



# Shenzhen LD Robot Co., Ltd.

## PRODUCT SPECIFICATION

|              |   |             |
|--------------|---|-------------|
| Product Name | : | TOF IDC8060 |
| Supply P/N   | : |             |
| Date         | : | 2019-08-05  |
| File No      | : |             |

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## SPECIFICATION UPDAGE HISTORY

| Version | Revision Date | Revision Content | Reviser  | Check          |
|---------|---------------|------------------|----------|----------------|
| 1.0     | 2017-08-01    | Primary Release  | Jack Guo | Jamson<br>shen |
| 2.0     | 2019-08-05    | Pass EMC         | Jack Guo | Weyne<br>Chen  |

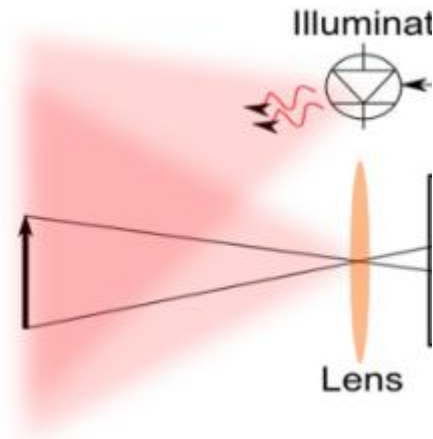
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## 1. DESCRIPTION

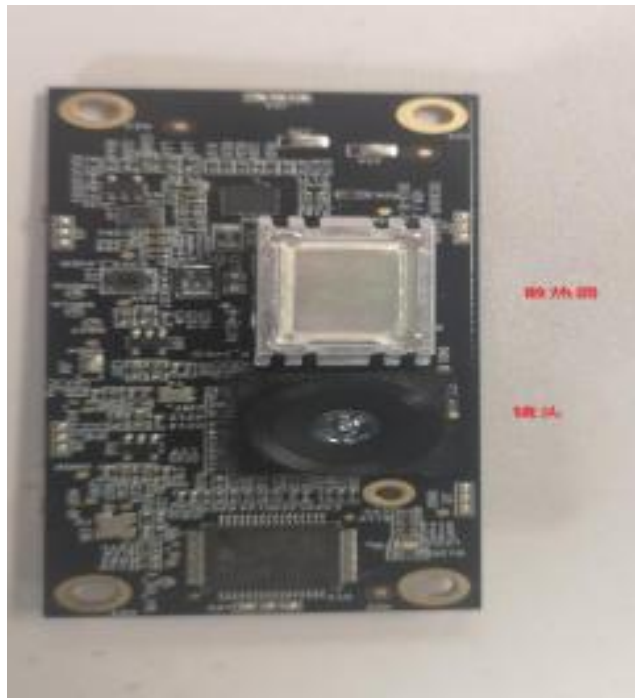
IDC8060 is a low-resolution (80 \* 60) depth sensor module developed by Shenzhen LDRobot Co., Ltd. This module can measure the target distance and convert it into depth point cloud data. Customers can read the depth point cloud data from the USB interface. The product can be used for impact, obstacle avoidance and navigation.

The main principle of the ranging module is: The principle of ranging is the TOF phase method ranging principle. The pulse-modulated laser emits an infrared laser signal. The laser signal irradiates the target object and generates a reflected light spot. The reflected light spot passes through a set of optical lenses and is received by the image acquisition processing system of the SENSOR sensor.



