Matchbox Demo User Manual
Intelligent Proximity Sensing

Rolf Weber | August 2013

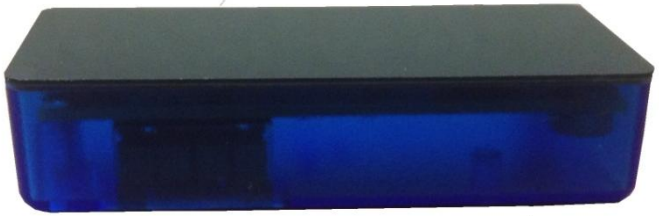
OSRAM
Opto Semiconductors

Matchbox Demo Manual

	Page
1. Demo Kit Contents	03
2. Getting Started	04
3. Modes	05
4. Software Installation	06
5. Graphical User Interface	12
6. PCB	14

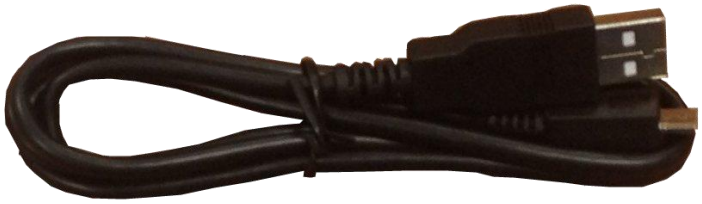
1. Demo Kit Contents

Sensor demo with Micro USB jack



Battery pack with Micro USB connector

USB cable



3 x AAA batteries

2. Getting Started

Use the battery pack or USB cable to power the demo.

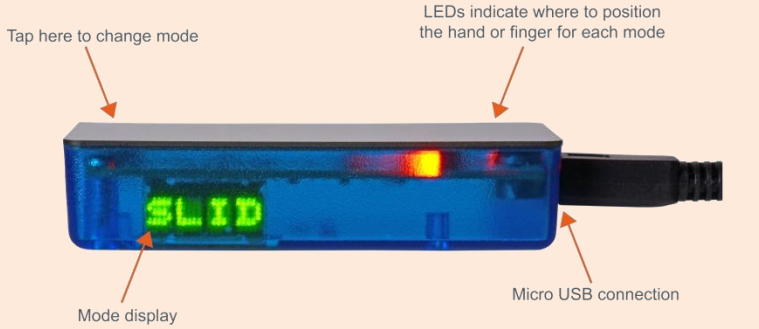
1a. Battery Pack

- Insert AAA batteries in the battery pack
- Connect the battery pack to the demo
- Switch on battery pack

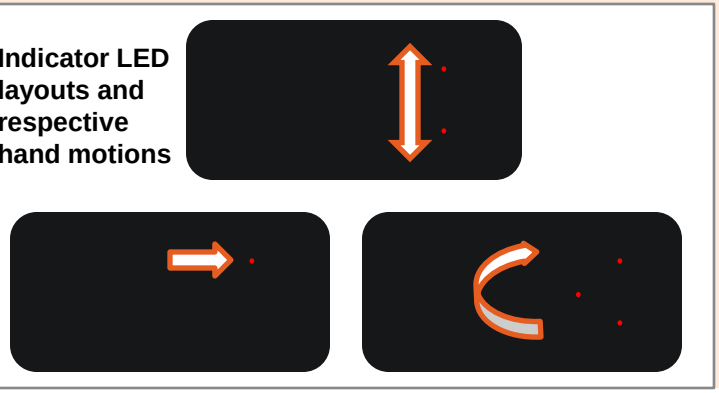
1b. USB Cable

- Connect the USB cable to demo and a computer
- See *4. Software Installation* and *5. Graphical User Interface*

2. Operating the demo



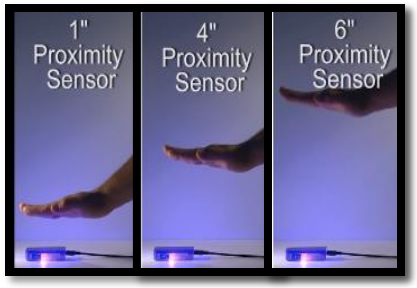
Indicator LED layouts and respective hand motions



OSRAM Opto Semiconductors

3. Modes

Proximity sensing (1”, 4” & 6”)
Place hand over indicator LED at respective distance for on. Remove hand for off.

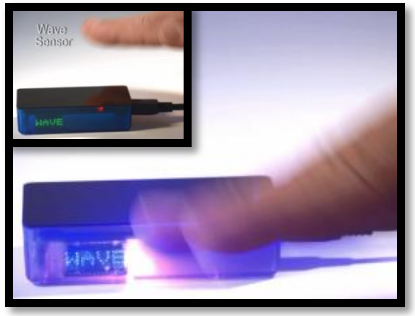


Slide
Slide finger across the two indicator LEDs for on. Slide finger across in the opposite direction for off.

