

## **Raman fiber laser with highly non-linear fiber**

### **ABSTRACT**

This paper demonstrates the power performance of an asymmetrical distributed feedback Raman fiber laser (DF-RFL) employing 2 km of highly nonlinear fiber (HNLF). The forward-pumped architecture exhibited better threshold condition and higher output power alongside a broader spectral profile compared to a DF-RFL utilizing a standard transmission fiber. This experimental layout could offer better insight on flatter broadband gain compared to conventional DF-RFL.

**Keyword:** Distributed feedback Raman fiber laser; Highly nonlinear fiber (HNLF); Random laser; Rayleigh scattering; Stimulated Raman scattering (SRS)