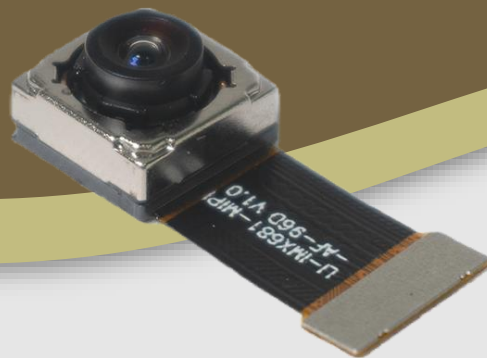




LEOPARD
IMAGING

LI-IMX681-MIPI-AF-96D



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INTRODUCTION

The LI-IMX681-MIPI-AF-96D is equipped with Sony 5.04 diagonal 12.19MP CMOS digital image color sensor IMX681 which could achieve high speed image and high sensitivity and low noise image. This camera outputs RAW data.

SPECIFICATIONS

Sensor	Sony 12.19MP CMOS digital image sensor IMX681
Optical Format	1/3.6"
Color / Mono	Color sensor
Unit cell Size	1.0 μm x 1.0 μm
Resolution	4032 (H) x 3024 (V) (active pixels)
Maximum Frame Rate	30 fps @ full size
HDR (High Dynamic Range)	Supported
Auto Focus	Supported
VCM for Auto Focus	Yes
Interface	2-lane MIPI CSI-2
Power Consumption	TBD
Operating Temp	TBD
Storage Temp	TBD
Weight	~ 2 g

APPLICATIONS

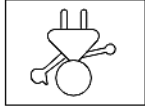
- Surveillance Camera
- Video Conferencing
- Machine Vision
- 3D and Stereo Imaging

LENS SPECIFICATIONS

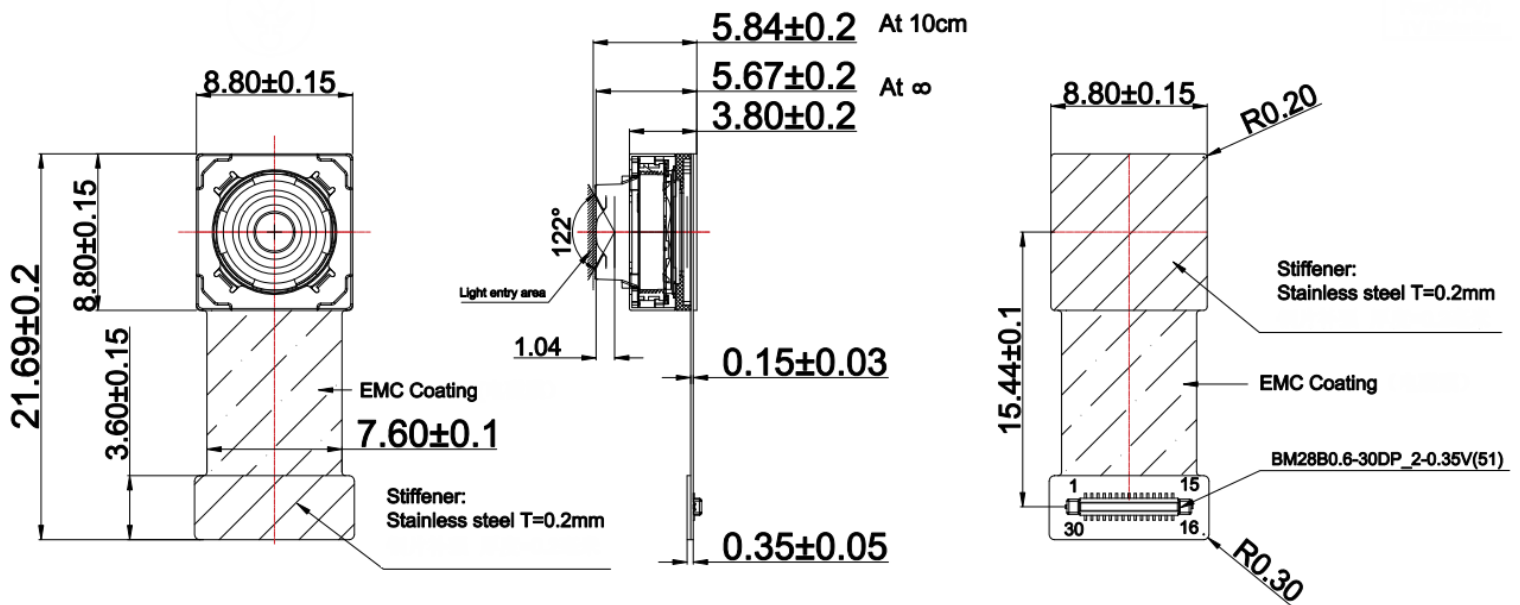
Focal Length	2.22 mm
Aperture, F/#	2.2
FOV	96° diagonal
	83° horizontal
	67° vertical
TV Distortion	<-8%