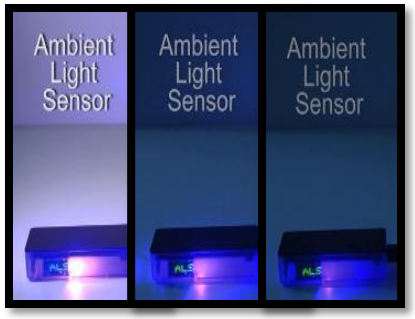
Rotary
Rotate finger counter clockwise around the three indicator LEDs to increase brightness. Rotate finger clockwise to reduce brightness.

Touch
Tap indicator LED to turn on/off. Hold finger down to increase/ decrease brightness.

Wave
Wave hand left- right- left once for on. Wave a second time for off.



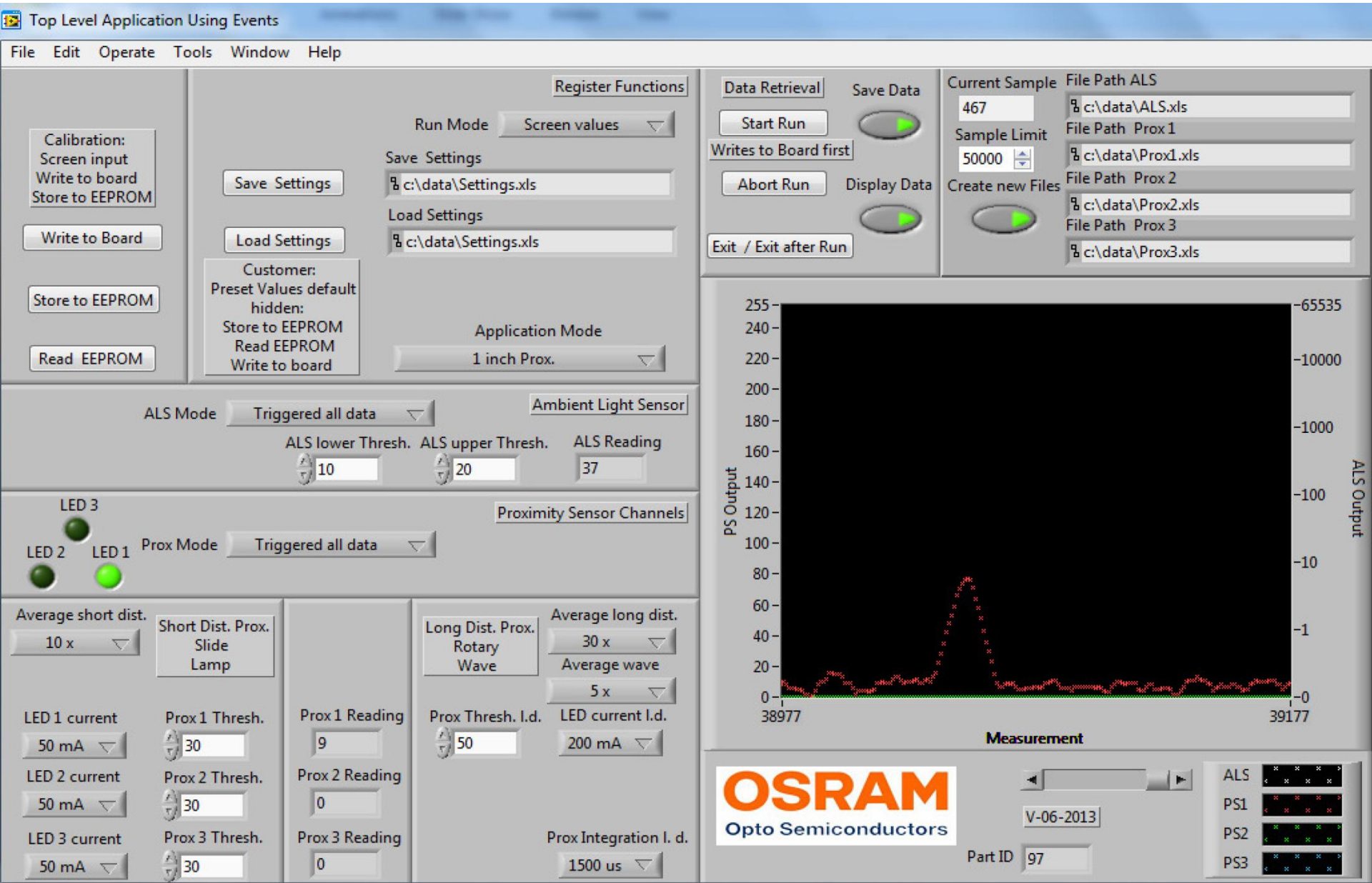
Ambient Light Sensor
Ambient light will increase brightness. The reduction of ambient light will decrease brightness.



