1. DESCRIPTION

MT3212 is a highly sensitive wide dynamic range digital ambient light sensor (ALS) with a low-profile and small footprint.

It includes Red, Green, Blue, Clear and Flicker photodiodes, which provide ambient light, temperature color and flicker frequency information of the ambient light source.

MT3212 architecture accurately measures the ambient light and enables the calculation of irradiance of different light sources. This provides ultra-high sensitivity for luminance detection and very useful for smart lighting management, especially in robust backlight brightness, display appearance, camera color temperature and flicker control.

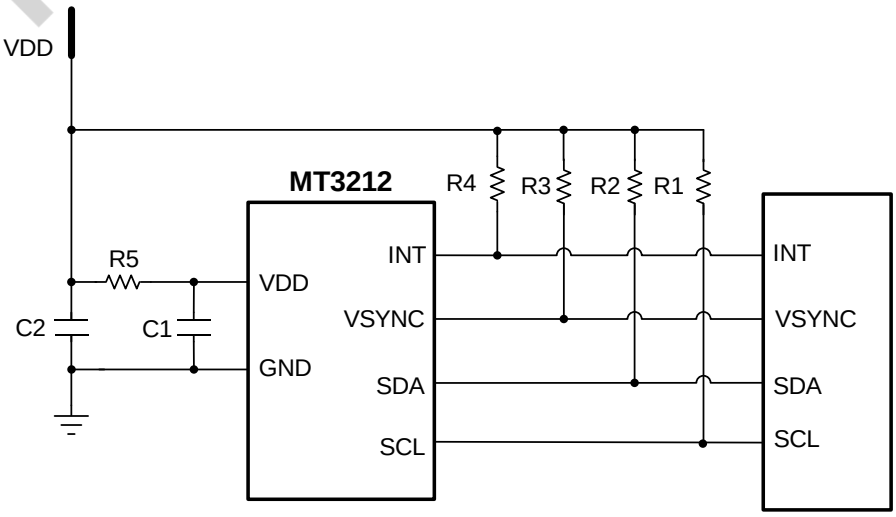
2. APPLICATIONS

- Display management
- Ambient light sensing
- Backlight management
- Camera AWB correction assistance
- Flicker-immune camera operation

3. FEATURES

- Excellent light transmittance designed for best sensitivity
- Output CCT, ALS, and Flicker in parallel
- Fully digital control with 1.2V~3.3V I²C interface
- 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
  - 8192x dynamic range by gain adjustment
  - Flicker-immune ALS sensing with programmable integration time
  - Temperature compensation
  - Approximates human eye response
  - 1MHz fast I²C Interface
- RoHS compliant lead-free OLGA package for smart lighting devices

4. TYPICAL APPLICATION CIRCUIT



PRELIMINARY
MAXIC CONFIDENTIAL