

<b>SANYO</b>	No.730F	<b>LB1450</b>
	<b>LED Tuning Indicator</b>	

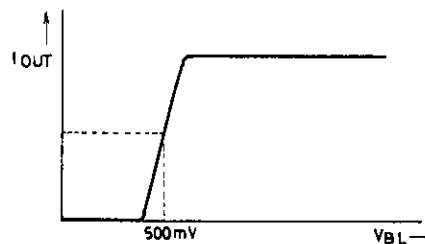
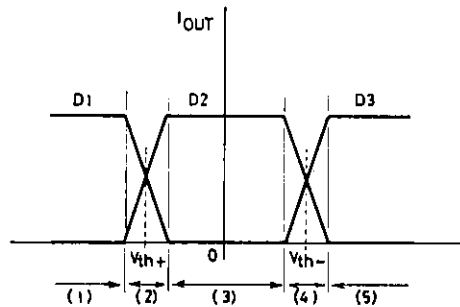
**Use**

Indicates tuning condition of FM receiver by means of 5 mode - 3 LED's

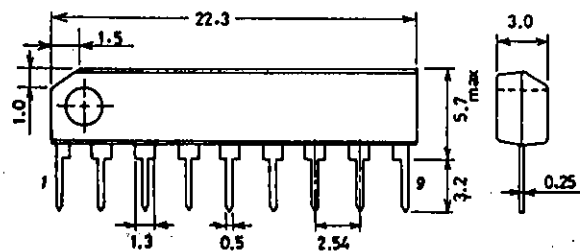
**Features**

1. 3 LED's display 5 mode tuning condition.  
Since the LED's are driven under constant current supply, the LED current varies as shown below when two LED's are lighted on simultaneously. This causes their brightness to vary, and enables the dynamic indication.
2. Desired tuning width can be set as the threshold width of window comparator is variable externally.
3. No switching radiation can be made as LED current changes over linearly.
4. Blanking at station interval and AM reception is easy to set by blanking pin.
5. Direct interface can be made to IF IC using quadrature detector (ex. LA1231, LA1140, etc.)
6. Single-ended 9 pin packaged with small mounting area.

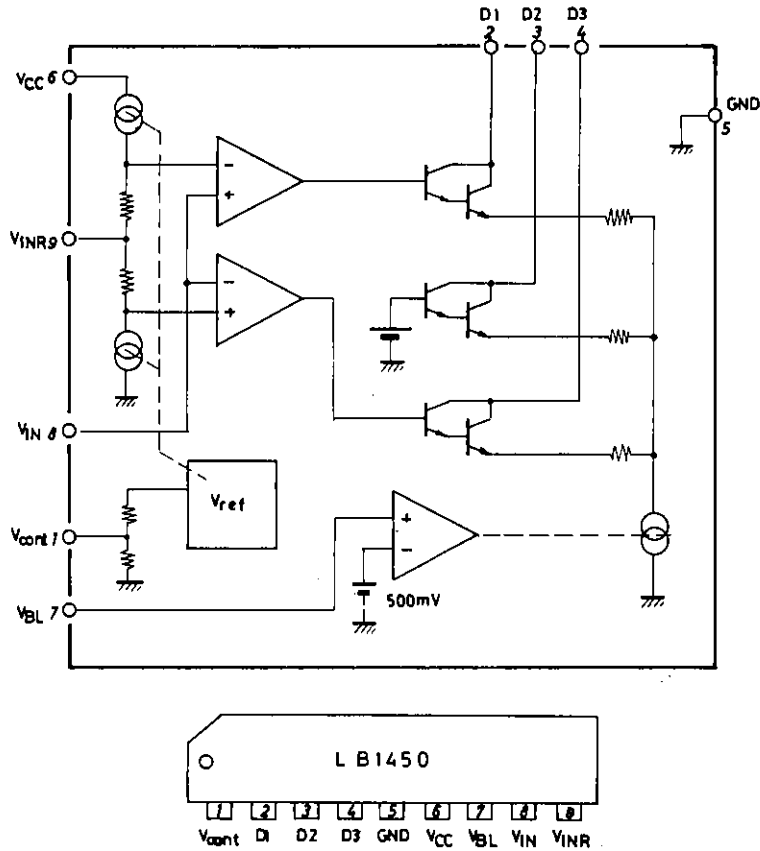
mode	LED light- ing mode	tuning condition
(1)	▶ ○ ◁	(-) detuned
(2)	▒ ● ◁	semituned
(3)	▷ ● ◁	tuned
(4)	▷ ● ▒	semituned
(5)	▷ ○ ◀	(+) detuned
(6)	▷ ○ ◁	lighted off



