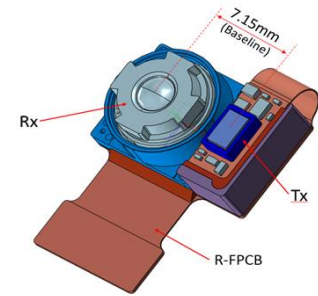


OPNM8508B



Description

OPNM8508B is a tiny 3D camera module, based on OPNOUS's 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.

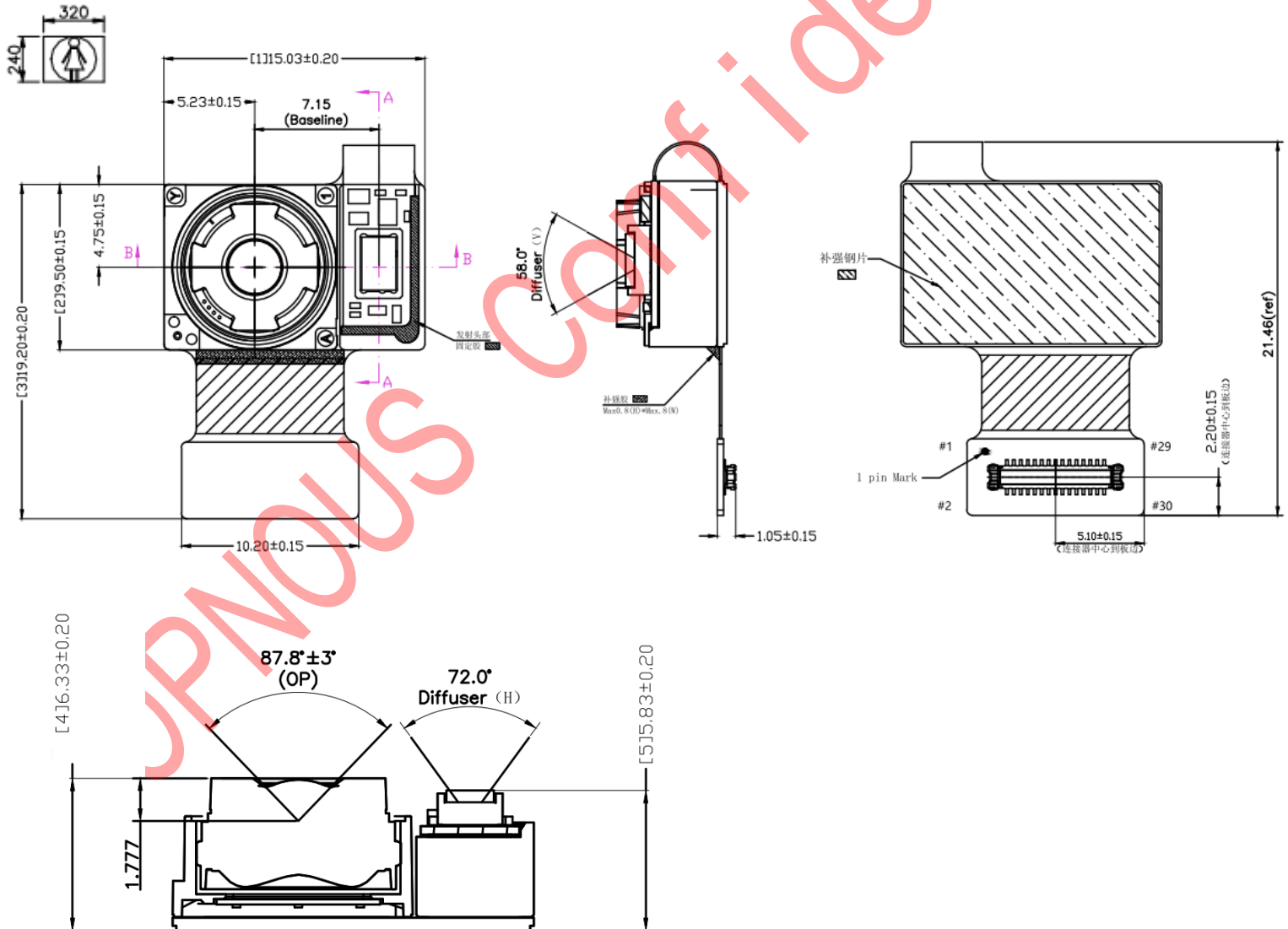
Key Specifications

No.	Parameter	Description
1	Sensor	OPN8008D, global shutter
2	Resolution	320 * 240
3	Pixel size	15um
4	Sensor Size	1/3"
5	Dimensions	15.03mm * 9.50mm * 6.33mm
6	Frame rate	10 – 60 fps
7	Measurement range	0.15 - 5m
8	FOV	71.8°(H) * 56.5°(V)
9	Distortion	<2.5%
10	Illumination	940nm, 3W
11	Input Clock	27Mhz
12	Power Supply	Sensor: 3.3V single power supply, >=300mA VCSEL: 4V, >= 2A
13	Power consumption	340mW. Typ
14	Depth accuracy	<=1% / <=1cm
15	Interface	MIPI CSI-2, 2 lanes

Typical Applications

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

Module Dimension



Pin Definitions

Pin No.	Name	Function/Description
1	AVDD_3V3	3.3V Power Supply
2	VCSEL_3V3	VCSEL Supply
3	AVDD_3V3	3.3V Power Supply
4	VCSEL_3V3	VCSEL Supply
5	DV33	3.3V Power Supply
6	VCSEL_3V3	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	SYNC_OUT	Sync Output
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	2019/8/20	Initial draft

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