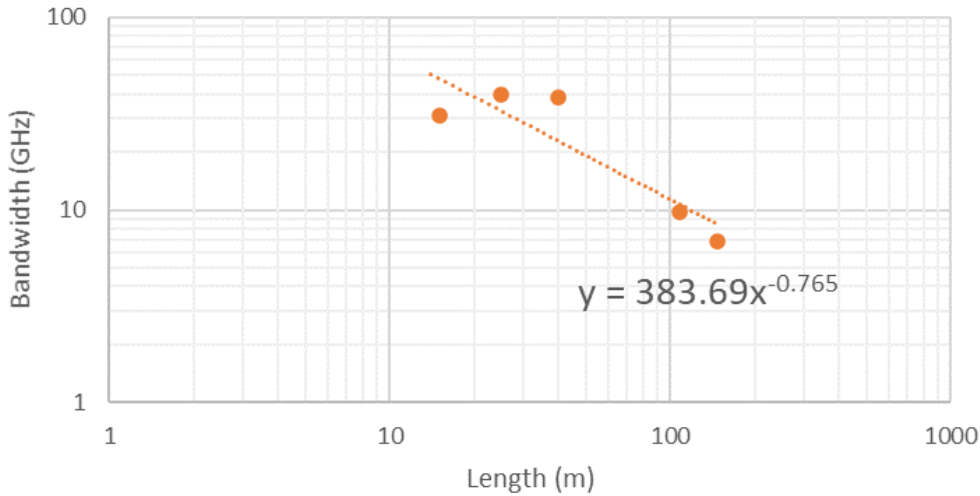


Bandwidth in short length for A4j fiber

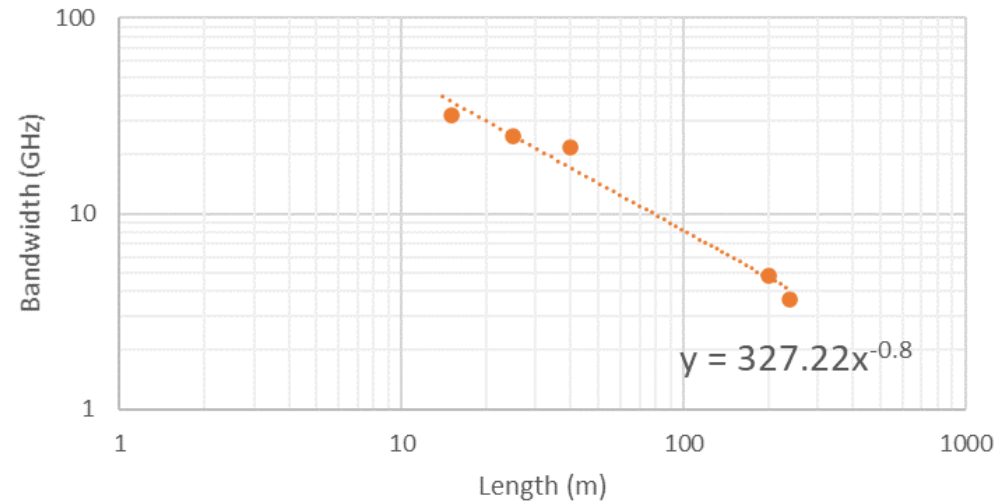
Yuji Watanabe , AGC Inc.

Bandwidth of GI-POF (A4j) for auto

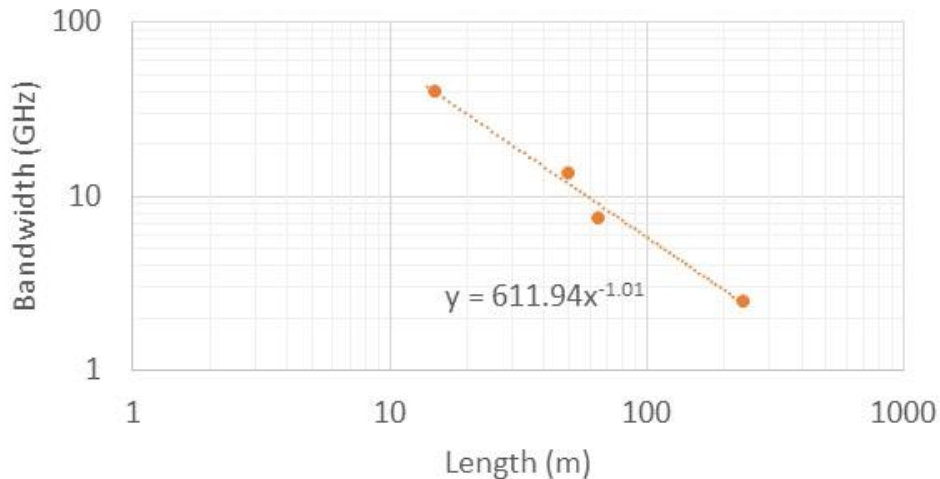
Sample A (A4j)



