

**OPTICAL TRANSCEIVER WITH IMPROVED RANGE
AND DATA COMMUNICATION RATE**

ABSTRACT OF THE DISCLOSURE

An IR transceiver (10) for use in low-power, low
5 cost environments such as portable computers and hand-held
calculators. The transceiver can transmit data at higher,
selectable baud rates and at greater distances than
previously possible. On the transmitting side the
transceiver elements include a serial interface device
10 (12), encoder circuitry (14) and an IR transmitter (16)
with LEDS (34) having fast turn-on and turn-off times. On
the receiving side are decoder circuitry (20) coupled to
the serial interface device (12) and an IR receiver (18)
designed specifically for a photo diode (D1). A baud rate
15 generator provided by the serial interface device (12)
sets the baud rate in the encoding and decoding circuitry
(14, 20). The receiver portion of the IR transceiver (10)
automatically sets itself to the baud rate of received
data. Because of the baud rate selectability, the IR
20 transceiver (10) is compatible with prior IR transceivers
that are limited to fixed baud rates.

(Fig.1)

This Sheet Has Been Replaced



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