

## DMOM2808D



### Description

DMOM2808D is a tiny 3D camera module, based on Time-of-Flight (TOF) technology using VCSEL illumination. The high integrated, low power consumption, high precision module is the ideal module for depth sensing applications.

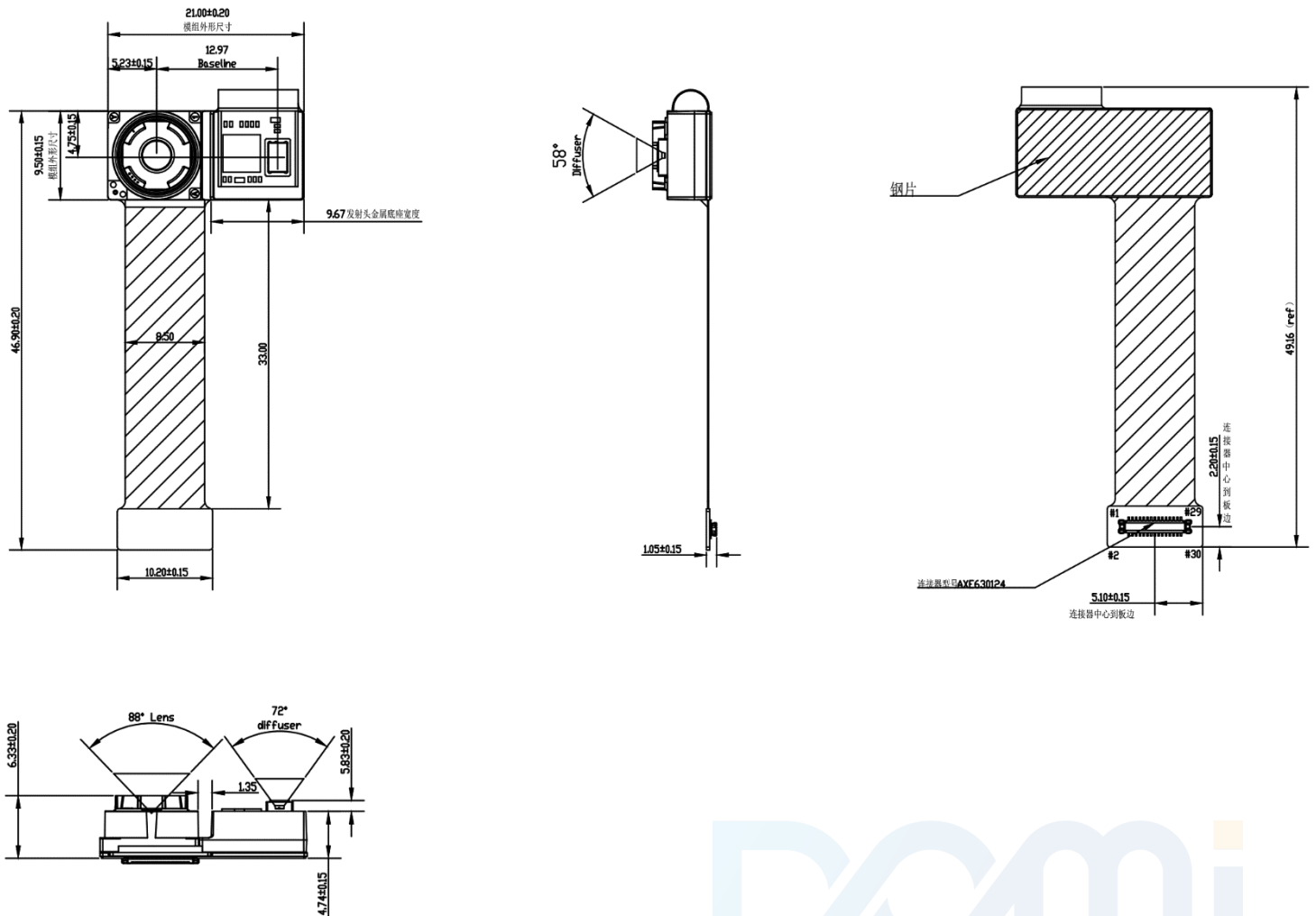
### Key Specifications

| No. | Parameter         | Description                                                     |
|-----|-------------------|-----------------------------------------------------------------|
| 1   | Sensor            | Global shutter                                                  |
| 2   | Resolution        | 320 * 240                                                       |
| 3   | Pixel size        | 15um                                                            |
| 4   | Sensor Size       | 1/3"                                                            |
| 5   | Dimensions        | 21.00mm * 9.50mm * 6.33mm                                       |
| 6   | Frame rate        | 10 – 30 fps                                                     |
| 7   | Measurement range | 0.25 - 4.5m                                                     |
| 8   | FOV               | 71.8°(H) * 56.5°(V)                                             |
| 9   | Distortion        | <2.5%                                                           |
| 10  | Illumination      | 850nm, 2W                                                       |
| 11  | Input Clock       | 27Mhz                                                           |
| 12  | Power Supply      | Sensor: 3.3V single power supply, >=300mA<br>VCSEL: 4.6V, >= 2A |
| 13  | Power consumption | 340mW. Typ                                                      |
| 14  | Depth accuracy    | <=1% / <=1cm                                                    |
| 15  | Interface         | MIPI CSI-2, 2 lanes                                             |

## Typical Applications

- o Face recognition and face motion tracking
- o 3D reconstruction
- o AR/VR
- o Hand and finger tracking for gesture control and interaction with virtual objects
- o visual support for robot grippers
- o Localization, tracking and identification of individuals (humans, animals)
- o People counting and motion analysis

## Module Dimension



## Pin Definitions

| Pin No. | Name      | Function/Description                           |
|---------|-----------|------------------------------------------------|
