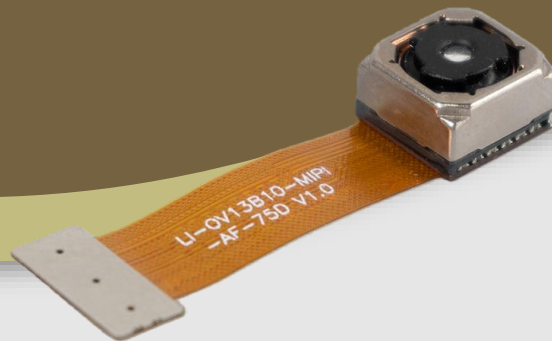




LEOPARD
IMAGING

LI-OV13B10-MIPI-AF-75D



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INTRODUCTION

The LI-OV13B10-MIPI-AF-75D is equipped with OmniVision 13MP CMOS digital image color sensor OV13B10 which features PureCel® Plus technology. This camera is assembled with VCM for auto focus and outputs RAW data.

SPECIFICATIONS

Frame Rate	30 fps @ 4208 x 3120 30 fps @ 4208 x 2368 60 fps @ 2104 x 1506 60 fps @ 1920 x 1080
Focusing Range	10 cm ~ Infinity
Output Format	10-bit RGB RAW
Sensor	OmniVision 13MP CMOS digital image sensor OV13B10
Color / Mono	Color sensor
Optical Format	1/3.06"
Pixel Size	1.12 μm x 1.12 μm
Shutter Type	Rolling shutter
Resolution	4208 (H) x 3120 (V) (active pixels)
Auto Focus	Supported
VCM for Auto Focus	Yes
Interface	4-lane MIPI D-PHY
Power Consumption	TBD
Operating Temp	TBD
Storage Temp	TBD
Weight	~ 1 g

APPLICATIONS

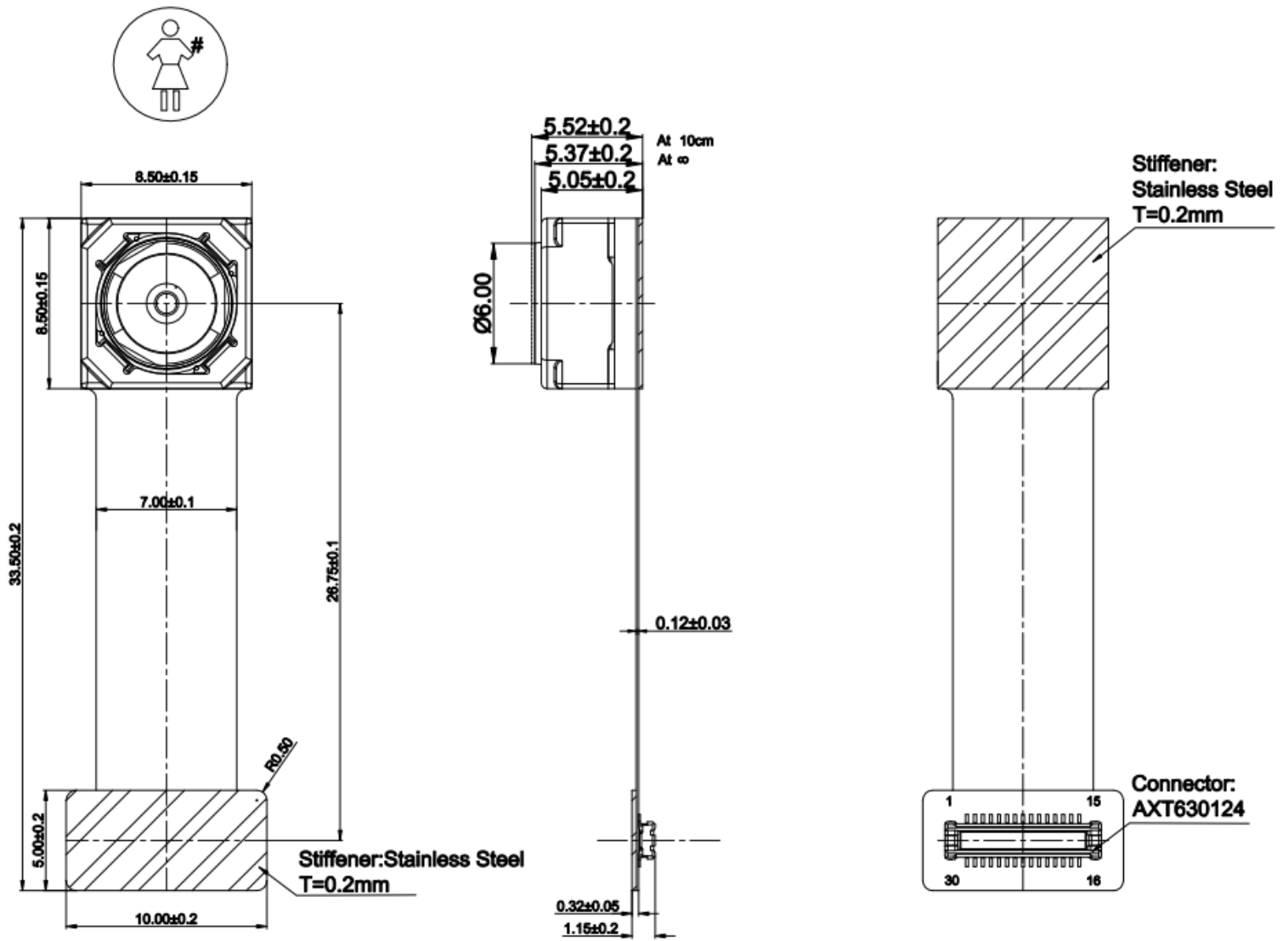
- Smart phones and feature phones
- PC multimedia
- Tablets
- Wearables

