

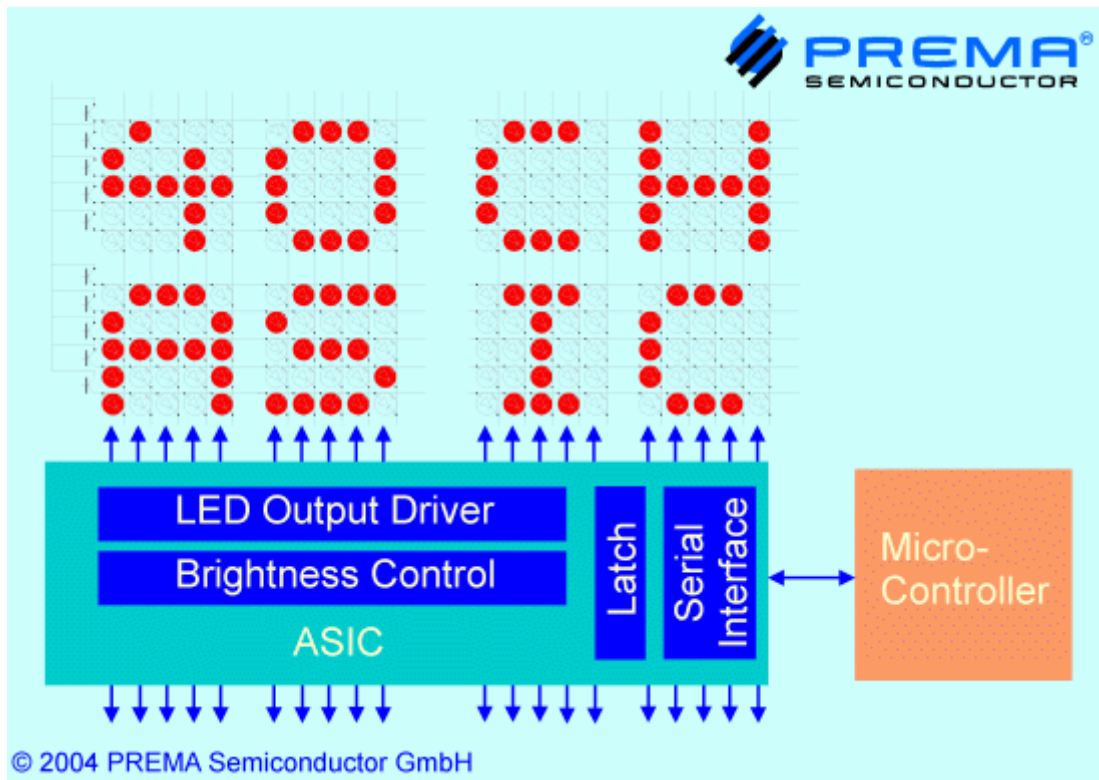
# PR4004

## 40-Channel LED Display Driver



The application specific 40-channel LED display driver PR4004 has been developed by PREMA Semiconductor for the use in household appliances.

Each of the 40 output stages can sink a current of up to 25 mA. The status of the current steered outputs is controlled by a micro controller via a serial interface and can be stored by a 40-bit latch. The integrated power-on-reset provides a reset signal to the chip, if the supply voltage drops below a certain value. A 'blank' input can be used to switch off all output stages simultaneously. The high output voltage range of up to 15 V allows the serial connection of multiple LEDs per channel in order to achieve a higher light intensity.



The ASIC can be used as a LED driver for dot matrix displays as well as for LED segments. The custom application consists of 16 5x5 dot matrix modules, arranged in two lines. Two ASICs are used to control the modules, one drives the 40 columns of the matrix, the other delivers the base current for the PNP transistors, that multiplex the 10 rows. Both ASICs and the transistors can be mounted on the backside of the LED display in a space saving way. Originally the ASIC has been developed for household appliances, but it can also be used for automotive applications as well as for information display systems.

Many customers decide to develop an ASIC instead of using a standard LED driver because of several reasons: In addition to the technical advantages, which a custom-specific IC has over a standard solution, an ASIC also guarantees a long time availability.

The ASIC can be used very flexible for different types of display matrixes allowing a high degree of freedom for the product design. An additional advantage is the protection against product piracy.

For more information about ASICs please visit our web site [www.prema.com](http://www.prema.com) .

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