**Package Dimensions 3017B**  
unit: mm



Equivalent Circuit Block Diagram and Pin Assignment



Absolute Maximum Ratings at  $T_a=25^\circ\text{C}$

Max. Supply Voltage	$V_{CCmax}$		18	V
Max. Input Voltage	$V_{INR}$	$V_{CC} > V_{INR}$	-0.3 to +16	V
	$V_{IN}$	$V_{CC} > V_{IN}$	-0.3 to +16	V
	$V_{cont}$		-0.3 to +4	V
	$V_{BL}$	$V_{CC} > V_{BL}$	-0.3 to +16	V
Max. Output Voltage	$V_{out}$	Pin2, 3, 4	16	V
Allowable Power Dissipation	$P_dmax$	$T_a=60^\circ\text{C}$	500	mW
Operating Temperature	$T_{opr}$		-20 to +70	$^\circ\text{C}$

Allowable Operating Conditions at  $T_a=25^\circ\text{C}$

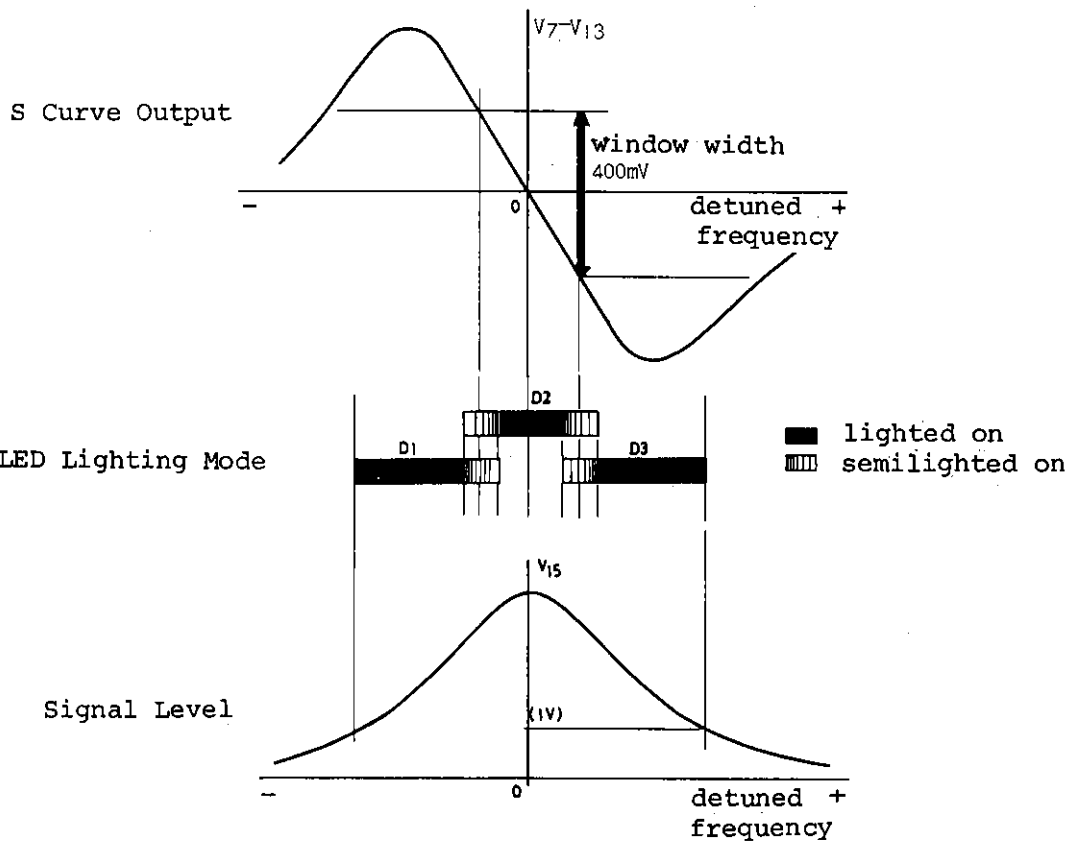
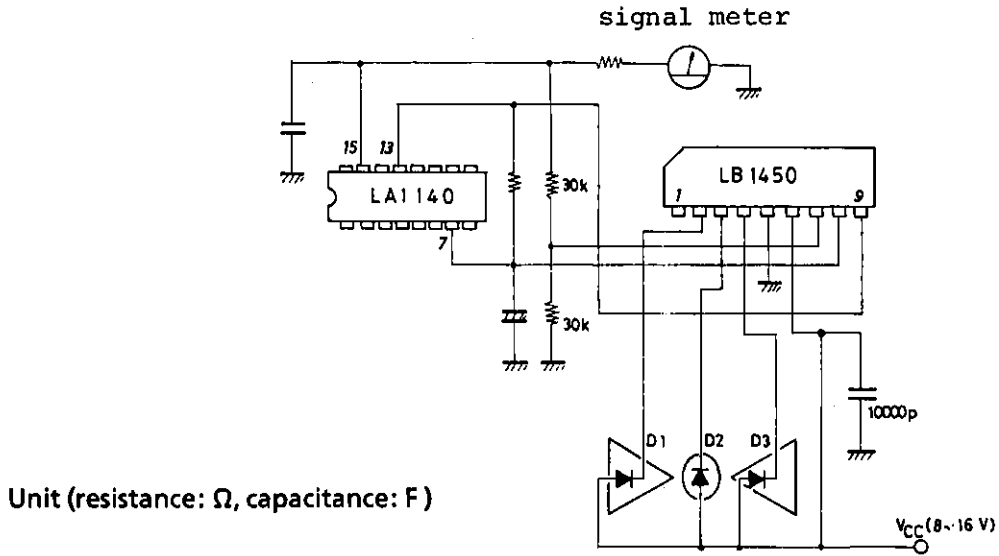
Supply Voltage	$V_{CC}$	8 to 16	V
Tuning Indication Voltage Width	$V_T$	200	mV

Electrical Characteristics at  $T_a=25^\circ\text{C}$ ,  $V_{CC}=12\text{V}$

			min	typ	max	unit
Input Bias Current	$I_{IN}$		-2		0	$\mu\text{A}$
	$I_{INR}$		-20		+20	$\mu\text{A}$
	$I_{INBL}$		-2		0	$\mu\text{A}$
Threshold Voltage	$V_{th+}$	$V_{IN}-V_{INR}$	150	200	250	mV
	$V_{th-}$	$V_{IN}-V_{INR}$	-250	-200	-150	mV
	$V_w$		30	50	100	mV
	Simultaneous Lighting Width Output Current	$I_{OUT1}, I_{OUT2}, I_{OUT3}$		11	18	25
Blanking Threshold Voltage	$V_{BL(L)}$		360	430	500	mV
	$V_{BL(H)}$		410	500	550	mV
Output Leak Current	$I_{OFF}$			10	$\mu\text{A}$	
Current Dissipation	$I_{CC}$	LED current excluded	3.0	3.8	5.6	mA

LB1450

Application : The case of window width 400mV typ. ( $\pm 200\text{mV}$ ) and interstation blanking.



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