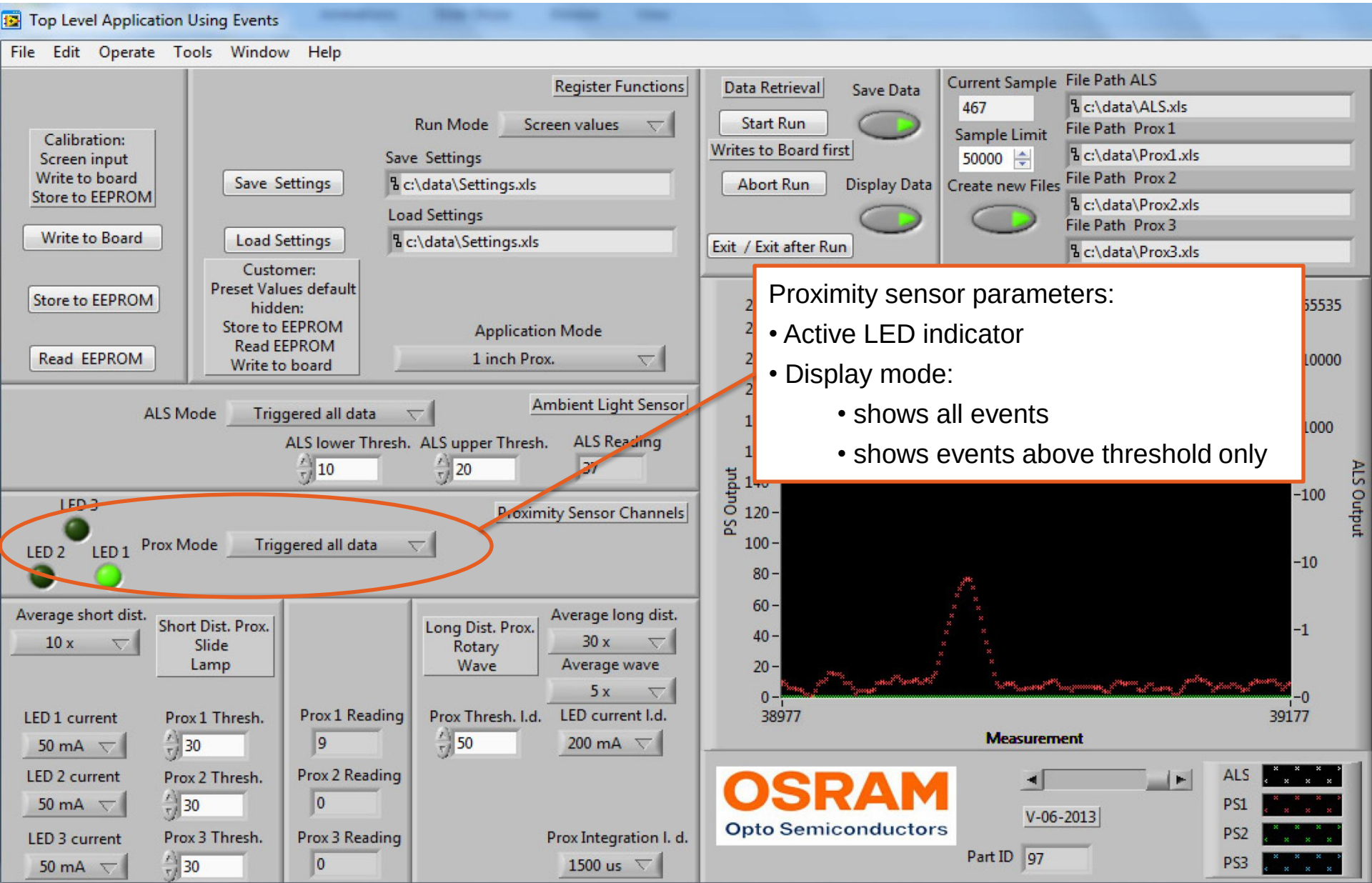
4. Software Installation

Go to: http://ledlight.osram-os.com/matchboxdemo

5. Graphical User Interface



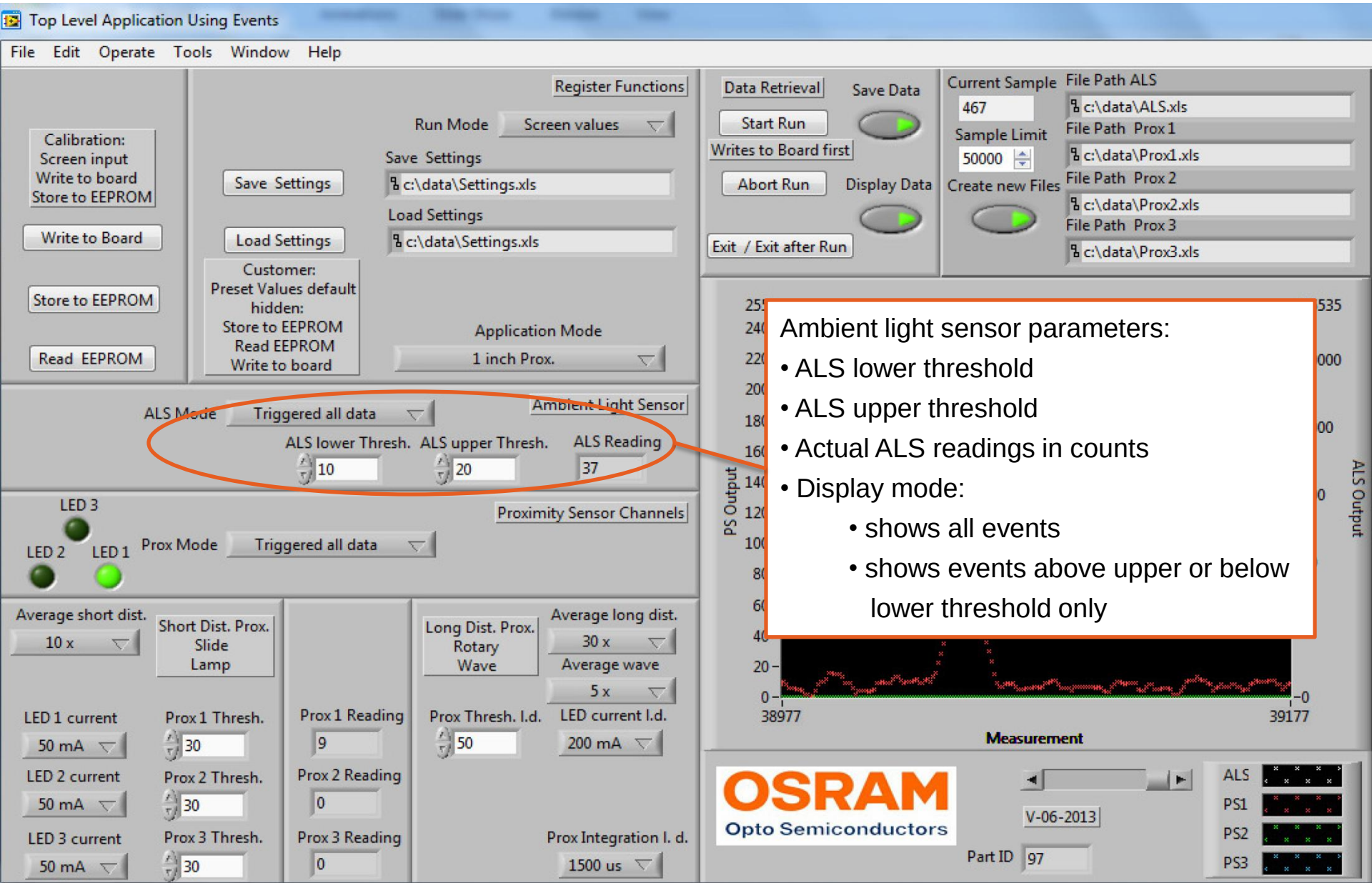
5. Graphical User Interface



Proximity sensor parameters:

- Active LED indicator
- Display mode:
  - shows all events
  - shows events above threshold only

