

# ML0131

FOR OPTICAL TRANSMITTER

## PRELIMINARY

Notice : This is not a final specification  
Some parametric limits are subject to change.

### DESCRIPTION

The laser driver IC were designed for use in 2.5Gb/s lightwave applications.

### FEATURES

- High speed operation  
tr/ta = 80ps (RL=25 )
- ECL/SCFL compatible interface
- Adjustable outout current  
I<sub>out</sub> = ~60mA
- Low Power Dissipation  
V<sub>ss</sub> = -5.2V, P<sub>D</sub> = 700mW

Photograph of Laser Driver IC

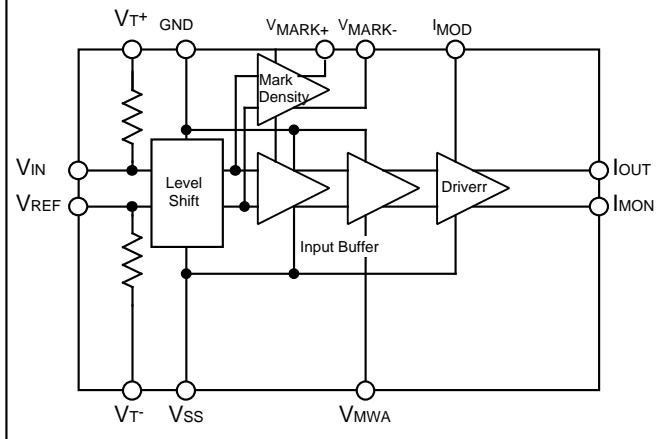


Package Size : 9.6mm x 7.6mm x 1.6mm

### APPLICATION

- 2.5Gb/s optical transmitter

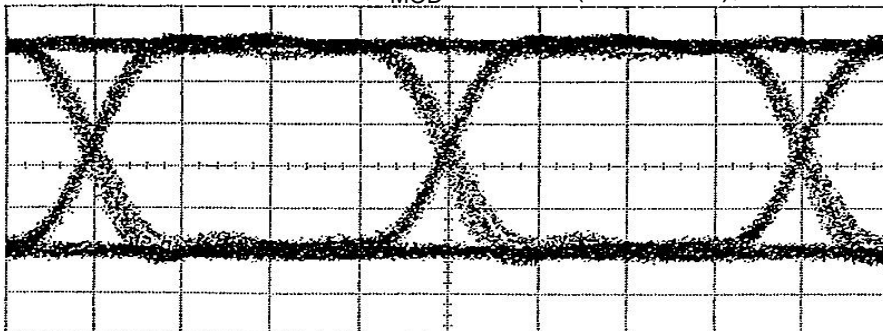
CIRCUIT DIAGRAM



### TYPICAL CHARACTERISTIC (Ta = 25°C)

Output waveform (@2.5Gb/s)

V<sub>ss</sub> = -5.2V, I<sub>MOD</sub> = 3.2mA (@2.5Gb/s), PN : 211-1



10 mA/div. 100 ps/div.

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### ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

Symbol	Parameter	Ratings	unit
V <sub>SS</sub>	Supply Voltage	-7.5	V
V <sub>IN</sub>	Input Voltage	V <sub>SS</sub> to 0	V
T <sub>c</sub>	Operating Temperature	-30 to +85	°C
T <sub>stg</sub>	Storage Temperature	-65 to +150	°C

### ELECTRICAL CHARACTERISTICS (Ta = 25°C)

Symbol	Parameter	Test Conditions	Limits			unit	
			Min	Typ	Max		
V <sub>SS</sub>	Supply voltage		-5.46	-5.2	-4.94	V	
I <sub>SS</sub>	Supply current	V <sub>SS</sub> = -5.2V	-	130	170	mA	
V <sub>REF</sub>	Input reference voltage	V <sub>SS</sub> = -5.2V	ECL	-	-1.3	-	V
			SCFL	-	-0.5	-	V
V <sub>IN</sub>	Input signal voltage	V <sub>SS</sub> = -5.2V	ECL	-	0.8	-	V
			SCFL	-	1.0	-	V
I <sub>OUT</sub>	Output modulation current	V <sub>SS</sub> = -5.2V	40	-	60	mA	
I <sub>MOD</sub>	Adjust modulation current	V <sub>SS</sub> = -5.2V	-	-	3.5	mA	
t <sub>r</sub>	Rise time of modulation voltage	V <sub>SS</sub> = -5.2V	-	80	-	ps	
t <sub>f</sub>	Fall time of modulation voltage	V <sub>SS</sub> = -5.2V	-	80	-	ps	

### BLOCK DIAGRAM OF TEST SYSTEM

