βL 105
βL 106
βL 107
βL 108

BAR - GRAPH DISPLAYS

The ICs are driving circuits for a 5 or 10 LED bar display having an integrated current generator. whose current is adjustable between 0 and 20 mA. Light emitting diodes are connected in series in order to reduce power dissipation and to have the same current flow to the supply, under any operating conditions. For red LEDs the supply voltage is 12 V, whereas in case of green or yellow LEDs the voltage is 16 V.

The input thresholds are :

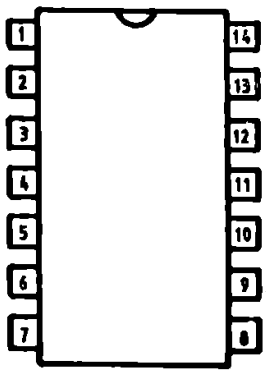
βL 105 0.1V; 0.3V; 0.5V; 0.7V; 0.9V
βL 106 0.2V; 0.4V; 0.6V; 0.8V; 1 V
βL 107 0.1V/-20dB; 0.31V/-10dB; 0.71V/-3dB; 1V/0dB; 1.41V/+3dB
βL 108 0.18V/-15dB; 0.5V/-6dB; 0.84V/-1.5dB; 1.19V/+1.5dB; 2V/+6dB

An externally compensated operational amplifier is included in the IC, whitch provides facilities for scaling, peak detection and/or chaining. The internal reference may be used for biasing.

By choosing a parallel connection of the inputs of a βL 105 and a βL 106, it is possible to get a 10 LED bar display with thresholds : 0.1 V ; 0.2 V ; 0.3 V ... 1 V.

By choosing a parallel connection of the inputs of a βL 107 and a βL 108, it is possible to get a 10 LED bar display with thresholds : -20 dB ; -15 dB ; -10 dB ... +6 dB.

1. Non-inverting Op Amp s input
2. Frequency compensation
3. Op Amp output
4. GND
5. LED 5
6. LED 4
7. LED 3
8. LED 2
9. LED 1
10. Bar display input
11. V+
12. LED current control
13. Internal reference
14. Inverting Op Amp input



PACKAGE TO-116 / TOP VIEW

βL 105 ; βL 106 ; βL 107 ; βL 108 (cont.)

Features

- Operating temperature	-25 ...	+70	oC
- Supply voltage range	12 ...	18	V
- Power dissipation	max.	680	mW
- Programmable LED current	0 ...	20	mA
- Linear dependence between LED current and command current	I LED = 20 mA - 40	I COM	
- Biasing current	max.	1	uA
- Operational amplifier open loop gain	min.	10000	-

- Different colour LED's can be connected arbitrary

Typical application