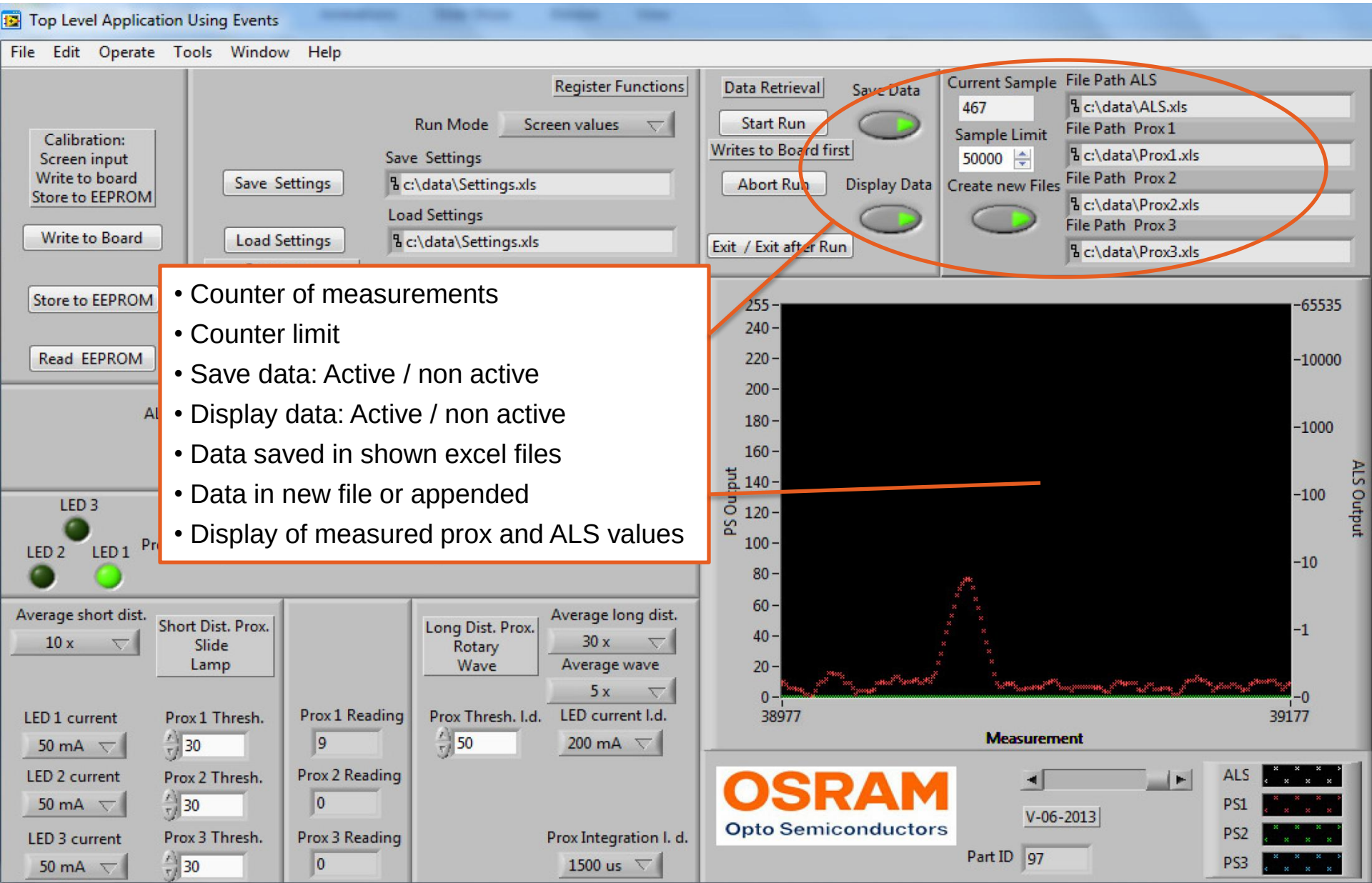
5. Graphical User Interface



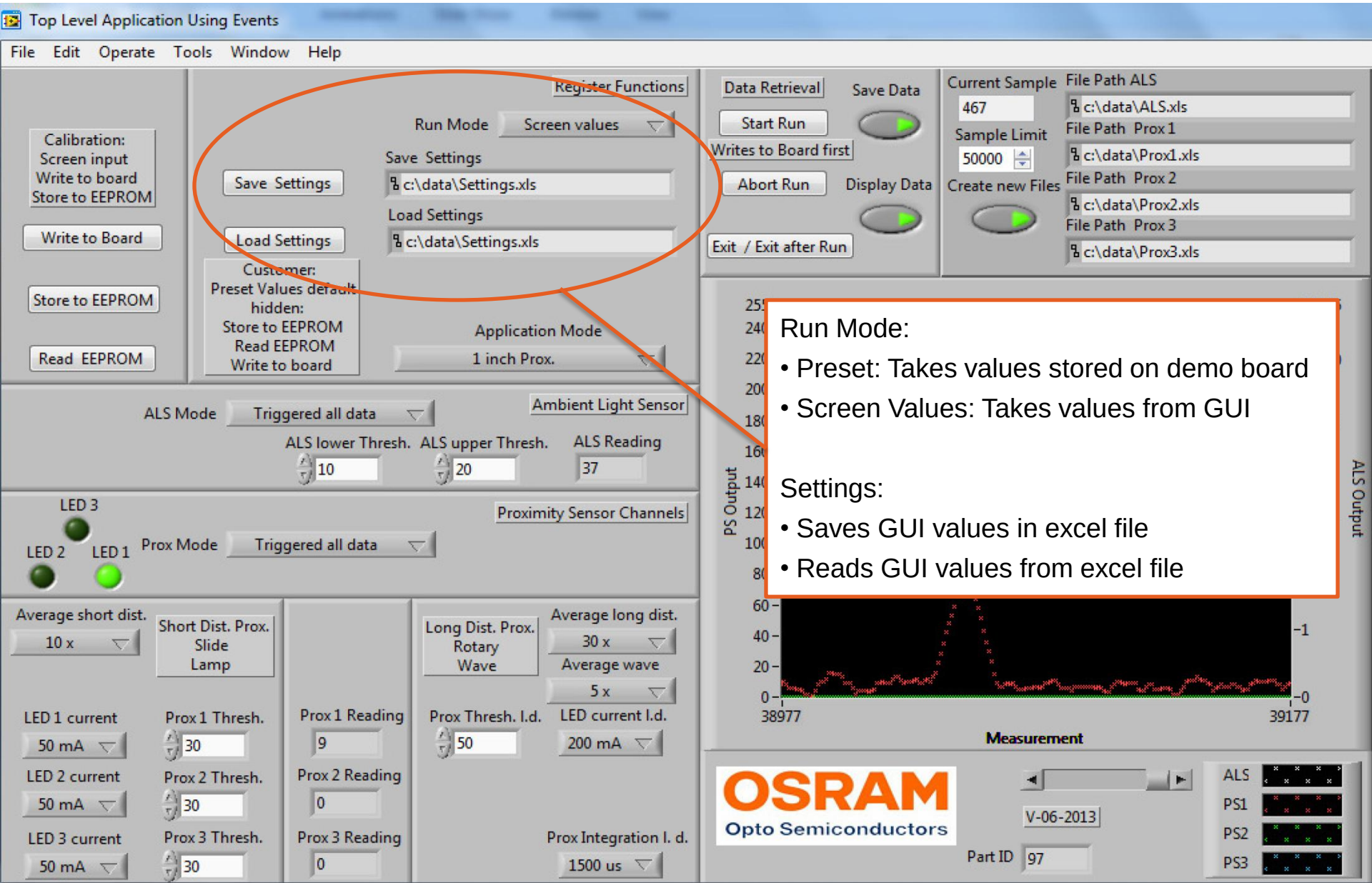
Ambient light sensor parameters:

