

# High Speed Optical Fiber Communication ICs Based on InP HEMT

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## Abstract

High-speed integrated circuit technology is the key to realizing large-capacity optical fiber communication systems. This paper describes the present status of 0.1- $\mu\text{m}$ -gate InP HEMT ICs for the next-generation 40-Gbit/s/ch. systems. As an advanced IC technology, this paper also describes a 40-Gbit/s OEIC that is monolithically fabricated with a uni-traveling-carrier photodiode and the 0.1- $\mu\text{m}$  InP HEMTs.