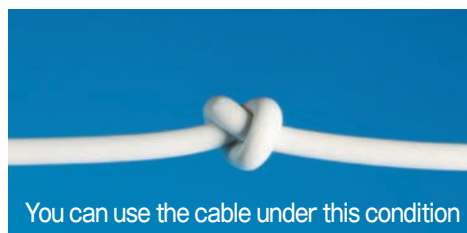
☆ Advantage over existing silica fibers

- Function even when knotted and bent, easy handling and free design (by capitalizing on the characteristics of plastic)
- Possible to change the core diameter of optical fibers to adjust to inexpensive simple connectors.
- Possible to reduce the number of connector parts (by simple tight-code structure)
- Easy terminal treatment operation (free from break or stick)

FONTEX still works under this condition

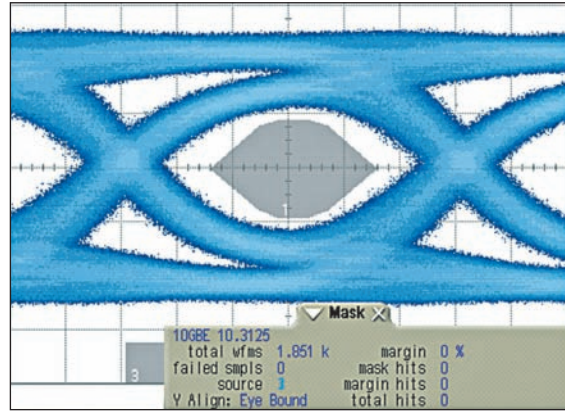


Fiber function when knotted

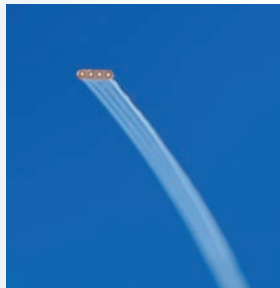


You can use the cable under this condition

- High speed transmission achieved by a fluororesin-based, low material dispersion plastic fiber. Best fit for multiple-wavelength transmission.
- Possible to reduce the number of connector parts (by simple tight-code structure)
- Possible to change the core diameter of optical fibers to adjust to inexpensive simple connectors.
- Least bending diameter: $< \phi 5\text{mm}$, bending endurance test: more than 100,000 times
- Easy terminal treatment operation (free from break or stick)
- Optical-Electric composite cable, Ribbon cable, and other product are under development
- 10Gbps and above, up to 100m. (Achieved 40Gbps at lab test)



OE Composite cable



Ribbon Cable



Optical cable with dual connector

- Interconnection and Inner connection for TVs and Displays (3D, 4k/2k, 8k/4k, etc.),
- Interconnection for PCs and peripherals
- Inner connection for mobile devices
- Interconnection for data center equipments
- Interconnection for networking equipments and medical devices in the hospitals

Caution

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* : Arup Polley and Prof. Stephen E. Ralphm, " 40 Gb/s Plastic Optical Fiber Link" in Proc OFC/NFOEC 2008, OWB2.

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