

## **Characterization of tapered-erbium doped fiber in co-propagating amplifier**

### **ABSTRACT**

The characteristics of tapered-EDF is studied. The loss, transmission and ASE spectrum, gain and noise figure are measured in order to observe the behavior of tapered-EDF. The comb-like spectrum with equal distance of 1.6nm is observed both for the ASE spectrum as well as for the transmission spectrum. This validates that the coupling between fundamental mode and higher order modes occurred in the tapered section. The power intensity loss is 7 dB due to tapering process. Due to that fact, the gain and noise figure does not show significance improvement in the experiment.