Sample B (A4j)

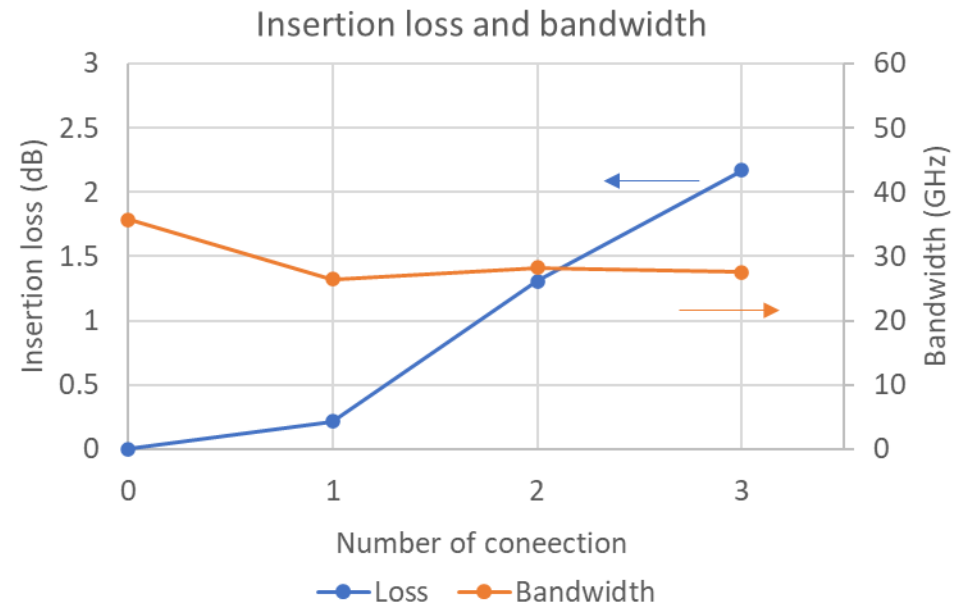
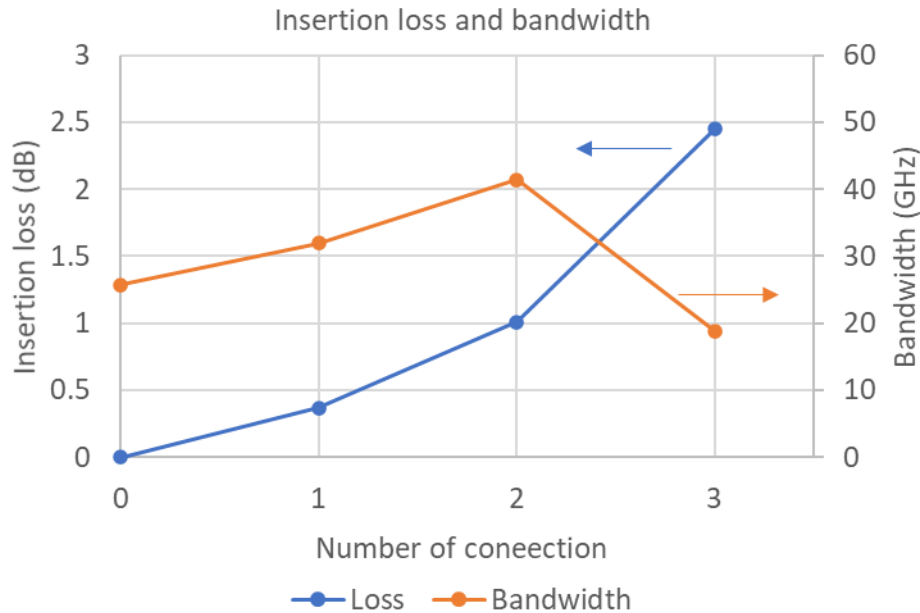


Sample C (A4j)



**Time domain measurement with OFL launch
Optical -3dB bandwidth: >20GHz @ 15m**

Bandwidth with inline connection (A4j)



