

## **i7110**

### **General Description**

The i7110 is a high-speed LED driver designed for low-cost optical fiber based transmission systems. Data rates up to 300Mbps can be achieved depending on the LED used.

The differential PECL inputs can be shaped by applying resistors between pulse width adjustment pins and ground. This adjustment is continuous over a  $\pm 500$ ps range to compensate the LED unbalanced 'turn on' and 'turn off' time. A peaking and clamp circuit is implemented in i7110 to enhance speed performance and connecting external RC network performs this function.

The i7110 can switch a wide range of current 5mA to 120mA into typical LEDs. To minimize the effects of temperature on LED output power, the device's modulation current can be set via two external resistors to increase with a temperature coefficient from 800ppm/c to 10000ppm/c.

Complementary current outputs help to maintain a constant supply current, reducing EMI and supply noise generated by the transmitter module, and the current is disabled if pin Disa is Pulled high. The i7110 is packaged in SSOP16 .

### **Features**

- Data rates up to 300 Mbps, depending on LED.
- +5 V to +3.3 V operation.
- Programmable output current from 5mA to 120mA.
- Peaking circuit giving rise and fall time < 700ps.
- Clamping circuit enhances turn off time.
- Resistor programmable compensation for temperature dependence of LED output.
- PECL input with optional pulse width adjustment.
- Support most LED types.
- Support output current disable ability.
- Single Chip solution, available in SSOP16.