

<b>SANYO</b>	No.1507C	LB1408
	Level Meter	

**Features**

- (1) An input amplifier is built in.
- (2) Minimum number of external parts required.
- (3) Low current dissipation because of series connection of LED's.

**Absolute Maximum Ratings at Ta=25°C**

			unit
Maximum Supply Voltage	$V_{CCmax}$ (Pin 3)	-0.3 to +18.0	V
Maximum Input Voltage	$V_{INmax}$ (Pin 2)	-0.3 to $V_{CC}$	V
D Pin Output Current	$I_{Dmax}$ Output transistor ON	0 to 30	mA
D Pin Output Voltage	$V_{Dmax}$	-0.3 to $V_{CC}$	V
Reference Flow-Out Current	$I_{refmax}$ (Pin 4)	-3.0 to 0	mA
Allowable Power Dissipation	$P_{dmax}$	1.2	W
Operating Temperature	$T_{opr}$	-30 to +80	°C
Storage Temperature	$T_{stg}$	-40 to +125	°C

**Allowable Operating Conditions at Ta=25°C**

			unit
Supply Voltage	$V_{CC}$	6.7 to 16.0	V

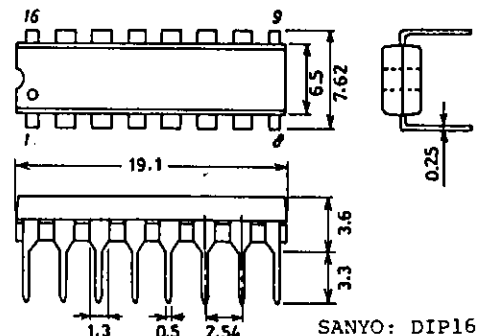
**Electrical Characteristics at Ta=25°C,  $V_{CC}=12V$**

			min	typ	max	unit
Current Dissipation $I_{CC}$	Quiescent, pin 3 3.3kohms across $I_{LED1}$ and $V_{ref}$			4	8	mA
Input Bias Current $I_{IN}$	Pin 2		-10		0	µA
Reference Voltage $V_{ref}$	Pin 4		4.40	4.85	5.30	V
D Pin Current 1 $I_{D2,4,7}$	3.3kohms across $I_{LED1}$ and $V_{ref}$ $I_{LED2}=GND$ , pins 7, 11, 14		12	16	19	mA
Output Saturation Voltage	$V_{satD}$ " , pins 6, 10, 12, 13			1.0	1.3	V
D Pin Current 2 $I_{D2,4,7}$	" , $V_{CC}=6.7V$ , $V_{D1,3,6}=0.9V$ , pins 7, 11, 14		12		19	mA
OUT Pin Impedance $R_{OUT}$	Pin 1		8	12	16	kohm

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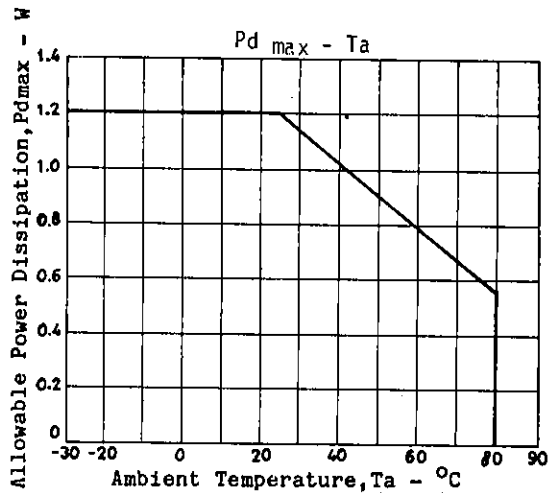
**Package Dimensions 3064**

(unit: mm)

