

40 ns Propagation Delay, CMOS Optocoupler

Technical Data

**HCPL-7720 HCPL-7721
HCPL-0720 HCPL-0721**

Features

- +5 V CMOS Compatibility
- 20 ns max. Prop. Delay Skew
- High Speed: 25 MBd
- 40 ns max. Prop. Delay
- 10 kV/μs Minimum Common Mode Rejection
- -40 to 85°C Temp. Range

Safety and Regulatory Approvals

UL Recognized

2500 V rms for 1 min. per

UL 1577 for HCPL-072X,

3750 V rms for 1 min. per

UL 1577 for HCPL-772X

CSA Component Acceptance

Notice #5

VDE 0884

- $V_{IORM} = 630$ Vpeak for
HCPL-772X Option 060

- $V_{IORM} = 560$ Vpeak for
HCPL-072X Option 060

Applications

- **Digital Fieldbus Isolation:**
CC-Link, DeviceNet,
Profibus, SDS
- **AC Plasma Display Panel**
Level Shifting

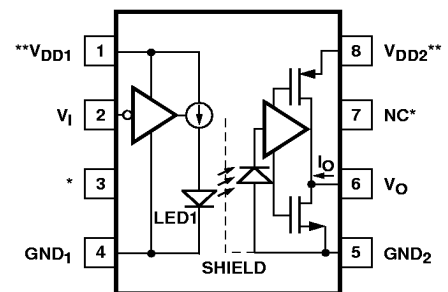
- **Multiplexed Data Transmission**
- **Computer Peripheral Interface**
- **Microprocessor System Interface**

Description

Available in either an 8-pin DIP or SO-8 package style respectively, the HCPL-772X or HCPL-072X optocouplers utilize the latest CMOS IC technology to achieve outstanding performance with very low power consumption. The HCPL-772X/072X require only two bypass capacitors for complete CMOS compatibility.

Basic building blocks of the HCPL-772X/072X are a CMOS LED driver IC, a high speed LED and a CMOS detector IC. A CMOS logic input signal controls the LED driver IC which supplies current to the LED. The detector IC incorporates an integrated

Functional Diagram



TRUTH TABLE
(POSITIVE LOGIC)

V _I , INPUT	LED1	V _O , OUTPUT
H	OFF	H
L	ON	L

photodiode, a high-speed transimpedance amplifier, and a voltage comparator with an output driver.

*Pin 3 is the anode of the internal LED and must be left unconnected for guaranteed data sheet performance. Pin 7 is not connected internally.

**A 0.1 μF bypass capacitor must be connected between pins 1 and 4, and 5 and 8.

CAUTION: It is advised that normal static precautions be taken in handling and assembly of this component to prevent damage and/or degradation which may be induced by ESD.

Selection Guide

8-Pin DIP (300 Mil)	Small Outline SO-8	Data Rate	PWD
HCPL-7721	HCPL-0721	25 MB	6 ns
HCPL-7720	HCPL-0720	25 MB	8 ns

Ordering Information

Specify Part Number followed by Option Number (if desired)

Example

HCPL-7720#XXX

060 = VDE0884 Option.

300 = Gull Wing Surface Mount Option (HCPL-7720 only).

500 = Tape and Reel Packaging Option.

