

# ICL7106, ICL7107 ICL7106S, ICL7107S

3<sup>1</sup>/<sub>2</sub> Digit,  
LCD/LED Display, A/D Converters

Complete Data Sheet available via web, Harris' home page: <http://www.semi.harris.com> or via Harris AnswerFAX, see Section 17

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## Features

- Guaranteed Zero Reading for 0V Input on All Scales
- True Polarity at Zero for Precise Null Detection
- 1pA Typical Input Current
- True Differential Input and Reference, Direct Display Drive
  - LCD ICL7106, LED ICL7107
- Low Noise - Less Than 15 $\mu$ V<sub>p.p</sub>
- On Chip Clock and Reference
- Low Power Dissipation - Typically Less Than 10mW
- No Additional Active Circuits Required
- Enhanced Display Stability (ICL7106S, ICL7107S)

## Ordering Information

PART NO.	TEMP. RANGE (°C)	PACKAGE	PKG. NO.
ICL7106CPL	0 to 70	40 Ld PDIP	E40.6
ICL7106RCPL	0 to 70	40 Ld PDIP (Note)	E40.6
ICL7106CM44	0 to 70	44 Ld MQFP	Q44.10x10
ICL7106SCPL	0 to 70	40 Ld PDIP	E40.6
ICL7107SCPL	0 to 70	40 Ld PDIP	E40.6
ICL7107CPL	0 to 70	40 Ld PDIP	E40.6
ICL7107RCPL	0 to 70	40 Ld PDIP (Note)	E40.6
ICL7107CM44	0 to 70	44 Ld MQFP	Q44.10x10

NOTE: "R" indicates device with reversed leads for mounting to PC board underside. "S" indicates enhanced stability.

## Description

The Harris ICL7106 and ICL7107 are high performance, low power, 3<sup>1</sup>/<sub>2</sub> digit A/D converters. Included are seven segment decoders, display drivers, a reference, and a clock. The ICL7106 is designed to interface with a liquid crystal display (LCD) and includes a multiplexed backplane drive; the ICL7107 will directly drive an instrument size light emitting diode (LED) display.

The ICL7106 and ICL7107 bring together a combination of high accuracy, versatility, and true economy. It features auto-zero to less than 10 $\mu$ V, zero drift of less than 1 $\mu$ V/°C, input bias current of 10pA (Max), and rollover error of less than one count. True differential inputs and reference are useful in all systems, but give the designer an uncommon advantage when measuring load cells, strain gauges and other bridge type transducers. Finally, the true economy of single power supply operation (ICL7106), enables a high performance panel meter to be built with the addition of only 10 passive components and a display.

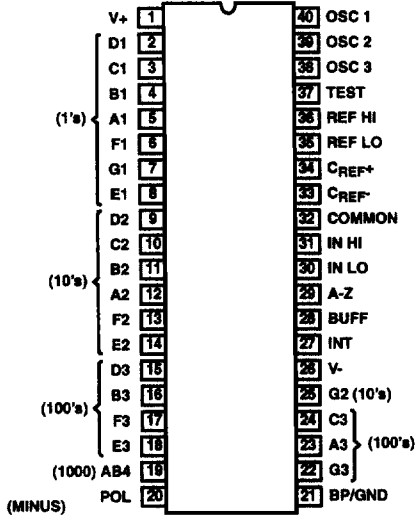
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A/D CONVERTERS  
DISPLAY

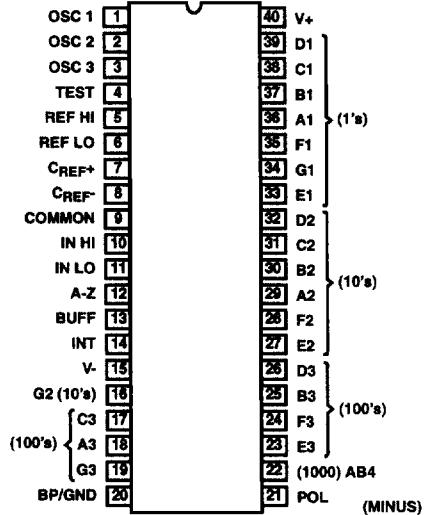
# ICL7106, ICL7107, ICL7106S, ICL7107S

## Pinouts

ICL7106, ICL7107 (PDIP)  
TOP VIEW



ICL7106R, ICL7107R (PDIP)  
TOP VIEW



ICL7106, ICL7107 (MQFP)  
TOP VIEW

