

PHASE AND AMPLITUDE MODULATION FORMATS FOR HYBRID 40GB/S AND 10GB/S DWDM PHOTONIC LONG-HAUL TRANSMISSION

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ABSTRACT

Amplitude and phase shift keying modulation and pulse sequence formats are employed to demonstrate their effectiveness in optical fibre transmission systems at a bit rate of 40Gb/s over the dense wavelength multiplexed 10Gb/s channels. The impacts of optical filters are studied for 40Gb/s 320 km standard single mode optical fibre optically amplified and dispersion compensated transmission system employing RZ/NRZ/CS-RZ amplitude shift keying and differential phase shift keying modulation formats. For 0.5 nm passband multiplexers and demultiplexers for wavelength channels multiplexing and separation, the receiver sensitivities are insignificantly affected.