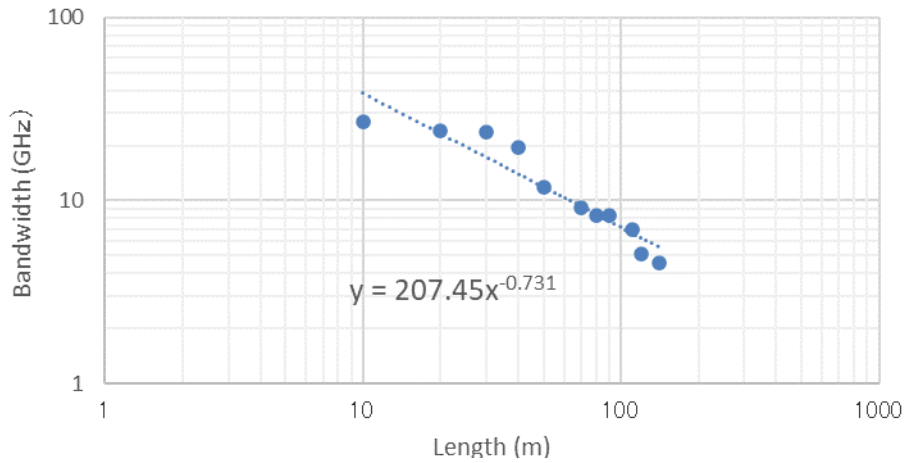
- Original fiber length is 15 m
- Optical -3dB bandwidth was measured by adding LC connectors one by one
- Producing higher connection loss, razor cutting was applied for fiber end termination.
- Objective: 25Gbps over 15m with two connections, 10Gbps or less 15m with three connections

- **Optical -3dB bandwidth vs. length relationship was investigated with GI-POF A4j for automobile**
- **$BW \sim L^{-\gamma}$: γ showed 0.77 ~ 1 with OFL launch**
- **More than 20GHz of bandwidth was observed at 15 m**
- **Bandwidth at 15 m was also measured with up to three inline connections.**
- **More data may be needed, but significant bandwidth degradation was not observed**

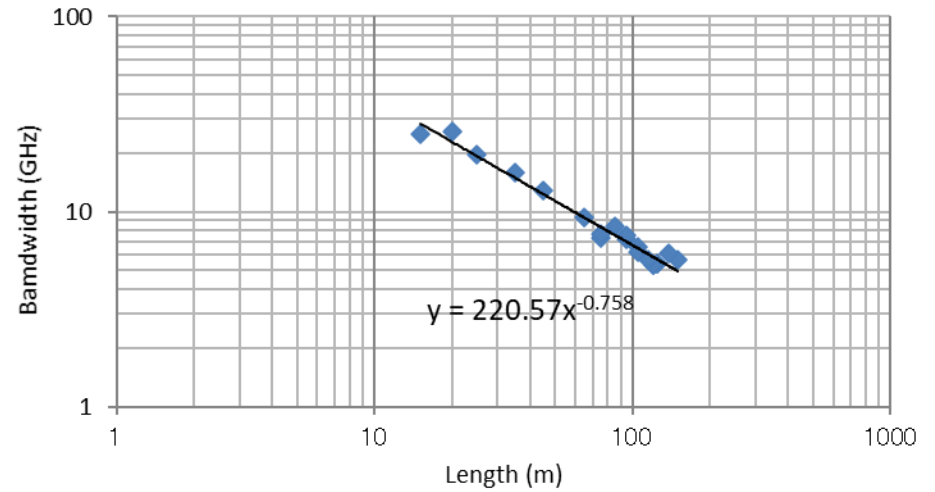
Supplemental slides

Example of bandwidth of GI-POF(A4i)

