

## Key Benefits & Features

The benefits and features of TCS3701 are listed below:

**Figure 1:**  
**Added Value of Using TCS3701**

Benefits	Features
<ul style="list-style-type: none"> <li>Invisible ALS and color sensing under any glass type</li> </ul>	<ul style="list-style-type: none"> <li>Configurable, high sensitivity <ul style="list-style-type: none"> <li>Programmable gain and integration time</li> <li>1024x dynamic range by gain adjustment only</li> <li>1mlux minimum detectable illuminance (100ms)</li> </ul> </li> <li>Tailored ALS and color response <ul style="list-style-type: none"> <li>UV/IR blocking filter for RGBC channels</li> <li>Wideband reference channel without filters</li> </ul> </li> <li>ALS/color interrupt with thresholds</li> </ul>
<ul style="list-style-type: none"> <li>Invisible proximity detection behind OLED displays</li> </ul>	<ul style="list-style-type: none"> <li>Capable to drive external IR emitter LED or VCSEL</li> <li>Crosstalk and threshold calibration on chip</li> <li>Programmable timings and sensitivity</li> <li>Calibrated LED output power</li> </ul>
<ul style="list-style-type: none"> <li>Low power consumption and minimum I<sup>2</sup>C traffic</li> </ul>	<ul style="list-style-type: none"> <li>1.8V<sub>DD</sub> operation</li> <li>Configurable sleep mode</li> <li>Interrupt-driven device</li> <li>On-chip self-calibration of ALS and proximity functions</li> </ul>
<ul style="list-style-type: none"> <li>Integrated status checking for all functions</li> </ul>	<ul style="list-style-type: none"> <li>Digital and analog ALS saturation flags</li> <li>Proximity saturation flag</li> </ul>

## Applications

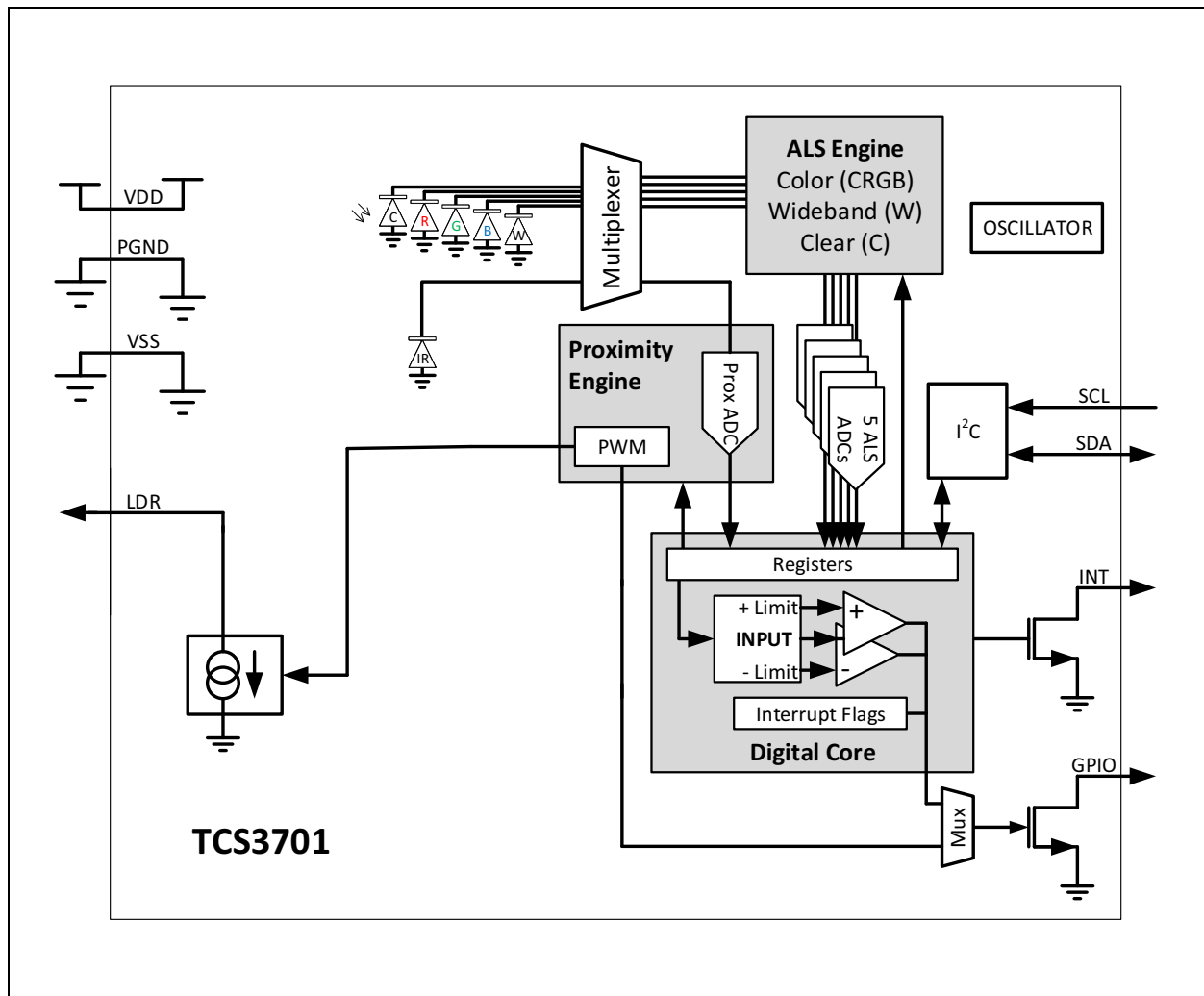
TCS3701 integrates multiple applications within one device. The applications for TCS3701 include:

- Brightness management for displays
- Color management for displays
- Proximity detection
- Touch screen disable

## Block Diagram

The functional blocks of this device are shown below:

**Figure 2:**  
**Functional Blocks of TCS3701**



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