

High Temperature Measurements of Transmitter Launched Optical Power for Gigabit Ethernet over Plastic Optical Fiber

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Agenda

- Objectives
- Measurement setup
- Measurement results

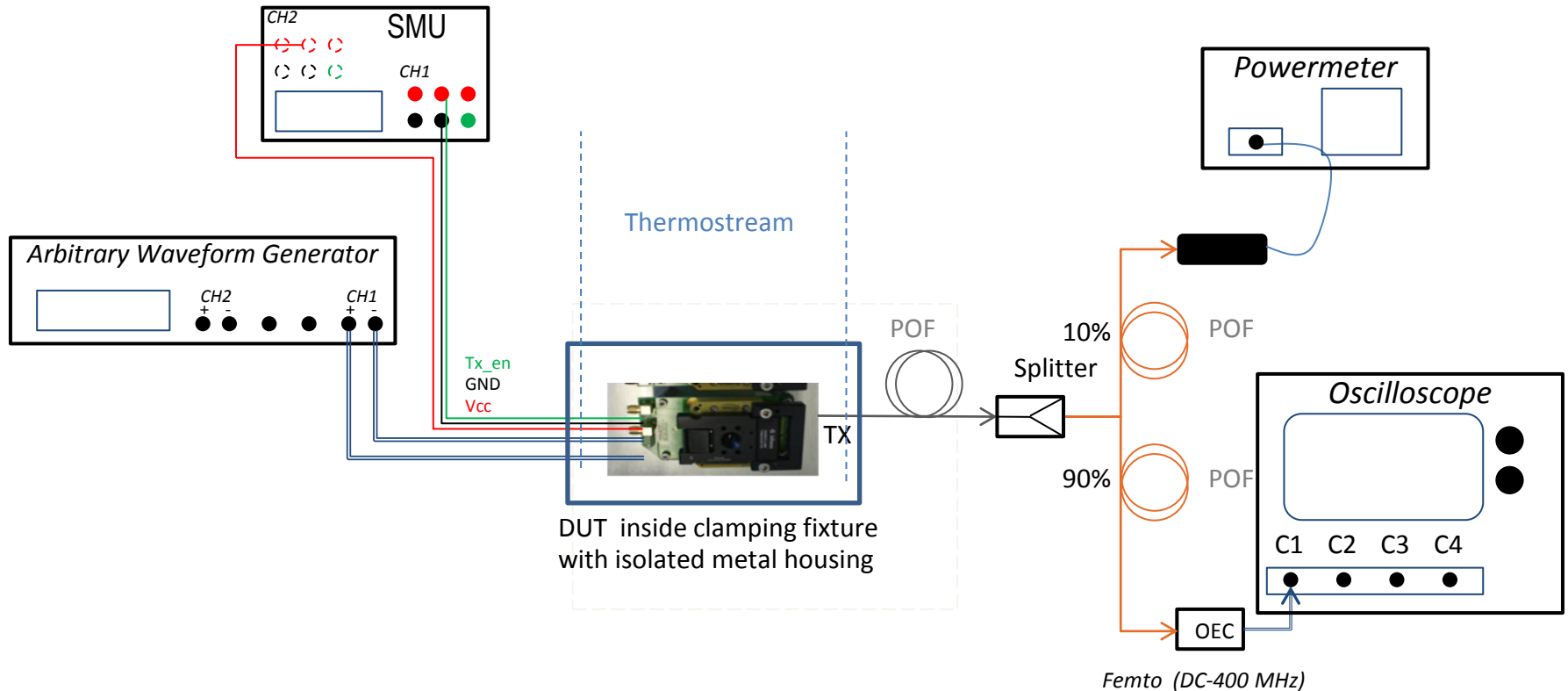
Disclaimer

- Technical characteristics provided in this presentation are limited with regards to sample size.
- Variations of e.g. manufacturing processes are not considered.