| 1       | AVDD_3V3  | 3.3V Power Supply                              |
| 2       | VCSEL_4V6 | VCSEL Supply                                   |
| 3       | AVDD_3V3  | 3.3V Power Supply                              |
| 4       | VCSEL_4V6 | VCSEL Supply                                   |
| 5       | DV33      | 3.3V Power Supply                              |
| 6       | VCSEL_4V6 | VCSEL Supply                                   |
| 7       | SLV_LSB   | Address Select                                 |
| 8       | GND       | Ground                                         |
| 9       | GND       | Ground                                         |
| 10      | SPI_MOSI  | SPI Data In                                    |
| 11      | IMG_CLK   | Reference Clock,27MHz                          |
| 12      | SPI_MISO  | SPI Data Out                                   |
| 13      | GND       | Ground                                         |
| 14      | SPI_CLK   | SPI Clock                                      |
| 15      | CSI_D0_P  | CSI-2 non-inverting data output of data lane 0 |
| 16      | SPI_CS    | SPI Cs                                         |
| 17      | CSI_D0_N  | CSI-2 inverting data output of data lane 0     |
| 18      | GND       | Ground                                         |
| 19      | GND       | Ground                                         |
| 20      | SYNC_IN   | Sync input                                     |
| 21      | CSI_CLK_P | CSI-2 non-inverting clock output               |
| 22      | ERR       | Error indicator                                |
| 23      | CSI_CL_N  | CSI-2 inverting clock output                   |
| 24      | I2C_SCL   | CCI, Camera control interface                  |
| 25      | GND       | Ground                                         |
| 26      | I2C_SDA   | CCI, Camera control interface                  |
| 27      | CSI_D1_P  | CSI-2 non-inverting data output of data lane 1 |
| 28      | GND       | Ground                                         |
| 29      | CSI_D1_N  | CSI-2 inverting data output of data lane 1     |
| 30      | RESET     | Reset (active low)                             |

## Key Component Specification

Part Number of module connector is AXE630124.

Mating connector is AXE530127.

## Revision History

| Revision | Date       | Description   |
|----------|------------|---------------|
| V1.0     | 2021/03/15 | Initial draft |

