

# 67025 4N41-SEVEN SEGMENT HERMETICALLY SEALED DISPLAY

# Mii

OPTOELECTRONIC PRODUCTS  
DIVISION

## Features:

- Hermetically Sealed
- Left Hand Decimal
- TTL Compatible
- High Luminous Intensity
- Large Character Height

## Applications:

- High reliability systems
- Instrumentation panels
- Communication equipment
- Medical equipment

## DESCRIPTION

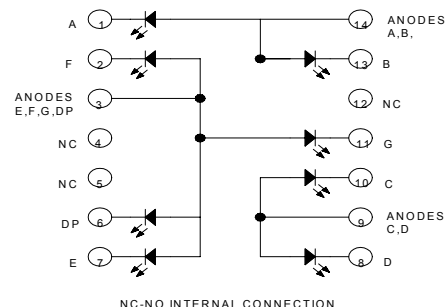
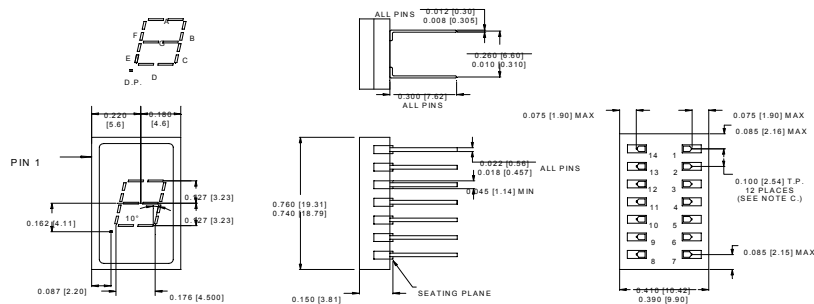
The **67025** (4N41) is a hermetically sealed seven segment display. The high luminous intensity and large character height make the 67025 ideal for most applications. This high reliability display is available in standard and screened versions.

## ABSOLUTE MAXIMUM RATINGS

Storage Temperature.....	-65°C to +125°C
Operating Free-Air Temperature Range.....	-55°C to +100°C
Lead Solder Temperature (1/16" [1.6mm] below seating plane for 10s).....	260°C
Reverse Voltage at 25°C Free-Air Temperature	
Each Segment .....	6V
Decimal Point.....	3V
Peak Forward Current at (or below) 70°C Free-Air Temperature (derate linearly to 100°C at the rate of 6.7mA/°C)	
Each Segment or Decimal Point .....	200mA
Average Forward Current at (or below) 70°C Free-Air Temperature (derate linearly to 100°C at the rate of 1mA/°C for each segment or 8mA/°C for total device)	
Each Segment or Decimal Point .....	.30mA

## Package Dimensions

## Schematic Diagram



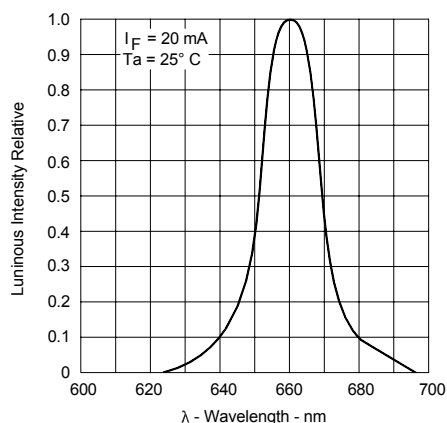
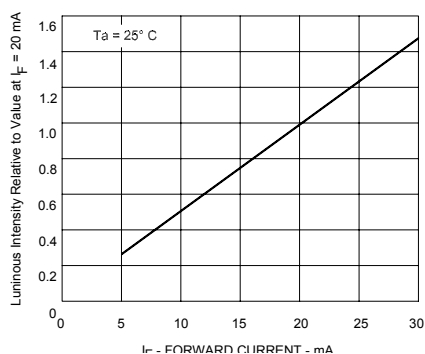
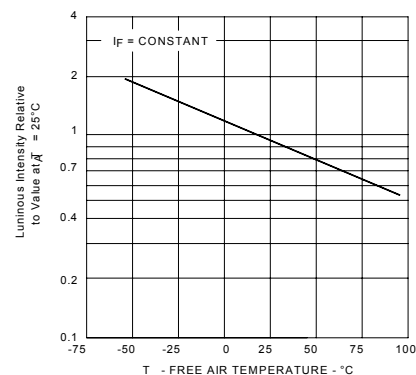
- NOTES:**
- a. All linear dimensions are in millimeters and parenthetically in inches.
  - b. Centerlines of character segments and decimal points are shown as dashed lines. Associated dimensions are nominal.
  - c. The true-position pin spacing is 2.54mm (0.10") between centerlines. Each centerline is located within 0.26mm (0.010") of its true longitudinal position relative to pins 4 and 11.

**ELECTRICAL CHARACTERISTICS** $T_A = 25^\circ\text{C}$  unless otherwise specified.

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Luminous Intensity 1	$I_V$	200	700		$\mu\text{cd}$	$I_F = 20\text{mA}$
Wavelength at Peak Emission	$\lambda_P$	640	660	680	nm	$I_F = 20\text{mA}$
Spectral Bandwidth			20		nm	$I_F = 20\text{mA}$
Static Forward Voltage	$V_F$	3	3.4	3.8	V	$I_F = 20\text{mA}$
Average Temperature Coefficient of Static Voltage	$\frac{\Delta V_F}{\Delta T_A}$		-2.7		mV/ $^\circ\text{C}$	$I_F = 20\text{mA}$ , $t_A = 0^\circ\text{C}$ to $100^\circ\text{C}$
Static Reverse Current	$I_R$			100	$\mu\text{A}$	$V_R = 6\text{V}$
Anode-to-Cathode Capacitance	C		85		pF	$V_R = 0\text{V}$ , $f = 1\text{MHz}$

**NOTES:**

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

**RELATIVE SPECTRAL CHARACTERISTICS****FIGURE 1****RELATIVE LUMINOUS INTENSITY  
vs  
FORWARD CURRENT****FIGURE 3****RELATIVE LUMINOUS INTENSITY  
vs  
FREE-AIR TEMPERATURE****FIGURE 2****RECOMMENDED OPERATING CONDITIONS:**

PARAMETER	SYMBOL	MIN	MAX	UNITS
Forward Current	$I_F$	20	30	mA
Operating Temperature	$T_A$	-55	100	$^\circ\text{C}$

**SELECTION GUIDE**

PART NUMBER	PART DESCRIPTION
67025-001	4N41 Mil-Temp only (-55° to +100°C)
67025-101	4N41 Mil-Temp (-55° to +100°C) with 100% screening.
67025-003	4N41 Commercial (0° to 70°C)
67025-004	4N41 Industrial-Temp only (-40° to +85°C)