- ALS lower threshold
- ALS upper threshold
- Actual ALS readings in counts
- Display mode:
  - shows all events
  - shows events above upper or below lower threshold only

5. Graphical User Interface



5. Graphical User Interface



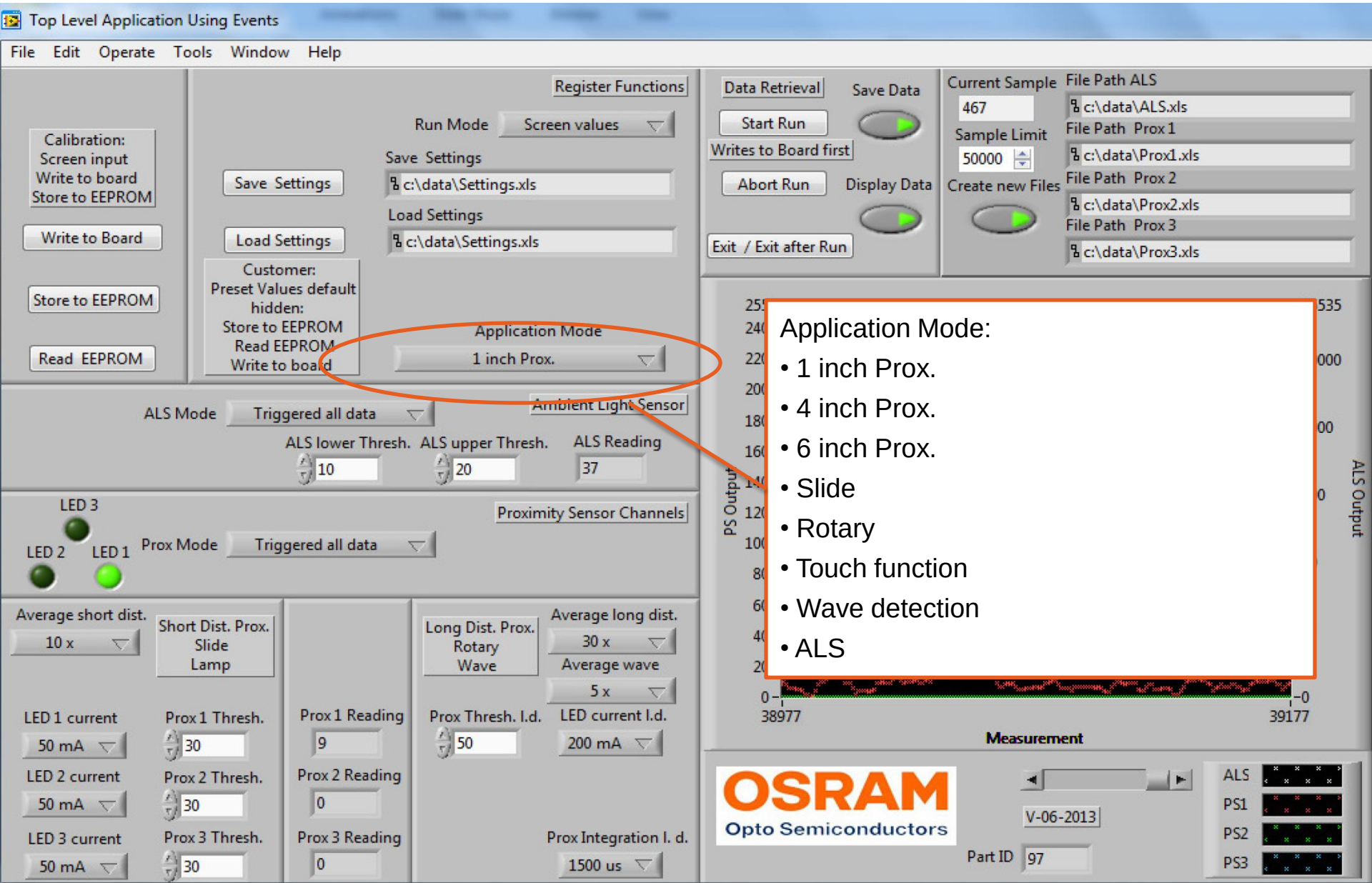
Run Mode:

