Product Document

Spectral_ID
a new class of Spectral Sensing Products
www.ams.com

AS7263 – Integrated 6-Channel NIR Spectrometer covering 600-900nm wavelengths

- Six 20nm FWHM interference filters spaced at 610, 680, 730, 760, 810, 860 nm (in this example of the product)
- Selectable smart interface (UART) with AT commands or standard I^2C interface for sensor buses
- Integrated LED drivers form an electronic shutter and directly control an LED based light source

We provide innovative analog solutions to the most challenging applications in sensor and sensor interfaces, power management, and wireless.

General Description

AS7263 is a highly integrated six channel spectral radiometer with 20nm FWHM Gaussian filters at 610, 680, 730, 760, 810 and 860nm. The filter peak wavelength positions, filter shapes and filter bandwidths are typical examples and can be adjusted to meet customer requirements. This allows designers to cost effectively sense spectral responses in specific NIR bands simultaneously thus reducing component count, physical space and BOM costs in NIR applications. This device is ideal for spectroscopic techniques applied to fluorescence, reflectance or irradiance.

The device comes with either a driverless smart interface (UART) for easy configuration or standard I²C sensor interface should multiple sensors need to be accommodated. There are integrated LED Drivers synchronized to the system clock to control external light source and can form an electronic shutter.
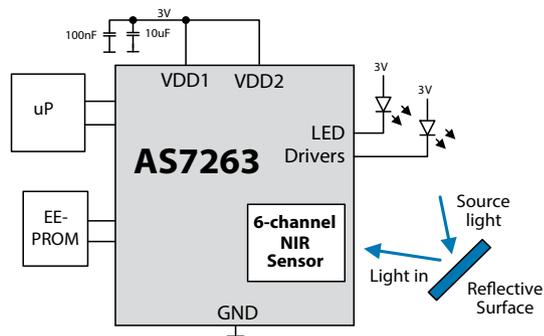
Benefits

- Integrated nano-optic filters on standard CMOS silicon
- Does not require a software driver, ease of programming and standard Sensor Interface
- Electronic shutter directly tied to the system clock reduce BOM costs for integrated light source control
- Cost effective 12 channel spectrometer
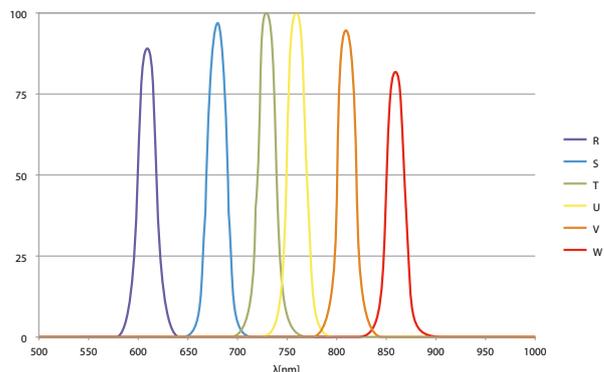- Commercial operating temp range

Features

- Six 20nm FWHM interference filters spaced at 610, 680, 730, 760, 810, 860 nm
- Selectable smart interface (UART) with AT commands or standard I²C interface for sensor buses
- Integrated LED drivers form an electronic shutter and directly control an LED based light source.
- 0°C to +85°C
- Packaging options
- 20 pin LGA package w/aperture

Block Diagram

Spectral Responsivity

Applications

This device is optimized for detecting wavelengths in the NIR wavelengths of the electromagnetic spectrum. Authentication and validation applications that use fluorescence, reflectance or Irradiance techniques are well suited to this device.