Abstract

Optical amplifiers are an indispensable part of today's network and face increasingly stringent demands on their performance with increasing link lengths, growing transmission rates, wavelength division multiplexing and the continual improvisation of technology. Erbium-Ytterbium co-doped fiber amplifier (EYDFA) an improvement of Erbium doped fiber amplifier (EDFA), helps overcome the limitation of increase in the concentration of excited erbium ions by countering the pairs quenching phenomenon. This paper investigates the role of optical pumping in EYDFA and the strong dependence of gain on the pump power till a stage of saturation is reached.

References

- Rajneesh Kaler and R. S. Kaler, “Gain and Noise figure performance of erbium
doped fiber amplifiers (EDFAs) and Compact EDFAs. Elsevier, Optik - International Journal for Light and Electron Optics, Volume 122, Issue 5, March 2011, Pages 440-443
- Masaru Fukushima and Jutaro Miura, Recent Progress of Erbium-Doped Fiber Amplifiers and their Components; Furukawa Electric.

Index Terms

Computer Science          Applied Sciences

Keywords

EDFA  EYDFA  dual stage  distributed pumping  high gain  low noise figure.