

## IR Receiver Modules for 3D Signals

### Description

The SDR5820 is miniaturized SMD-IR receiver for infrared remote control systems. PIN diode and preamplifier are assembled on lead frame, the epoxy package is designed as IR filter.

The demodulated output signal can directly be decoded by a microprocessor. The main benefit is the reliable function even in disturbed ambient and the protection against uncontrolled output pulses.

### Features

- TTL and CMOS compatibility
- Output active low
- Low power consumption
- Small size package
- Wide supply voltage
- Lead-Free component in accordance with RoHS directives

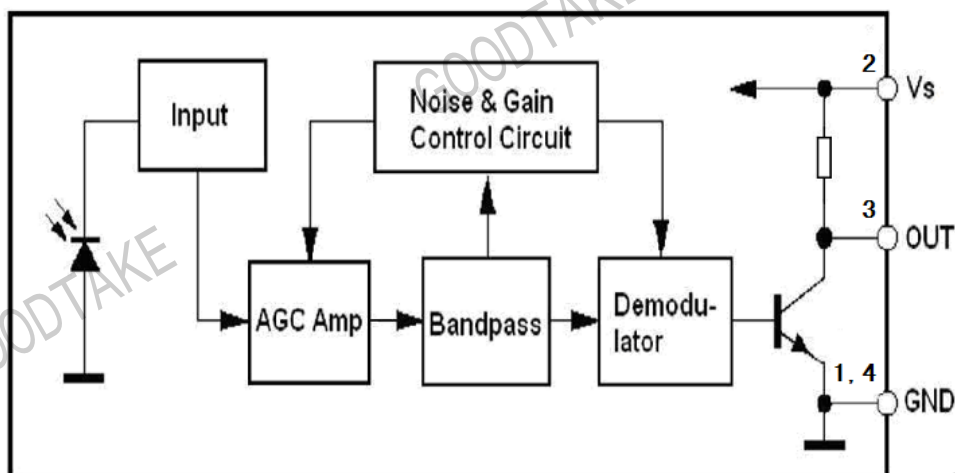
### Special Features

- Enhanced immunity against all kinds of disturbance light
- No occurrence of disturbance pulses at the output

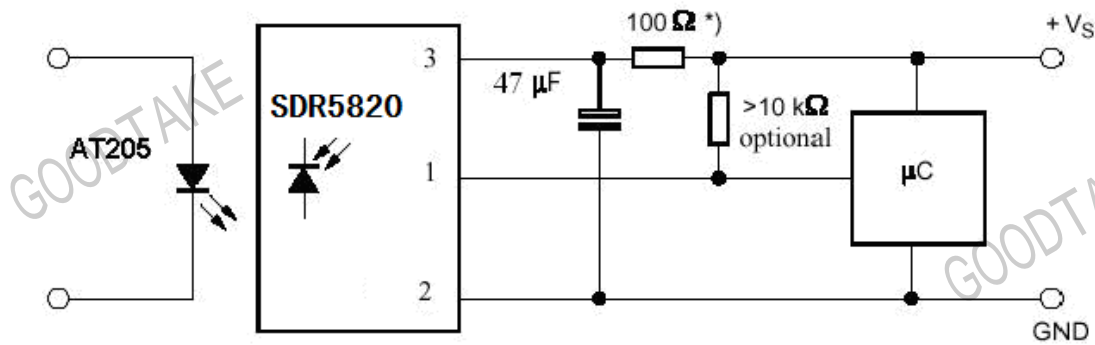
### Applications

Stereo glasses

### Block Diagram



Application Circuit



\*) recommended to suppress power supply disturbance

Absolute Maximum Ratings

Tamb = 25 °C

| Parameter                   | Test Conditions    | Symbol | Value     | Unit |
|-----------------------------|--------------------|--------|-----------|------|
| Supply Voltage              | Vs                 | Vs     | 0---6.0   | V    |
| Supply Current              | Vs                 | Is     | 5         | mA   |
| Output Voltage              | OUT                | Vo     | 0---6.0   | V    |
| Output Current              | OUT                | Io     | 5         | mA   |
| Storage Temperature Range   |                    | Tstg   | -30---+85 | °C   |
| Operating Temperature Range |                    | Tamb   | -25---+85 | °C   |
| Power Consumption           | ( Tamb ≤85°C)      | Ptot   | 50        | mW   |
| Soldering Temperature       | t≤5s 1mm from case | Tsd    | 260       | °C   |

Basic Characteristics

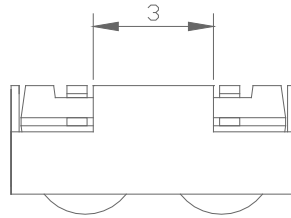
Tamb = 25 °C

| Parameter                | Test Conditions                               | Symbol | Min | Typ | Max | Unit |
|--------------------------|---|--------|-----|-----|-----|------|
| Supply Voltage (Vs)      | Recommended operating                         | Vs     | 2.7 |     | 5.5 | V    |
| Supply Current (Vs)      | Vs = 5V                                       | Is     |     | 0.3 |     | mA   |
| Transmission Distance    | IR diode AT205,IF=0.4A                        | d      |     | 20  |     | m    |
| Output Voltage High      | Vs = 5V<br>Cycle 1.2mS , 50% duty             | VOSH   | 45  |     |     | V    |
| Output Voltage Low       |   | VOSL   |     |     | 250 | mV   |
| Level Output Pulse Width | Burst Wave= 600µs ,<br>Cycle 1.2mS , 50% duty | TWH    | 400 |     | 800 | µs   |
| Level Output Pulse Width |   | TWL    | 400 |     | 800 | µs   |
| Carrier frequency        |   | fo     |     | 20  |     | kHz  |
| Peak Wavelength          |   | λ      |     | 940 |     | nm   |
| Directivity              | Angle of half transmission distance           | θ 1/2  |     | ±45 |     | deg  |

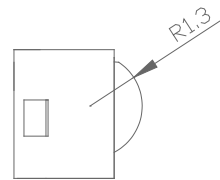
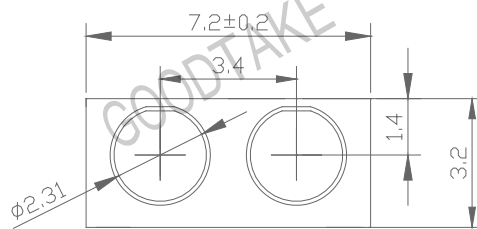
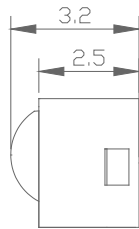
## Package Outline

Dimensions in mm: tolerance $\pm 0.3$ mm

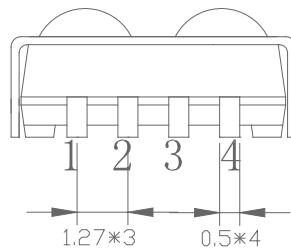
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- 1. GND
- 2. VS
- 3. OUT
- 4. GND

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