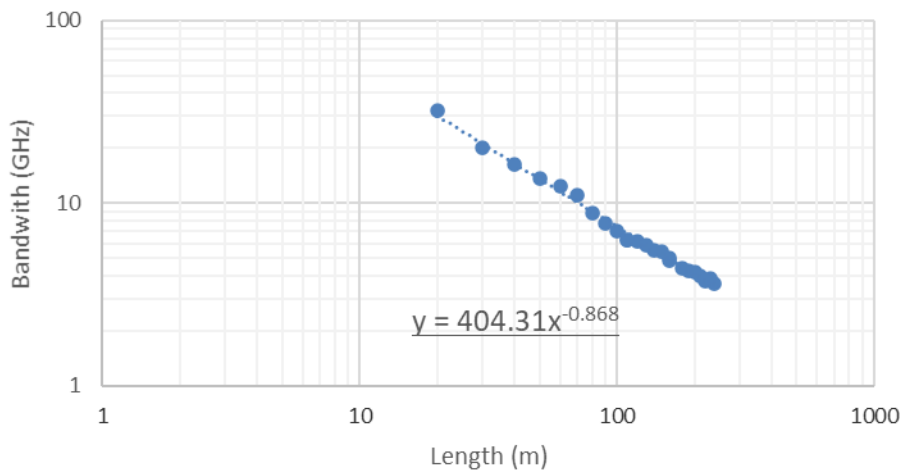
Sample A



Sample B



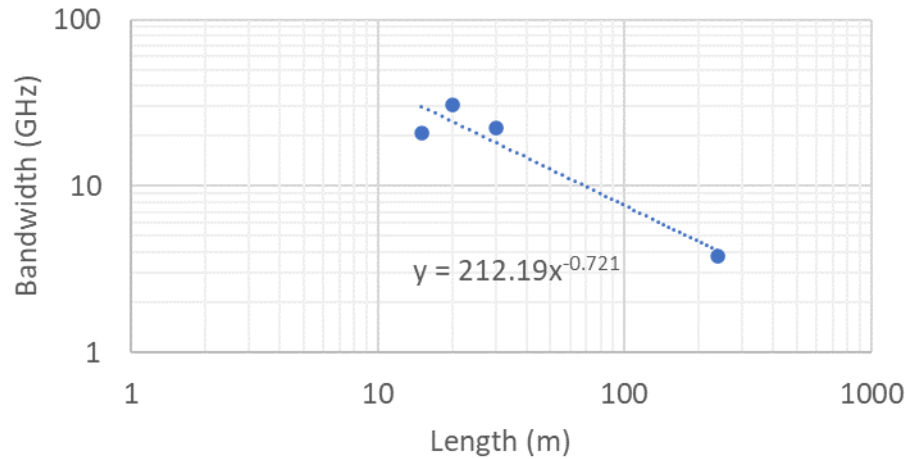
Sample C



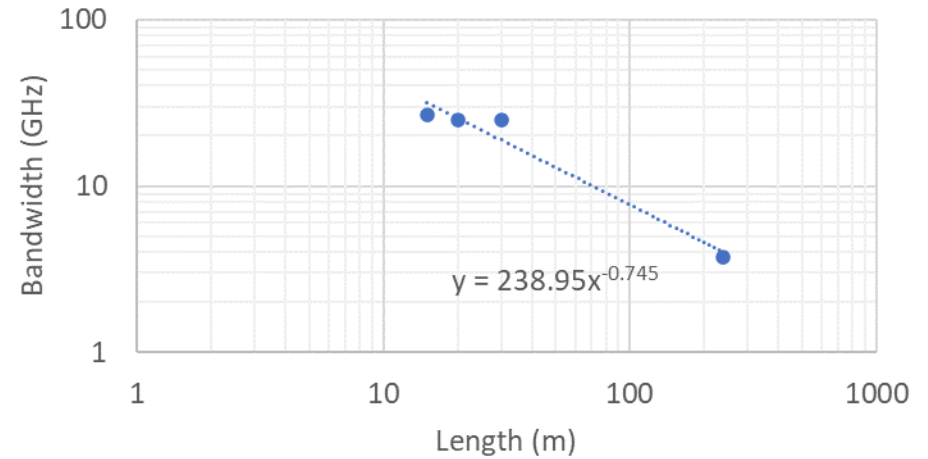
**Time domain:
OFL launch**

Example of bandwidth of GI-POF(A4i)

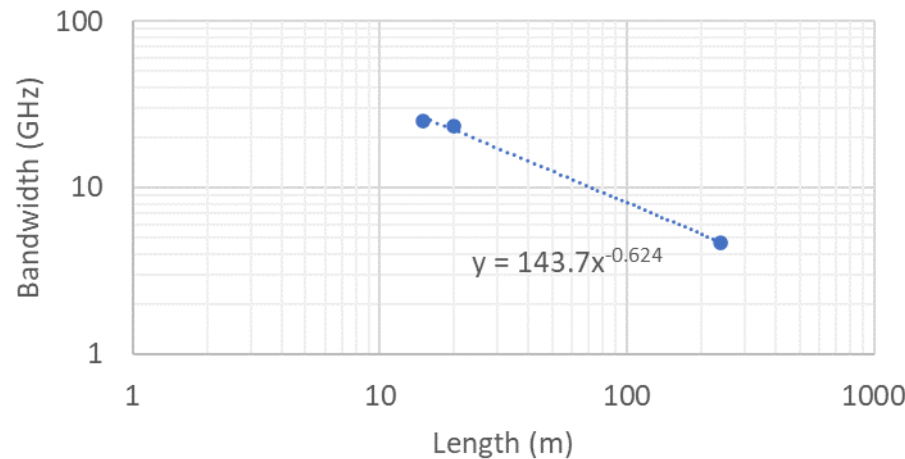
Sample D



Sample E



Sample F



Sample G