- Preset: Takes values stored on demo board
- Screen Values: Takes values from GUI

Settings:

- Saves GUI values in excel file
- Reads GUI values from excel file

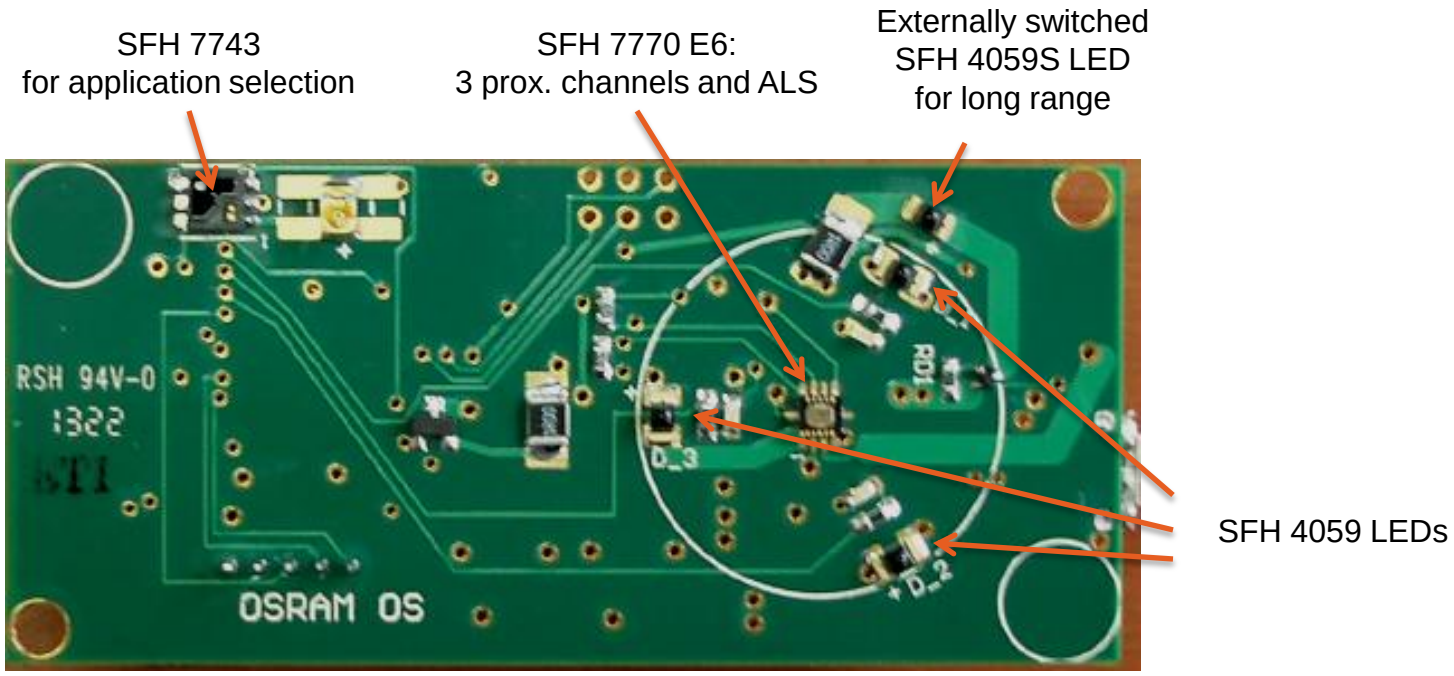
5. Graphical User Interface



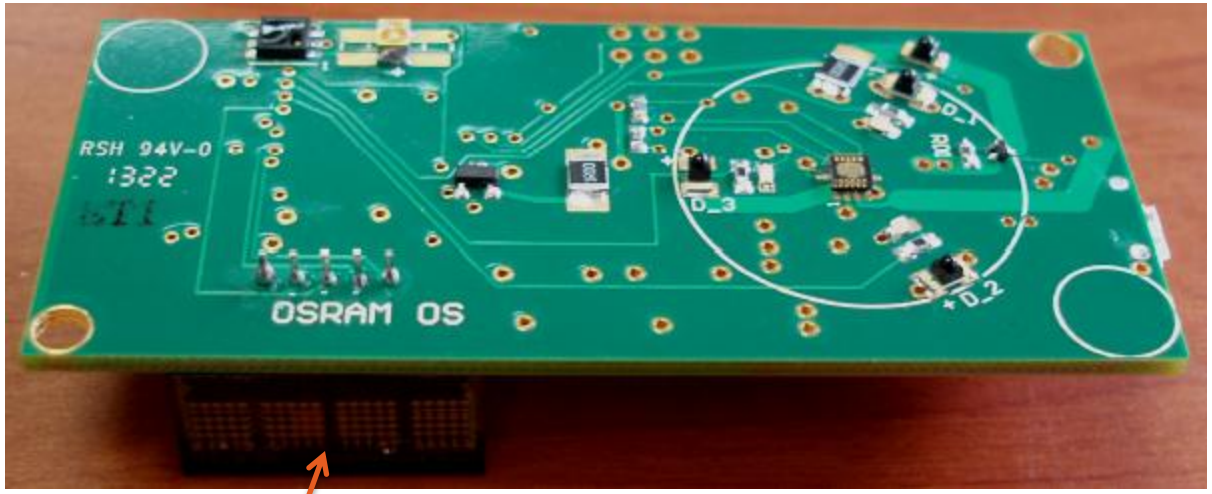
Application Mode:

