

Kernel driver isl29003

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Supported chips:
* Intersil ISL29003
Prefix: 'isl29003'
Addresses scanned: none
Datasheet:
<http://www.intersil.com/data/fn/fn7464.pdf>

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Description

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The ISL29003 is an integrated light sensor with a 16-bit integrating type ADC, I2C user programmable lux range select for optimized counts/lux, and I2C multi-function control and monitoring capabilities. The internal ADC provides 16-bit resolution while rejecting 50Hz and 60Hz flicker caused by artificial light sources.

The driver allows to set the lux range, the bit resolution, the operational mode (see below) and the power state of device and can read the current lux value, of course.

Detection

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The ISL29003 does not have an ID register which could be used to identify it, so the detection routine will just try to read from the configured I2C address and consider the device to be present as soon as it ACKs the transfer.

Sysfs entries

range:

- 0: 0 lux to 1000 lux (default)
- 1: 0 lux to 4000 lux
- 2: 0 lux to 16,000 lux
- 3: 0 lux to 64,000 lux

resolution:

- 0: 2¹⁶ cycles (default)
- 1: 2¹² cycles
- 2: 2⁸ cycles
- 3: 2⁴ cycles

mode:

- 0: diode's current (unsigned 16bit) (default)
- 1: diode's current (unsigned 16bit)
- 2: difference between diodes (l1 - l2, signed 15bit)

power_state:

isl29003..txt

0: device is disabled (default)

1: device is enabled

lux (read only):

returns the value from the last sensor reading