

Compact Digital Color Sensor IC

BH1745NUC



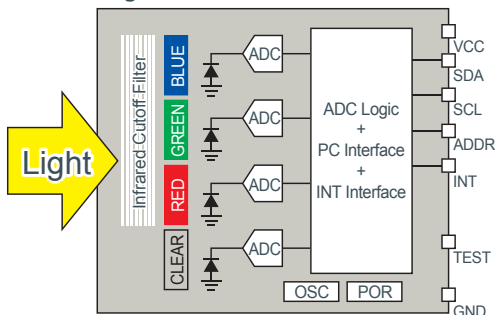
Provides high-precision operation and superior spectral sensitivity characteristics in a compact form factor

Product Outline

The BH1745NUC I²C-compatible digital color sensor is designed to detect the color components (RGB) in light and convert them digitally. Superior spectral sensitivity, achieved through optimum infrared cutoff characteristics and original optical technology, makes it possible to calculate the color temperature and brightness with a high degree of accuracy - even through low-transmittance optical windows - contributing to greater design freedom.

Proprietary optical filter technology ensures excellent spectral sensitivity

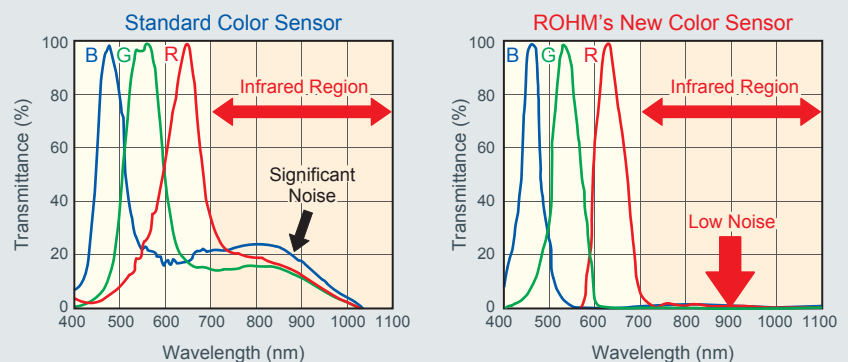
Block Diagram



Key Characteristics

- Supply Voltage Range: 2.3 to 3.6V
- Max. Sensitivity: 0.005 lx/step
- Operating Current Consumption: 130μA (Typ.)
- Power Down Current Consumption: 0.8μA (Typ.)
- Operating Temperature Range: -40 to +85°C

Spectral Sensitivity Characteristics



Infrared cutoff filter and original optical technology provide superior infrared removal performance

Broad applicability

Application Examples

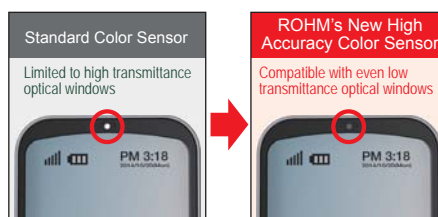
Brightness/color adjustment

Detects ambient light conditions and automatically adjusts the color and brightness in LCDs for optimum results



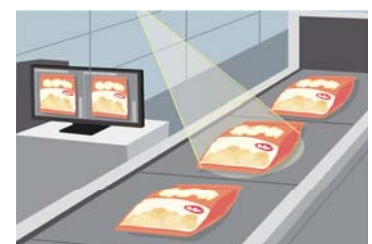
Improved design flexibility

Provides greater design freedom for the optical windows in tablets and smartphones



Process control in industrial applications

Determine the colors of products and liquids in production lines



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