

## APPLICATION DESCRIPTIONS

### Melexis SensorEyeC™ Series MLX75303 MLX75304 MLX75305

Printers and copiers detect paper presence in multiple areas: paper orientation on the glass plate, paper detection in the interior body of the printer/copier, paper detection in the paper trays etc.

The MLX75303 Optical Switch SensorEyeC is perfectly suited for this application because of its dirt robustness, long lifetime, high operating temperature and solder reflow 260degC compatibility.



Cell phones, GPS receivers, MP3 players, notebooks, in general all battery powered handheld devices benefit from LCD backlight dimming. Automatic screen dimming in darker environments saves battery power and enhances user experience.

Main benefits of the MLX75304 Light-to-Frequency and MLX75305 Light-to-Voltage SensorEyeCs are their small size DFN packages (3mm by 3mm by 0.65mm) and solder reflow 260degC compatibility. Their fast electrical set-up times allow pulsed activation of the sensor to save average sensor power consumption.



Near-infrared range detection on short distances is used in many applications. A NIR LED shines light on a surface and the light is reflected back into a sensor. For instance, in home robot vacuum cleaners, this function stops a robot from falling off a staircase.

Depending on the required accuracy, the SensorEyeC series are perfectly fit for this application. Main benefits are stable light responsivity over time and over temperature and solder reflow 260degC.



Indoor and outdoor LED light intensity control is a fast growing market. The Melexis light sensors feature a wide light range (120dB), high precision and high lifetime. An application note is available with circuit examples for the MLX75305 Light-to-Voltage SensorEyeC and MLX10803 LED driver.

A second type of applications is color control for RGB LED Lighting. Here, every color is separately pulsed and the corresponding light value is detected by a light sensor.



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Automotive applications for the Melexis SensorEyeCs include:

- Automatic light dimming of instrument panels and displays
- Rear-view mirror dimming
- Headlights on/off control
- Hand presence detection for opening doors
- Contactless switching buttons and contactless steering stocks

The sensors are AEC-Q100 automotive qualified and feature operating temp. to 125°C



The MLX75303 Optical Switch SensorEyeC is perfectly suited as a twilight sensor (day/night detection) to activate sun blinds, window blinds, roof windows, etc.

Main benefits are long lifetime, temperature independency, robustness by design and robustness by its unique package.



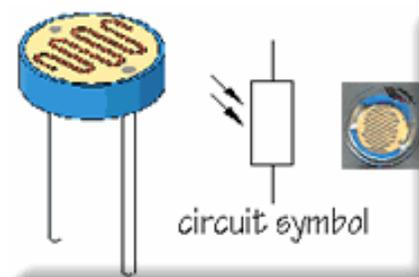
The MLX75303 Optical Switch SensorEyeC is perfectly suited as hand detector for automatic activation of water taps, hand dryers, etc.

Main benefits are long lifetime, temperature independency, robustness by design and robustness by its unique package.



The SensorEyeC series are perfect replacement parts for LDRs, **L**ight **D**ependant **R**esistors, also named photoconductive cell photoresistors. These devices are found in numerous applications where ambient light is measured. Many LDRs contain cadmium particles and are not RoHS compliant.

The MLX light sensor family is RoHS compliant. Because the integrated sensors have photodiode, amplifier and output transistor on-chip, they minimize use of external components and save PCB space.



**Are you RoHS compliant?**