

# TIL305 5 × 7 ALPHANUMERIC DISPLAY

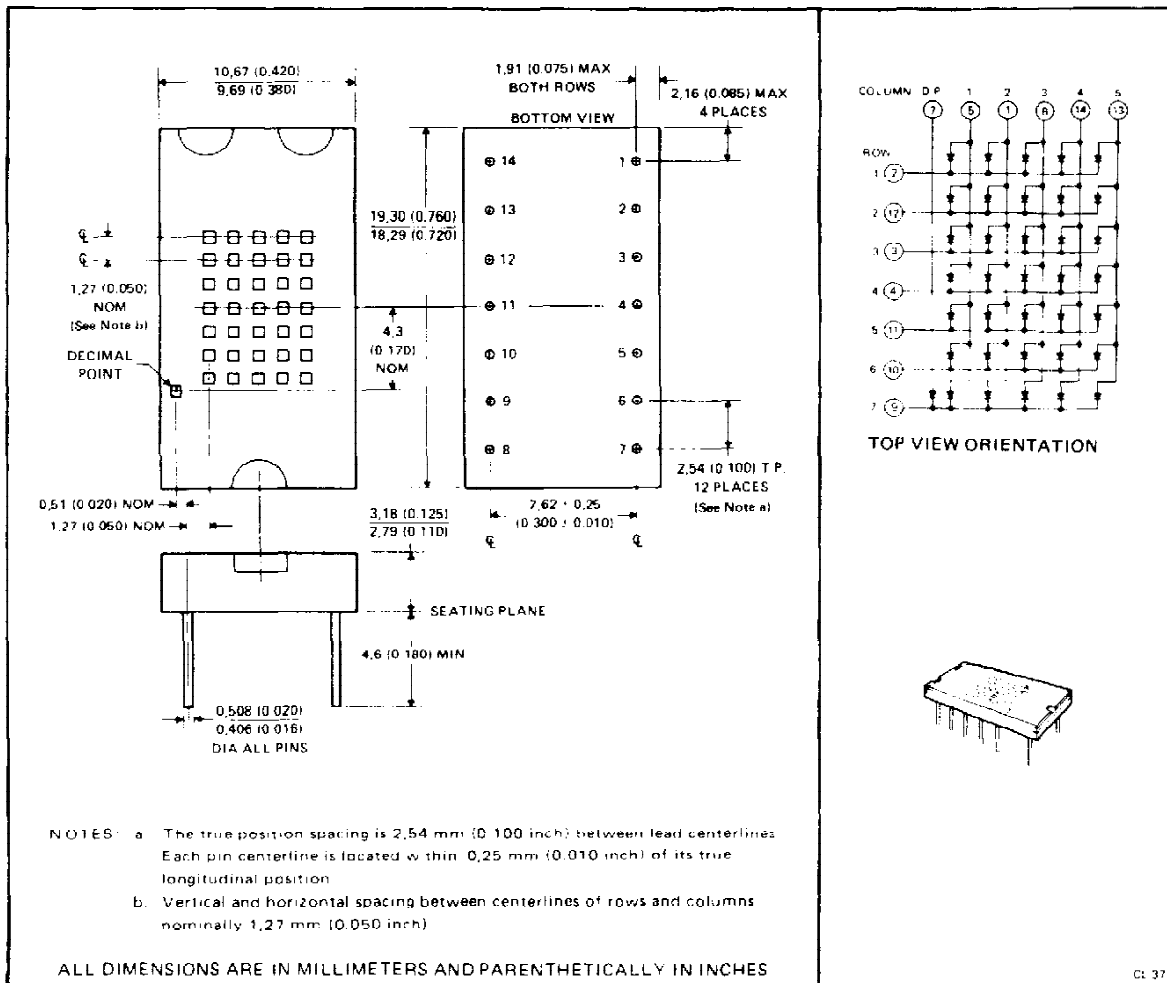
SODS002 D1033, MAY 1971 - REVISED MARCH 1983

## SOLID-STATE DISPLAY WITH RED TRANSPARENT PLASTIC ENCAPSULATION

- 7,62-mm (0.300-inch) Character Height
- High Luminous Intensity
- Low Power Requirements
- Wide Viewing Angle
- 5 X 7 Array with X-Y Select and Decimal
- Compatible with USASCII and EBCDIC Codes

### mechanical data

This assembly consists of a display chip mounted on a printed circuit board with a red molded plastic body. Multiple displays may be mounted on 11,43-mm (0.450-inch) centers.



PRODUCTION DATA documents contain information current as of publication date. Products conform to specifications per the terms of Texas Instruments standard warranty. Production processing does not necessarily include testing of all parameters.

  
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# TIL305

## 5 × 7 ALPHANUMERIC DISPLAY

### absolute maximum ratings over operating free-air temperature range (unless otherwise noted)

Reverse Voltage at 25°C Free-Air Temperature	3 V
Peak Forward Current, Each Diode	100 mA
Average Forward Current (see Note 1):	
Each Diode	10 mA
Total	200 mA
Operating Free-Air Temperature Range	0° to 70°C
Storage Temperature Range	-25°C to 85°C

### operating characteristics of each diode at 25°C free-air temperature (unless otherwise noted)

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
$I_V$ Luminous Intensity (see Note 2)	$I_F = 10 \text{ mA}$	40	110		$\mu\text{cd}$
$\lambda_p$ Wavelength at Peak Emission			660		nm
$\Delta$ Spectral Bandwidth			20		nm
$V_F$ Static Forward Voltage		1.5	1.65	2	V
$\alpha_{VF}$ Average Temperature Coefficient of Static Forward Voltage	$I_F = 10 \text{ mA}$ , $T_A = 0^\circ \text{C to } 70^\circ \text{C}$		-1.4		mV/°C
$I_R$ Static Reverse Current	$V_R = 3 \text{ V}$		10		$\mu\text{A}$
C Anode-to-Cathode Capacitance	$V_R = 0$ , $f = 1 \text{ MHz}$		80		pF

- NOTES: 1. This average value applies for any 1 ms period.  
 2. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (International Commission on Illumination) eye-response curve.

### TYPICAL CHARACTERISTICS

RELATIVE LUMINOUS INTENSITY  
VS  
FREE-AIR TEMPERATURE

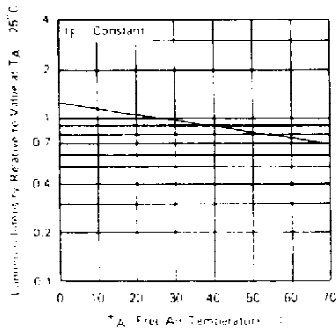


FIGURE 1

RELATIVE LUMINOUS INTENSITY  
VS  
FORWARD CURRENT

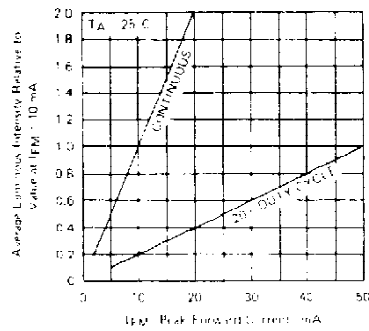


FIGURE 2

FORWARD CONDUCTION  
CHARACTERISTICS

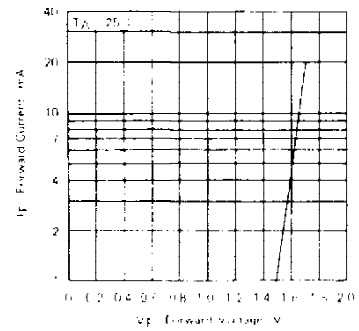


FIGURE 3

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