

## **Hermite-Gaussian mode-selective multicore fiber for space division multiplexing**

### **Abstract**

A recent paradigm in optical communications is the utilization of eigenmodes as an additional attribute for increasing the data-carrying capacity of a communication channel. In space division multiplexing, few-mode fiber or multicore fiber may be used to transmit several data streams independently using eigenmodes. In this paper, we use Hermite-Gaussian modes for selective excitation of three independent channels in a multicore space division multiplexing system.

### **Keywords:**