1-1 Technical principle

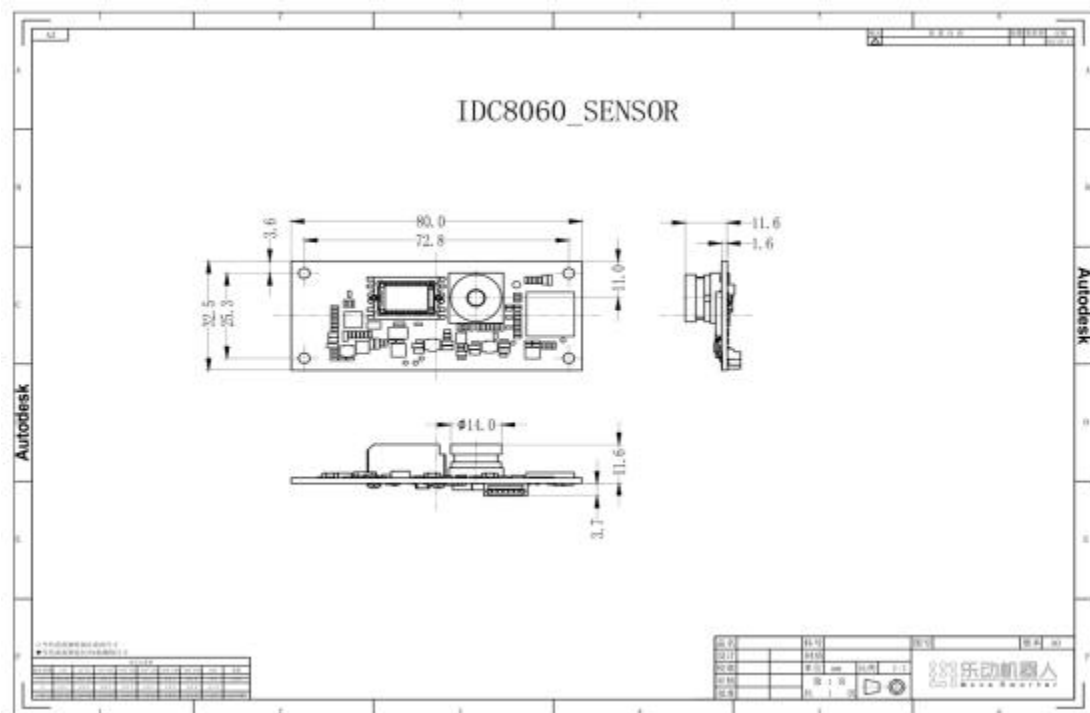
IDC8060 depth camera consists of electronic PCBA, structural lens and heat sink.



1-2 IDC8060\_SENSOR Sample

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## 2. DRAWING



IDC8060\_SENSOR Drawings

### 3. SPECIFICATIONS

| Parameters          | Units | Range         | Note                         |
|---------------------|-------|---------------|------------------------------|
| Dementions          | mm    | 80*32.5*1.6   |                              |
| Resolution          |       | 80x60         |                              |
| Aperture angle      | °     | 92*74.1*57.5  | D*H*V                        |
| Laser               |       | VCSEL+Diffuse |                              |
| Operating voltage   | V     | 5±0.25        |                              |
| Power consumption   | W     | 1.95±0.5      |                              |
| Measurable distance | m     | 0.4-2         | 0.4m 黑色反射物<br>2m 白色反射物<br>可调 |
| Accuracy            | %     | 5             |                              |
| Frame rate          | fps   | < 33.3333     |                              |

### 4. INTERFACE

| Interface | Pin | Signal |
|-----------|-----|--------|
| J23       | 1、2 | VCC    |
|           | 3   | USB DM |
|           | 4   | USB DP |
|           | 5   | PGND   |
|           | 6、7 | GND    |



## 5. WORKING ENVIRONMENT

| Parameters                    | Units | Range            | Note                                                                               |
|-------------------------------|-------|------------------|------------------------------------------------------------------------------------|
| Ambient operating humidity    | %     | 0~80             |                                                                                    |
| Ambient operating temperature | ℃     | -5~45            | When working in the system, ensure that the IC surface temperature is below 70 ° C |
| Operating system              |       | Windows 10/Linux |                                                                                    |

## 6. PACKING AND SHIPPING

| Parameters               | Description                                | Note |
|--------------------------|--------------------------------------------|------|
| Package                  | Static bag                                 |      |
| Anti-impact with package | Maximum height 80 cm                       |      |
| Storage temperature      | -10~60℃                                    |      |
| Anti-impact bare         | Precision optical instrument , DO NOT DROP |      |