

# TYPES TIL364 THRU TIL375 4-DIGIT CLOCK DISPLAYS

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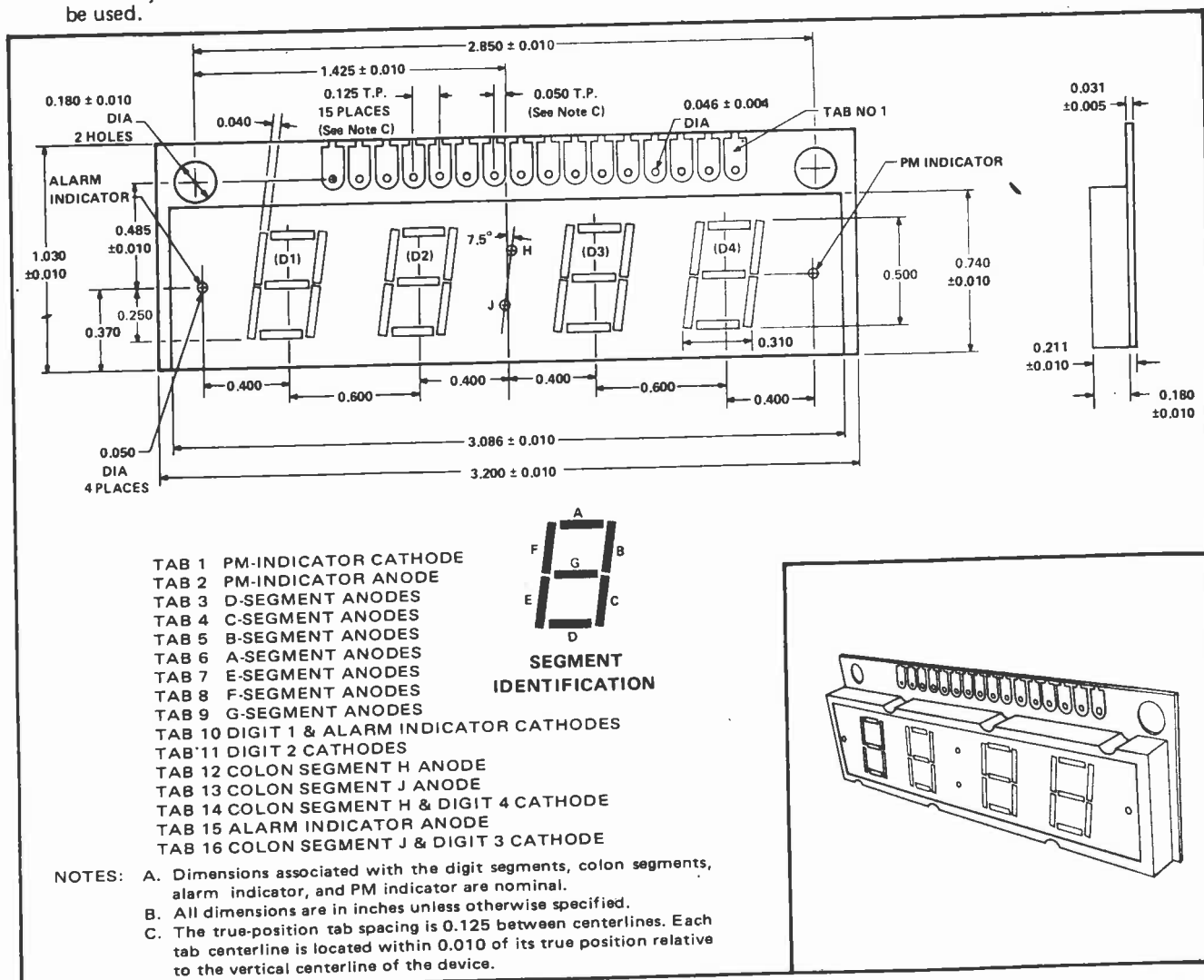
## 4-DIGIT SOLID-STATE VISIBLE CLOCK DISPLAYS WITH RED, GREEN OR AMBER TRANSPARENT PLASTIC ENCAPSULATION

- 0.500-Inch-High Characters
- Continuous Uniform Segments
- Wide Viewing Angle
- High Contrast
- Categorized for Uniformity of Luminous Intensity among Units within Each Category
- Low Power Requirements
- 24-Hour Displays Can Be Used in Timers (All 4 Digits Are Complete)

	12-HOUR DISPLAYS		24-HOUR DISPLAYS	
RED	TIL364	TIL367	TIL370	TIL373
GREEN	TIL365	TIL368	TIL371	TIL374
AMBER	TIL366	TIL369	TIL372	TIL375
SEGMENTS IN DIGIT 1	B & C	B & C	A-G	A-G
ALARM INDICATOR	yes	no	yes	no
PM INDICATOR	yes	yes	no	no

### mechanical data

The displays are formed by placing a one-piece reflector assembly within a transparent plastic case which is attached to a printed-circuit board that contains the light-emitting-diode chips. To optimize device performance, materials are used that are limited to certain solvents for cleaning operations. It is recommended that only freon TF, isopropanol, or water be used.



### TENTATIVE DATA SHEET

This document provides tentative information on a new product. Texas Instruments reserves the right to change specifications for this product in any manner without notice.

TEXAS INSTRUMENTS

# TYPES TIL364 THRU TIL375

## 4-DIGIT CLOCK DISPLAYS

### description

This multidigit display is intended for use under pulsed conditions by enabling each of the character cathodes sequentially and enabling the desired segments or indicator anodes in phase with the character-enabling pulse. The pulse rate is kept high enough so that the light from each character appears to the eye to be constant.

### absolute maximum ratings

Reverse Voltage at 25°C Free-Air Temperature, Each Segment or Indicator	3 V
Peak Forward Current at (or below) 25°C Free-Air Temperature (See Note 1), Each Segment or Indicator	200 mA
Continuous Forward Current at (or below) 25°C Free-Air Temperature (See Note 2), Each Segment or Indicator	25 mA
Operating Free-Air Temperature Range	-25°C to 85°C
Storage Temperature Range	-25°C to 85°C
Terminal Temperature for 5 Seconds	230°C

- NOTES: 1. This value applied for PRR ≥ 60 Hz, duty cycle ≤ 6.25%.  
2. Derate linearly to 10 mA at 85°C free-air temperature at the rate of 0.25 mA/°C.

### operating characteristics of each segment or indicator at 25°C free-air temperature

PARAMETER		TEST CONDITIONS	TIL364, TIL367 TIL370, TIL373			TIL365, TIL368 TIL371, TIL374			TIL366, TIL369 TIL372, TIL375			UNIT	
			MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX		
Luminous Intensity $I_v$ (See Note 3)	Each Digit Segment	$I_F = 20 \text{ mA}$	240	600		150	320		150	340	$\mu\text{cd}$		
	Each Colon Segment and Indicator		95	240		60	130		60	135			
Segment-to-Segment Luminous Intensity Ratio			1.5:1			1.5:1			1.5:1				
$\lambda_p$	Wavelength at Peak Emission		640	655	680	565			590		nm		
$\Delta\lambda$	Spectral Bandwidth		20			40			40			nm	
$V_F$	Static Forward Voltage		1.7			2			2.5			3.5	

NOTE 3: Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (International Commission on Illumination) eye-response curve.