LENS SPECIFICATIONS

Focal Length	3.8 mm
Aperture, F/#	2
FOV	75° diagonal
	63.1° horizontal
	49.1° vertical
TV Distortion	<-1.5 %



DIMENSIONS

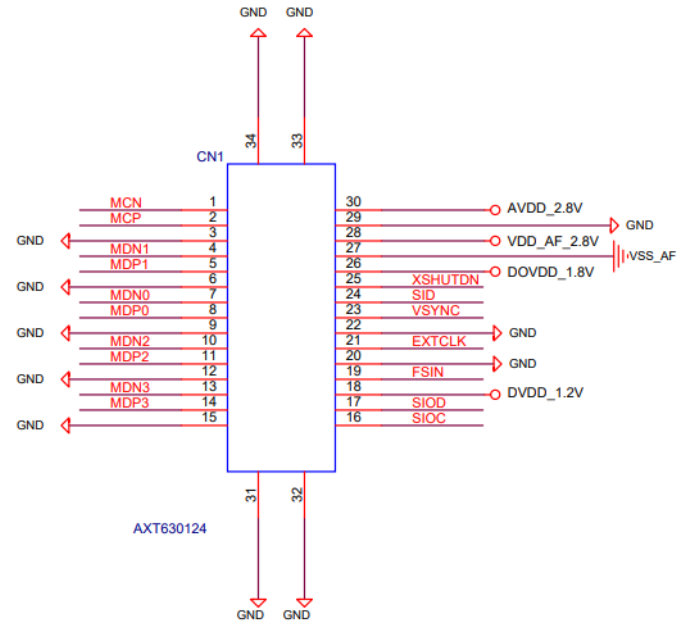


Unit: mm

MODULE CONNECTOR

- Connector Part#: AXT630124
- Number of Positions: 30
- Pitch: 0.40 mm
- Sensor I2C Address: 0X20 (8-bit)
- External Power Supply: 1.2V, 1.8V, 2.8V

Note: 1.2V, 1.8V, 2.8V can rise in any order.