- 1 inch Prox.
- 4 inch Prox.
- 6 inch Prox.
- Slide
- Rotary
- Touch function
- Wave detection
- ALS

6. PCB: Top view

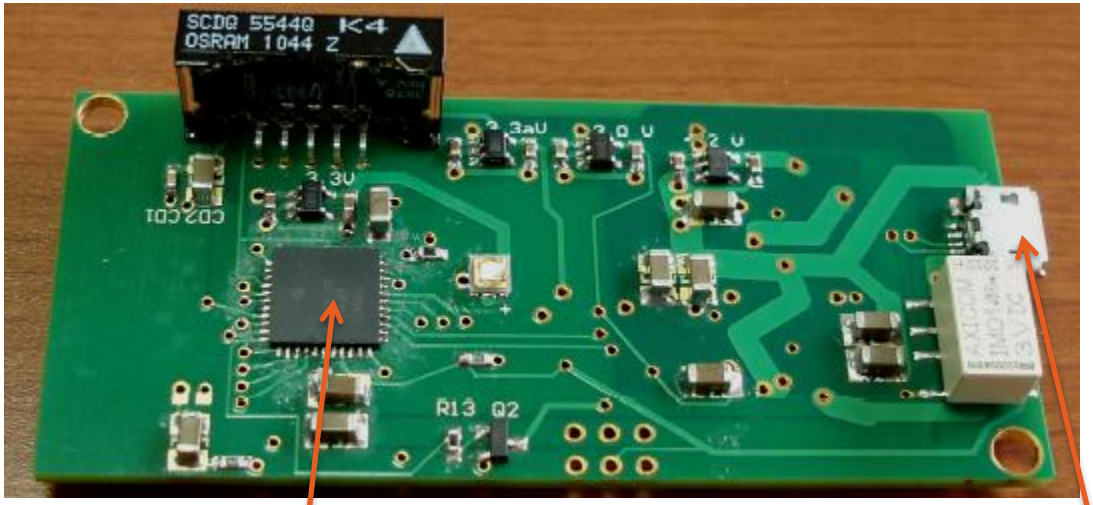


6. PCB: Side view



Display SCDQ 5544 Q
for application mode display

6. PCB: Bottom view



Microcontroller Microchip
PIC18F46J50
for I²C and USB communication

USB Micro connector

Thank You.

OSRAM
Opto Semiconductors

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Optical Sensor Development Tools ***category:***

Click to view products by OSRAM ***manufacturer:***

Other Similar products are found below :

AR0330CS1C12SPKAH3-GEVB MT9V034C12STCH-GEVB MT9V115EBKSTCH-GEVB 416015300-3 ISL29102IROZ-EVALZ MT9M021IA3XTMH-GEVB AR1820HSSC12SHQAH3-GEVB AR1335CSSC11SMKAH3-GEVB MAXCAMOV10640# MT9M031I12STMH-GEVB TSL2581CS-DB TMD3700-DB NANOUSB2.2 ASX340AT3C00XPEDH3-GEVB AR0144ATSM20XUEAH3-GEVB AR0144CSSC00SUKAH3-GEVB AR0522SRSC09SURAH3-GEVB AR0522SRSM09SURAH3-GEVB AR0521SR2C09SURAH3-GEVB MARS1-MAX9295A-GEVK MARS1-MAX9296B-GEVB ISL29112IROZ-EVALZ AR0233AT2C17XUEAH3-GEVB AR0431CSSC14SMRAH3-GEVB MARS-DEMO3-MIPI-GEVB TCS3430-DB AR0234CSSC00SUKAH3-GEVB AR0130CSSM00SPCAH-GEVB AR0330CM1C00SHAAH3-GEVB EVALZ-ADPD2212 TMD2772EVM TMG3993EVM MIKROE-2103 TSL2672EVM 1384 MT9M114EBLSTCZDH-GEVB SEN0043 SEN0162 TMD2771EVM TMD3782EVM TSL4531EVM 1918 AS7225 DEMO KIT SEN0097 SEN0228 AR0134CSSC00SUEAH3-GEVB AP0100AT2L00XUGAH3-GEVB AR0144CSSM20SUKAH3-GEVB 725-28915 EVAL-ADPD1081Z-PPG