

## **Excellent Integrated System Limited**

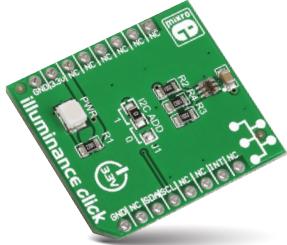
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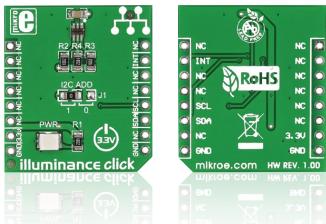
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## Illuminance click™

### 1. Introduction



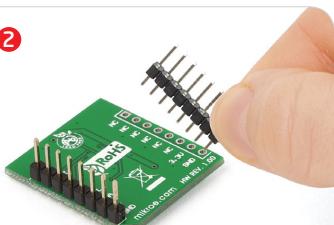
Illuminance click™ is a light sensor suited for detecting ambient lighting (compared to conventional light sensors that are overly sensitive to infrared). It carries **TSL2561**, a **light-to-digital converter**. Illuminance click™ transforms light received through two photodiodes into a digital signal, by way of two ADCs. It communicates with the target board through **mikroBUS™** I<sup>2</sup>C lines: SCL (clock) and SDA (data). It uses a 3.3V power supply only.

### 2. Soldering the headers

Before using your click™ board, make sure to solder 1x8 male headers to both left and right side of the board. Two 1x8 male headers are included with the board in the package.

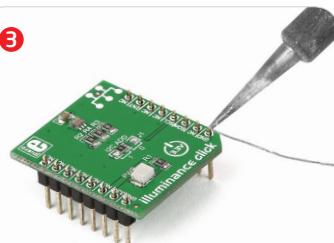


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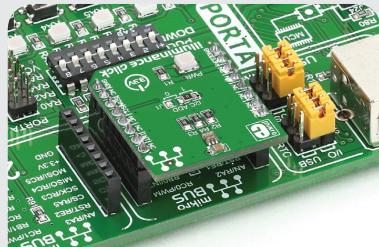


Turn the board upside down so that the bottom side is facing you upwards. Place shorter pins of the header into the appropriate soldering pads.

3

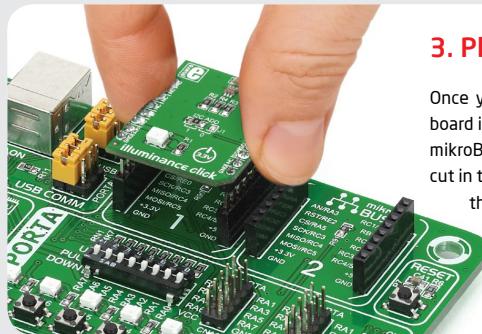


Turn the board upward again. Make sure to align the headers so that they are perpendicular to the board, then solder the pins carefully.



### 4. Essential features

The TSL2561 sensor on Illuminance click™ is designed to mimic the way humans perceive light. Conventional light sensors are too sensitive to infrared light to be suitable for measuring ambient lightning. The sensor on Illuminance click™ has two photodiodes. One is sensitive to the full-spectrum of light, the other to infrared light only. The visible-spectrum of light can then be deduced by using a formula. Applications include brightness adjustment for LCD and OLED displays, based upon ambient lighting conditions.



### 3. Plugging the board in

Once you have soldered the headers your board is ready to be placed into the desired mikroBUS™ socket. Make sure to align the cut in the lower-right part of the board with the markings on the silkscreen at the mikroBUS™ socket. If all the pins are aligned correctly, push the board all the way into the socket.

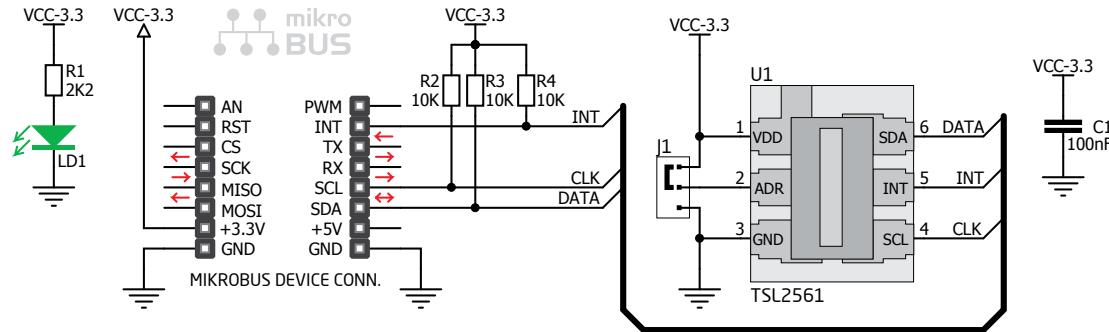
**click™**  
**BOARD**  
[www.mikroe.com](http://www.mikroe.com)

Illuminance click™ manual  
ver. 1.00

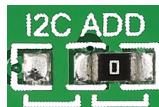


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## 5. Illuminance click™ board schematic



## 6. I²C Address selection



The J1 jumper on Illuminance click™ allows you to switch between three available I²C addresses. To select an address, switch the jumper between logic 1 (default) and logic 0 positions, or unsolder it completely.

## 7. Code examples

Once you have done all the necessary preparations, it's time to get your click™ board up and running. We have provided examples for mikroC™, mikroBasic™ and mikroPascal™ compilers on our **Libstock** website. Just download them and you are ready to start.



## 8. Support

MikroElektronika offers **free tech support** ([www.mikroe.com/support](http://www.mikroe.com/support)) until the end of the product's lifetime, so if something goes wrong, we're ready and willing to help!



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