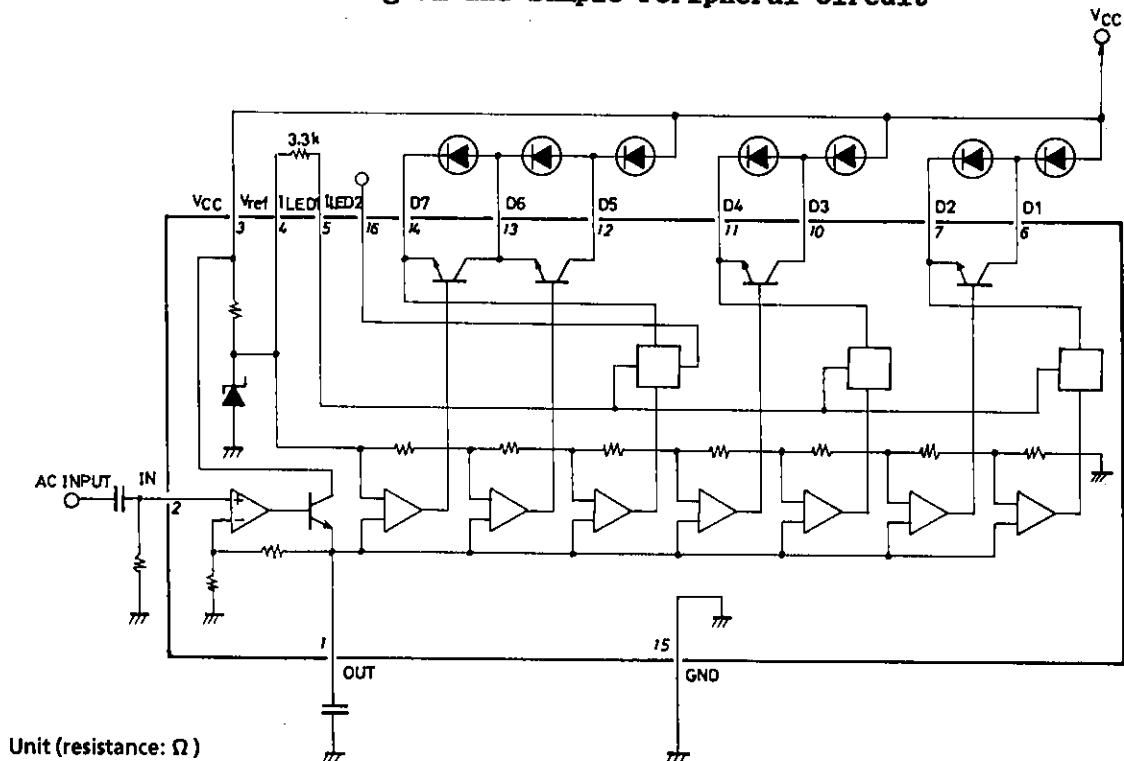


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			min	typ	max	unit	
Input Sensitivity	$V_{IN5}$	Input voltage at which LED of D5 is lighted	119	132	145	mV	
Comparator Level D1	$V_{T1}$	Input voltage at which LED of D5 is lighted is taken as 0db.	-26	-20	-14	dB	
	D2	$V_{T2}$	"	-12	-10	-8	dB
	D3	$V_{T3}$	"	-7	-6	-5	dB
	D4	$V_{T4}$	"	-3.5	-3.0	-2.5	dB
	D5	$V_{T5}$	"	0	0	0	dB
	D6	$V_{T6}$	"	2.5	3.0	3.5	dB
	D7	$V_{T7}$	"	5	6	7	dB
Output Leakage Current	$I_{DL}$	$V_{IN}=0V$ , pins 6,10,12	0		10	$\mu A$	
D Pin Current 3	$I_{D7}$	3.3kohms across $I_{LED1}$ and $V_{ref}$	4.5	6.0	8.0	mA	
D Pin Current 4	$I_{D7}$	$I_{LED2}=\text{Open}$ , pin 14 $V_{CC}=6.7V$ , $V_{D6}=0.7V$ , Pin 14	4.5		8.0	mA	



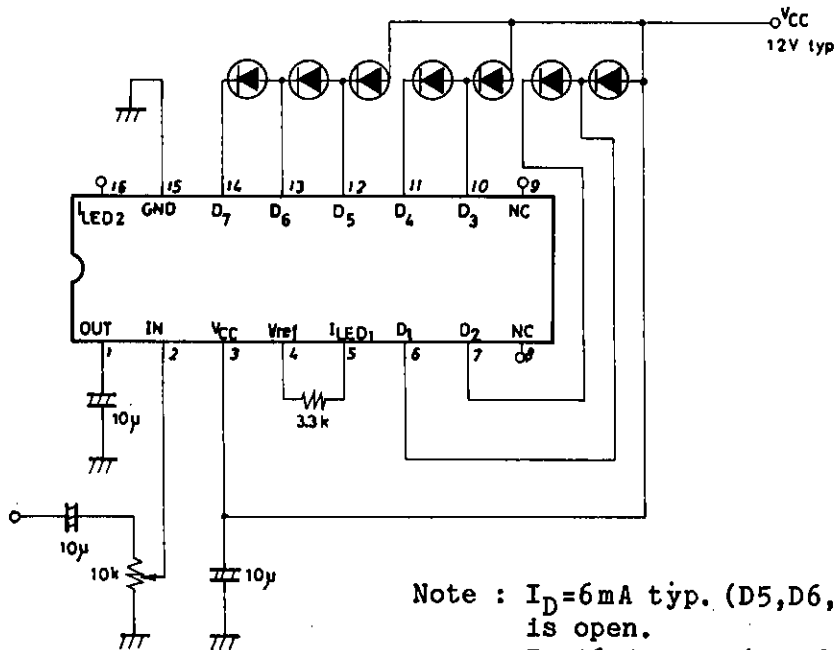
Equivalent Circuit Block Diagram and Sample Peripheral Circuit



Unit (resistance:  $\Omega$ )

Sample Application Circuit

Unit (resistance: Ω, capacitance: F)



Note :  $I_D = 6\text{mA typ. (D5,D6,D7)}$  when  $I_{LED2}$ (pin 16) is open.  
 $I_D = 16\text{mA typ. (D5,D6,D7)}$  when  $I_{LED2}$ (pin 16) is grounded.

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