Objectives

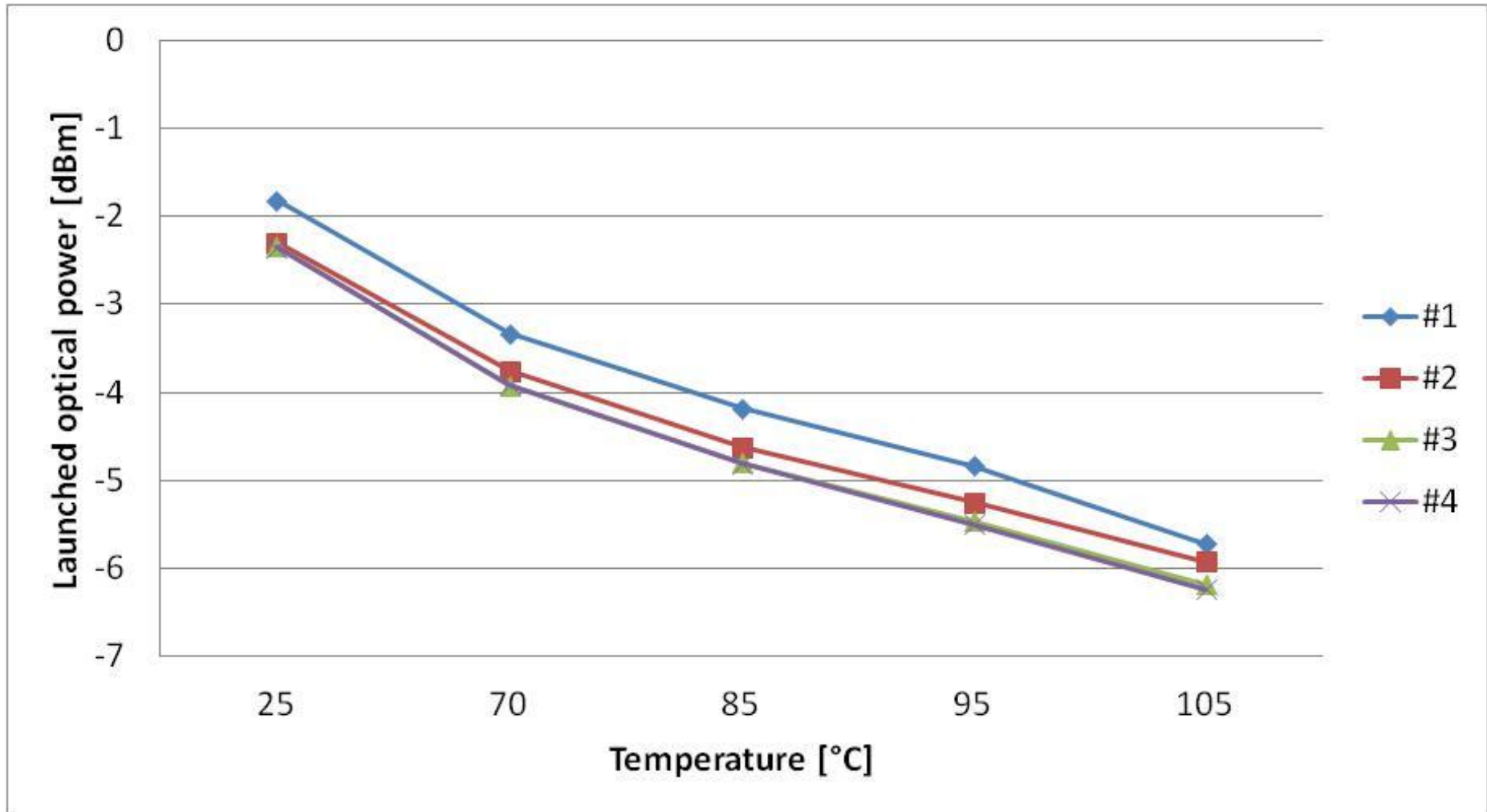
- To present laboratory measurements of the transmitter Launched Optical Power (LOP) across temperature of available products for technical feasibility assessment.
- Used components:
 - Avago Tx with linear driver IC and 650nm LED (same which is used for MOST150 automotive)

Measurement setup



- ❑ AWG for generating PAM16 signal
- ❑ Symbol rate = 312.5 MSps
- ❑ Light coupled from Tx into the POF with MOST ferrule
- ❑ 30 cm POF between DUT and Splitter
- ❑ Setup with splitter is calibrated with Golden Samples, LOP from Golden Samples were directly measured without splitter (LOP was measured after 1m of 1mm standard POF fiber NA 0.5 with a large photo detector)

Measurement Results



Graph above shows the average LOP of 4 samples across temperature. 16-PAM baseband modulation was used for the measurements.