

Ambient Light Sensor IC Series

# Digital 16bit Serial Output Type Ambient Light Sensor IC

## BH1726NUC

### General Description

BH1726NUC is a digital Ambient Light Sensor IC with I<sup>2</sup>C bus interface. This IC is most suitable for obtaining ambient light data for adjusting LCD and backlight power of TV and mobile phone. It is capable of detecting a very wide range of illuminance.

### Features

- Built-in Ircut filter
- 2 outputs with different spectral response
- Correspond to dark window because of high sensitivity
- Rejecting 50Hz/60Hz light noise
- I<sup>2</sup>C bus interface (f/s mode support)
- It is possible to select 2 type of I<sup>2</sup>C bus slave address.
- Correspond to 1.8V logic interface
- Resolution 0.0003lx/count (Typ)  
(In highest gain and longest measurement time setting)

### Applications

Mobile Phone, Tablet PC, Note PC, Portable Game Machine, LCD TV, Digital Camera

### Key Specifications

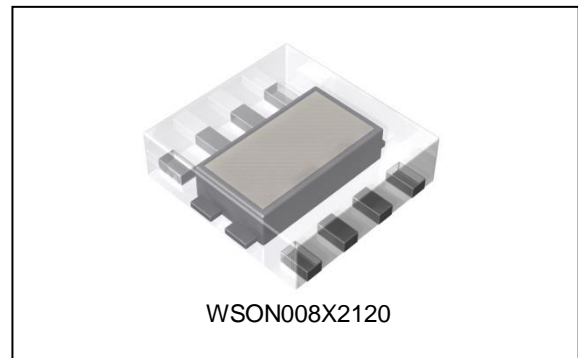
- VCC Voltage Range: 2.3V to 3.6V
- Detection Range: 30klx (Typ)
- Current Consumption: 75μA (Typ)
- Power Down Current: 0.8μA (Typ)
- Operating Temperature Range: -40°C to +85°C

### Package(s)

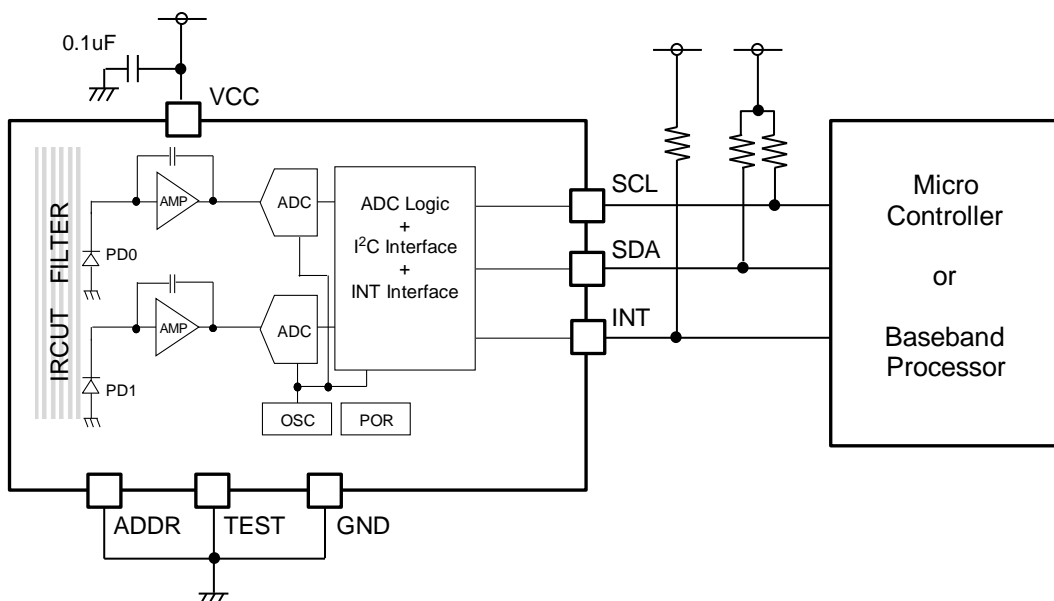
WS0N008X2120

### W(Typ) x D(Typ) x H(Max)

2.10mm x 2.00mm x 0.6mm



### Typical Application Circuits

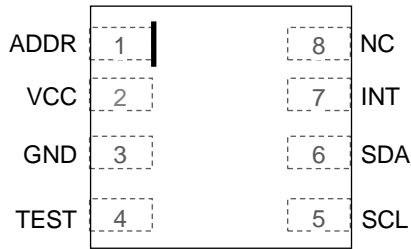


○Product structure: Silicon monolithic integrated circuit.  
 ○This product does not include laser transmitter.  
 ○This product includes Photo detector, ( Photo Diode ) inside of it.

○This product has no designed protection against radioactive rays.  
 ○This product does not include optical load.

Pin Configuration

TOP VIEW

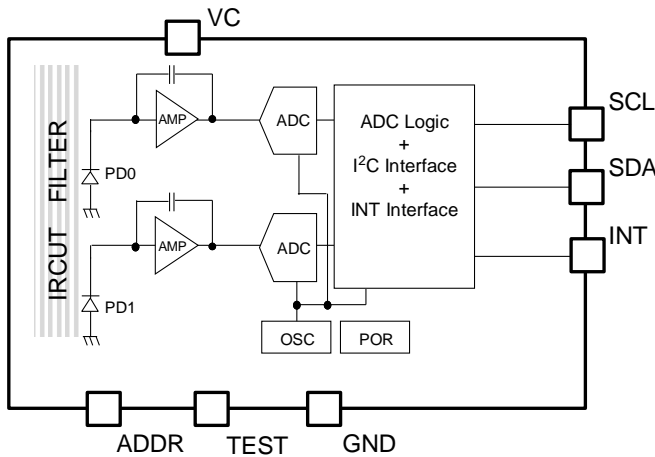


Pin Description

Pin No.	Pin Name	Function
1	ADDR	I <sup>2</sup> C bus slave address selector
2	VCC	Power supply <sup>(Note 1)</sup>
3	GND	Ground
4	TEST	Test pin (Connect to GND)
5	SCL	I <sup>2</sup> C bus serial clock
6	SDA	I <sup>2</sup> C bus serial data
7	INT	Interrupt
8	NC	Non connect

(Note 1) Dispose a bypass capacitor as close as possible to the IC

Block Diagram



Description of Blocks

- PD0, PD1  
Photodiode
- AMP  
Integrated OPAMP for converting PD current to voltage.
- ADC  
Analog-to-Digital Converter for obtaining 16bit digital data.
- ADC Logic + I<sup>2</sup>C Interface + INT Interface  
ADC control logic and I/F logic
- OSC  
Oscillator for clock of internal logic
- POR  
Power ON Reset. All registers are reset after VCC is supplied.