PINOUT DETAILS

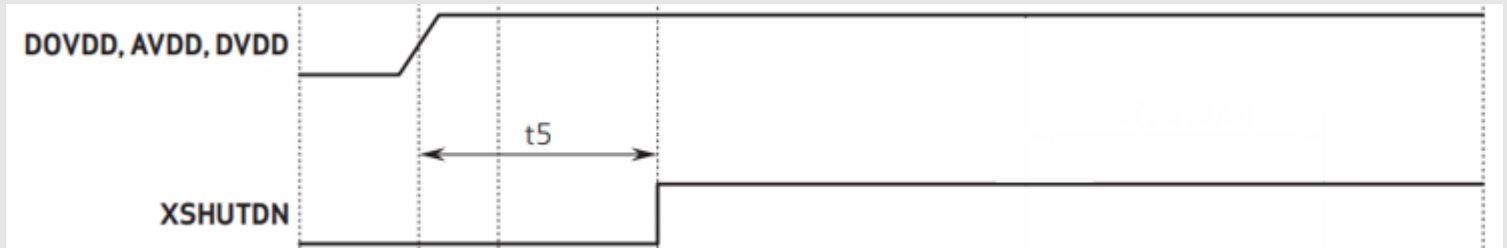
Pin No	Signal Name	Pin Type	Description	Voltage Level
1	MCN	OUTPUT	MIPI Clock Lane Differential Pair -	MIPI DPHY
2	MCP	OUTPUT	MIPI Clock Lane Differential Pair +	MIPI DPHY
3	DGND	-	-	-
4	MDN1	OUTPUT	MIPI Data Lane 1 Differential Pair -	MIPI DPHY
5	MDP1	OUTPUT	MIPI Data Lane 1 Differential Pair +	MIPI DPHY
6	DGND	-	-	-
7	MDN0	OUTPUT	MIPI Clock Lane Differential Pair -	MIPI DPHY
8	MDP0	OUTPUT	MIPI Clock Lane Differential Pair +	MIPI DPHY
9	DGND	-	-	-
10	MDN2	OUTPUT	MIPI Data Lane 2 Differential Pair -	MIPI DPHY
11	MDP2	OUTPUT	MIPI Data Lane 2 Differential Pair +	MIPI DPHY
12	DGND	-	-	-
13	MDN3	OUTPUT	MIPI Data Lane 3 Differential Pair -	MIPI DPHY



Pin No	Signal Name	Pin Type	Description	Voltage Level
14	MDP3	OUTPUT	MIPI Data Lane 3 Differential Pair +	MIPI DPHY
15	DGND	–	–	–
16	SIOC	INPUT	1.8V IO Camera I2C SCL Signal (Require pull-up at the host)	1.8 V
17	SIOD	I/O	1.8V IO Camera I2C SDA Signal (Require pull-up at the host)	1.8 V
18	DVDD	INPUT	1.2V Digital Power Supply (Must be provided from the host side)	1.2 V
19	FSIN	I/O	Video Output Frame Start Signal	1.8 V
20	DGND	–	–	–
21	EXTCLK	INPUT	Sensor Clock Signal (Must be provided from the host side)	1.8 V
22	DGND	–	–	–
23	VSYN	I/O	Frame Sync	1.8 V
24	SID	INPUT	SCCB ID select W/R:SID=1,0X20/0X21;SID=0,0X6C/0X6D	1.8 V
25	XSHUTDN	INPUT	Reset And Power Down Active LOW (Require pullup at host side)	1.8 V
26	DOVDD	INPUT	1.8V I/O Power Supply (Must be provided from the host side)	1.8 V
27	VSS_AF	–	–	–
28	VDD_AF	INPUT	2.8V Power Supply For VCM	2.8 V
29	AGND	–	–	–
30	AVDD	INPUT	2.8V Analog Power Supply (Must be provided from the host side)	2.8 V

External Power supply Power On Sequence

1. There is no requirement for the power sequence.
2. XSHUTDOWN rising must occur after AVDD(2.8V), DOVDD(1.8V), and DVDD(1.2V) are stable.



Item	Symbol	Min.	Max.	Unit
AVDD/DOVDD/DVDD rising, whichever is last-XSHUTDOWN rising	t3	0	∞	ms

Power Consumption

Symbol	Min.	Typ.	Max.	Unit
I_{DOVDD}		0.4		mA
I_{DVDD}		78		
I_{AVDD}		35.7		

● REVISION HISTORY

Revision	Description	Release Date
0.1	Initial draft.	19 Jan 2026

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