

## 1. DESCRIPTION

MT3211 is a highly sensitive wide dynamic range digital ambient light sensor (ALS) with a low-profile and small footprint.

It includes Photopic, Clear and Flicker photodiodes (PDs), which provide ambient light and flicker frequency information of the ambient light source.

MT3211 architecture accurately measures the ambient light, provides ultra-high sensitivity for luminance detection and very useful for smart lighting management, especially in robust backlight brightness, display appearance, camera flicker control.

## 2. APPLICATIONS

- Display management
- Ambient light sensing and flicker detection
- Backlight management
- Flicker-immune camera operation

## 3. FEATURES

- Excellent light transmittance designed for best sensitivity
- Output ALS and Flicker in parallel
- Fully digital control with I<sup>2</sup>C interface operating within 1.2V ~ 3.6V VDD range
- Wide range of VDD voltage: 1.7V ~ 2.0V
- Idle mode current: 2μA
- Sleep mode current: 0.35μA
- Enables superior detections
  - 1024 bytes FIFO
  - Up to 7kHz flicker detection
  - 16-bit digital data output
  - Programmable gain and integration time
  - 4096x dynamic range by gain adjustment
  - Flicker-immune ALS sensing with programmable integration time
  - Temperature compensation
  - Approximates human eye response
  - 1MHz fast I<sup>2</sup>C Interface
- RoHS compliant lead-free OLGA package for smart lighting devices

## 4. TYPICAL APPLICATION CIRCUIT

