

6.4 Interrupt Operation	.31
6.5 Timing of Channel Measurements	.31
7. Parameter Table	33
7.1 Global Area of the Parameter Table	.35
7.2 Channel Specific Setup Areas of the Parameter Table.	.36
7.2.1 ADCCONFIGx	.38
7.2.2 ADCSENSx	.39
7.2.3 ADCPOSTx	.40
7.2.4 MEASCONFIGx	.41
7.3 Photodiode Selection	.42
8. Electrical Specifications	43
9. Pin Descriptions	53
9.1 DFN Pin Description	.53
9.2 Module Pin Description	.54
10. Package Outline	55
10.1 10-Pin 2x2 mm DFN	.55
10.2 10-Pin LGA Module	.56
11. Land Patterns.	58
11.1 2x2 mm DFN Land Pattern	.58
11.2 10-Pin LGA Module	.59
12. Revision History.	60

1. Feature List

- Proximity detector
 - From under 1 cm to 50 cm without additional lensing.
 - From under 1 cm to 200 cm with additional lensing (e.g., 5 mm hemispherical lens).
 - Up to three independent LED drivers.
 - 30 current settings from 5.6 mA to 360 mA for each LED driver.
 - Operates in direct sunlight with optional on-die 940 nm passband filter.
 - On die 940 bandpass filter that rejects unwanted visible light and IR from daylight and other sources (Si115x- AB09/ AB9X).
- Ambient light sensor
 - <100 mlx resolution possible, allowing operation under dark glass.
 - Up to 128 klx dynamic range possible across two ADC range settings.
- Industry's lowest power consumption
 - 1.62 to 3.6 V supply voltage
 - 9 μ A average current (LED pulsed 24.4 μ s every 800 ms at 180 mA plus 3 μ A Si115x supply)
 - <500 nA standby current
 - 24.4 μ s LED "on" time keeps total power consumption duty cycle low without compromising performance or noise community
 - Internal and external wake support
 - Built-in voltage supply monitor and power-on reset controller
- Trimmable internal oscillator with typical 1% accuracy
- I²C Serial communications
 - Up to 400 k data rate
 - Slave mode hardware address decoding
- Two package options:
 - 10-lead 2 x 2 x 0.65 mm DFN
 - 10-lead 2.9 x 4.9 x 1.2 mm LGA module with integrated 940 nm LED
- Temperature Range: -40 to +85 °C