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Davies

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(54) **OPTICAL DUOBINARY SINGLE SIDEBAND MODULATOR**

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(51) **Int. Cl.**⁷ **G02B 26/00**

(52) **U.S. Cl.** **359/238; 398/81**

(58) **Field of Search** **359/238; 398/81, 398/183, 188; 385/1, 3**

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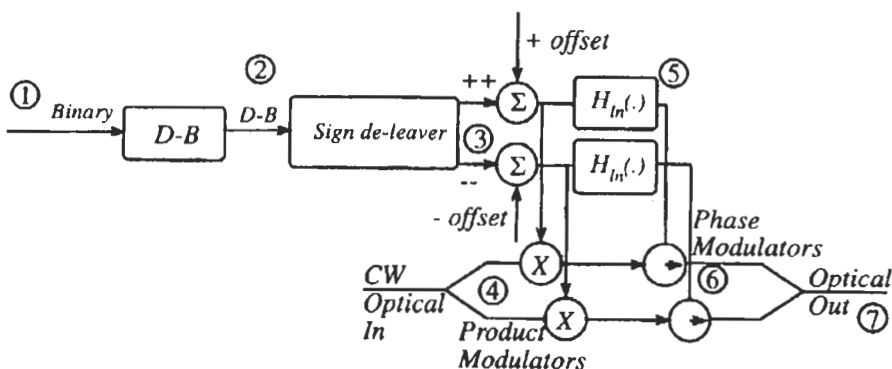
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(57) **ABSTRACT**

An apparatus for modulating information bearing symbols onto an optical carrier includes a polybinary coder that operates on a binary information signal to produce an envelope compatible polybinary signal; and an optical single sideband modulator that modulates an optical carrier with the envelope compatible polybinary signal to produce a single sideband optical signal. This provides an improvement over both polybinary signaling and optical single sideband. This action combines the chromatic dispersion advantages of SSB modulation with the DC level and bandwidth reduction of duo-binary coding.

7 Claims, 1 Drawing Sheet



Duo-binary (Polybinary) Envelope Compatible Single Sideband Modulator