HEWLETT® PACKARD COMPONENTS

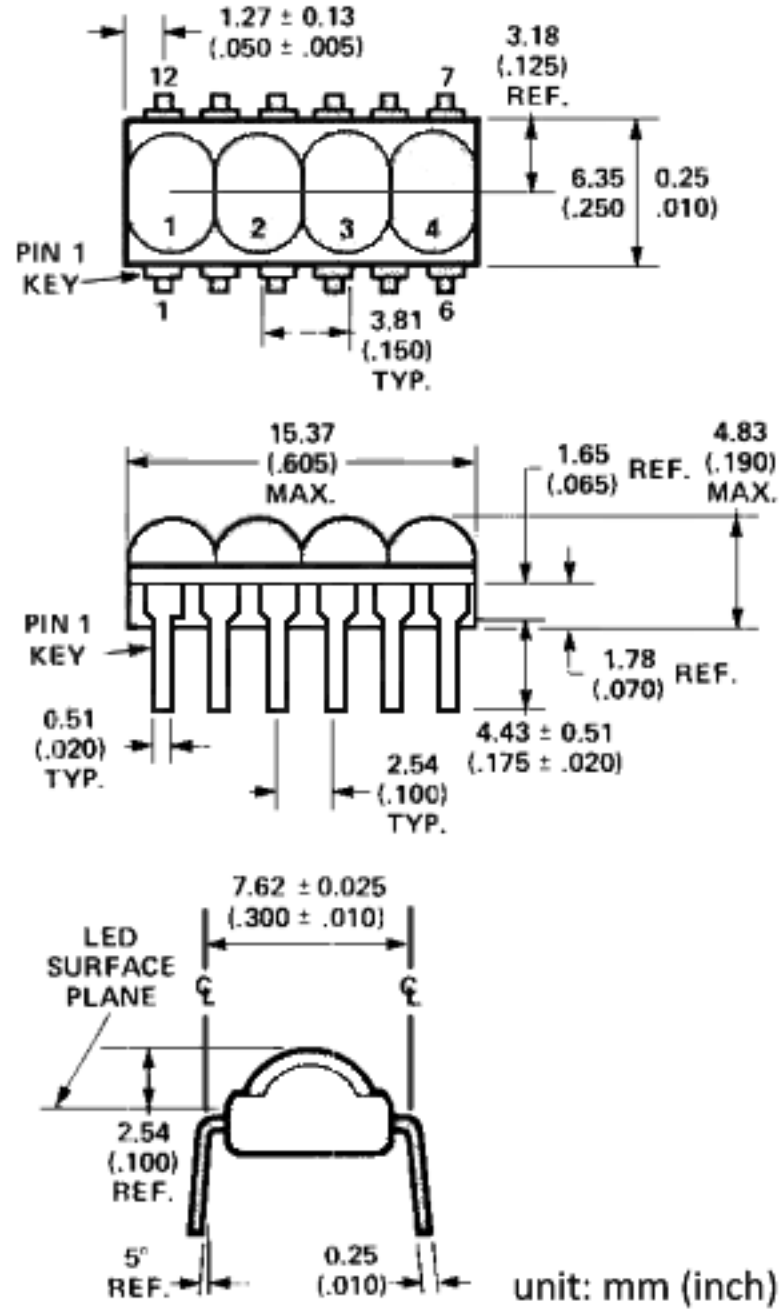
QDSP-6064

4-DIGITS MICRO NUMERIC INDICATOR (7 Segment Monolithic)

Features

- **ULTRA LOW POWER**
  Excellent Readability at Only 500µA Average per Segment
- **CONSTRUCTED FOR STROBED OPERATION**
  Minimizes Lead Connections
- **STANDARD DIP PACKAGE**
  End Stackable
  Integral Red Contrast Filter
  Rugged Construction
- **CATEGORIZED FOR LUMINCUS INTENSITY**
  Assures Uniformity of Light Output from Unit to Unit within a Single Category
- **IC COMPATIBLE**

Package Description



unit: mm (inch)

Description

The HP QDSP-6064 are 2.79mm (.1 1”), micro seven segment GaAsP numeric indicators packaged in 4 digits end-stackable clusters. An integral magnification technique increases the luminous intensity, thereby making ultra-low power consumption possible. Options include either the standard lower right hand decimal point or a centered decimal point for increased legibility in multi-cluster applications.
Applications include hand-held calculators, portable instruments, digital thermometers, or any other product requiring low power, minimum space, and long lifetime indicators.

Mechanical

The QDSP-6064 package is a standard 12 Pin DIP consisting of a plastic encapsulated lead frame with integral molded lenses. It is designed for plugging into DIP sockets or soldering into PC boards. The lead frame construction allows use of standard DIP insertion tools and techniques. Alignment problems are simplified due to the clustering of digits in a single package. The shoulders of the lead frame pins are intentionally raised above the bottom of the package to allow tilt mounting of up to 20° from the PC board.

Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Units
Peak Forward Current per Segment (Duration < 1 msec)	I_{PEAK}		110	mA
Average Current per Segment	I_{AVG}		5	mA
Power Dissipation per Digit [1]	P_D		80	mW
Operating Temperature, Ambient	T_A	-40	75	℃
Storage Temperature	T_S	-40	100	℃
Reverse Voltage	V_R		5	V

NOTES: 1. At 25°C; derate 1mW/°C above 25°C ambient. 2. See Mechanical Section for recommended flux removal solvents

Electrical /Optical Characteristics at TA=25°C

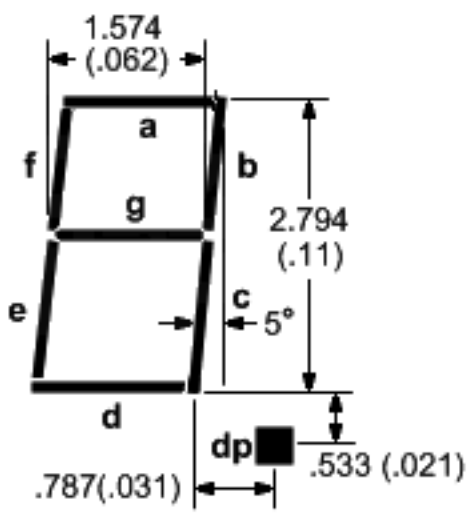
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Units
Luminous Intensity/Segment or dp (Time Averaged) [3]	I_V	I_{AVG} =1mA (I_{PK}=10mA Duty cycle=10%)	5	20		µcd
Peak Wavelength	λ_{PEAK}			655		nm
Forward Voltage/Segment or dp	V_R	I_R =10mA		1.6	2.0	V
Reverse Current/Segment or dp	I_R	V_R =5V			100	µA
Rise and Fall Time [4]	t_r , t_f			10		ns

NOTES: 3. The digits are categorized for luminous intensity. Intensity categories are designated by a letter located on the hack side of the package. 4. Time for a 10%-90% change of light intensity for step change in current.

Device Pin Description

PIN NO.	FUNCTION
1	CATHODE 1
2	ANODE e
3	ANODE c
4	CATHODE 3
5	ANODE dp
6	CATHODE 4
7	ANODE g
8	ANODE d
9	ANODE f
10	CATHODE 2
11	ANODE b
12	ANODE a

Font Description



unit: mm (inch)