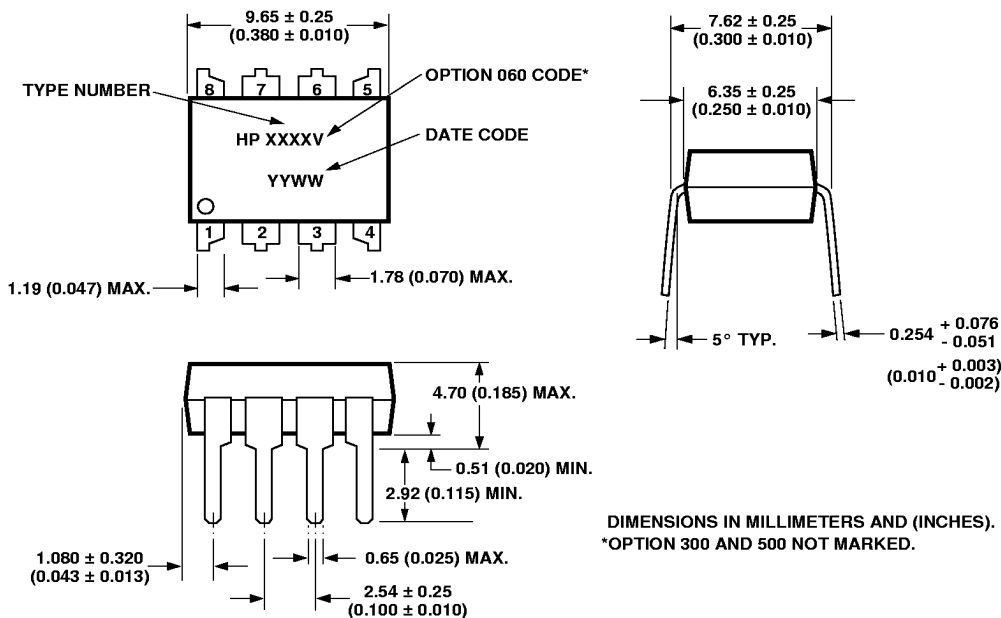
No Option and Option 300 contain 50 units (HCPL-772X), 100 units (HCPL-072X) per tube.

Option 500 contain 1000 units (HCPL-772X), 1500 units (HCPL-072X) per reel.

Option data sheets available. Contact Hewlett-Packard sales representative or authorized distributor.

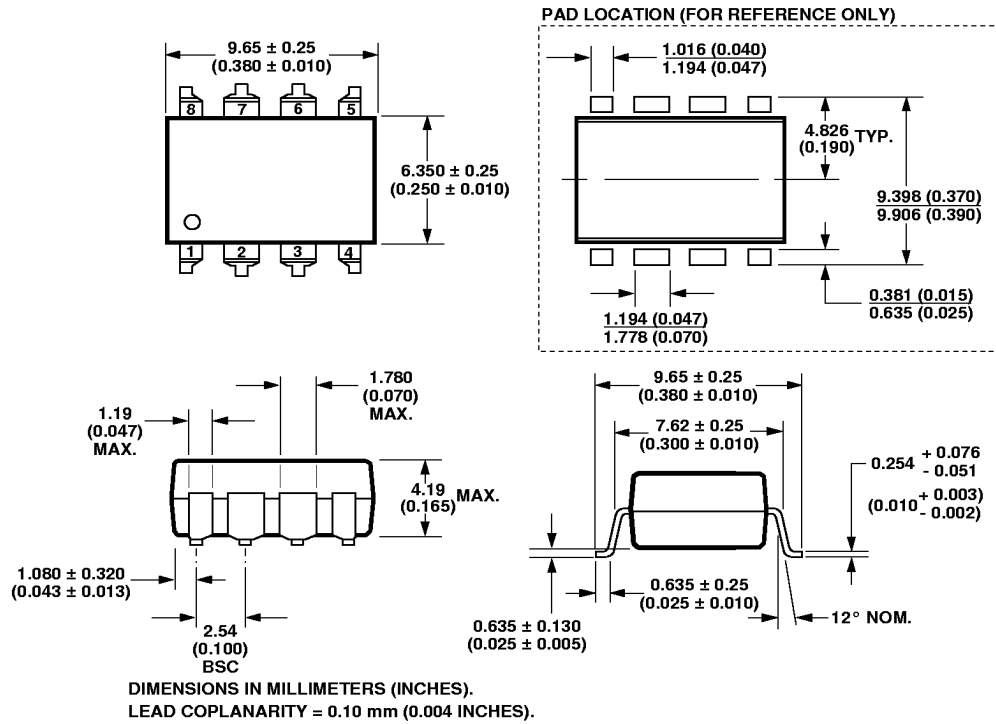
Package Outline Drawing

HCPL-772X 8-Pin DIP Package



Package Outline Drawing

HCPL-772X Package with Gull Wing Surface Mount Option 300



Package Outline Drawing

HCPL-072X Outline Drawing (Small Outline SO-8 Package)