DIMENSIONS



Capture Direction



Unit: mm

MIPI-CS2 INTERFACE

■ Connector Part#:

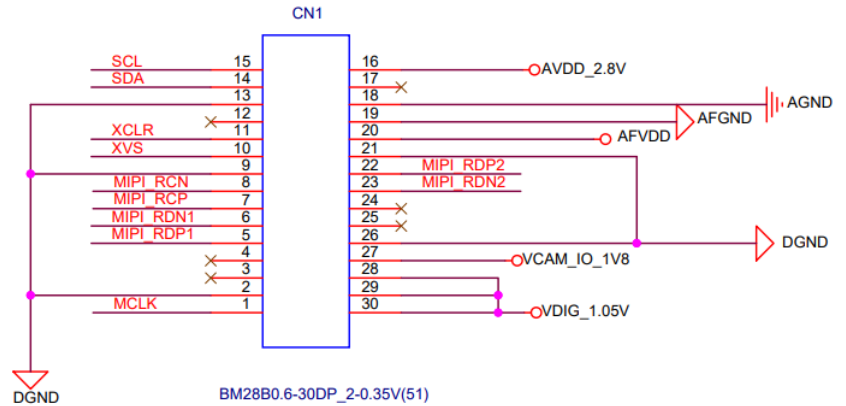
BM28B0.6-30DP_2-0.35V(51)

■ Number of Positions: 30

■ Pitch: 0.35 mm

■ External Power Supply: 2.8V, 1.8V, 1.05V

Note: AVDD_2.8V, VCM_IO_1.8V, VDIG_1.05V may rise in any order.



Pinout Details

Pin No	Signal Name	Pin Type	Description	Voltage Level
1	MCLK	INPUT	Clock input	1.8V
2	DGND	-	-	-
3	-	-	-	-
4	-	-	-	-
5	MIPI_RDP1	OUTPUT	MIPI Clock Data1 Differential Pair +	MIPI DPHY
6	MIPI_RDN1	OUTPUT	MIPI Clock Data1 Differential Pair -	MIPI DPHY
7	MIPI_RCP	OUTPUT	MIPI Clock Lane Differential Pair +	MIPI DPHY
8	MIPI_RCN	OUTPUT	MIPI Clock Lane Differential Pair -	MIPI DPHY
9	DGND	-	-	-
10	XVS	I/O	Dual sync(pull-up internal)	1.8V
11	XCLR	INPUT	Chip clear(pull-down internal)	1.8V
12	-	-	-	-
13	DGND	-	-	-

Pin No	Signal Name	Pin Type	Description	Voltage Level
14	SDA	I/O	1.8V IO Camera I2C SDA signal	1.8V
15	SCL	INPUT	1.8V IO Camera I2C SCL signal	1.8V
16	AVDD_2.8V	POWER	Sensor Analog Power	2.8V
17	-	-	-	-
18	AGND	-	-	-
19	AFGND	-	-	-
20	AFVDD	POWER	VCM Analog Power	2.8V
21	DGND	-	-	-
22	MIPI_RDP2	OUTPUT	MIPI Clock Data2 Differential Pair +	MIPI DPHY
23	MIPI_RDN2	OUTPUT	MIPI Clock Data2 Differential Pair -	MIPI DPHY
24	-	-	-	-
25	-	-	-	-
26	DGND	-	-	-
27	VCAM_IO_1V8	POWER	Sensor Digital I/O Power	1.8V
28	VDIG_1.05V	POWER	Sensor Digital Power	1.05V
29	VDIG_1.05V	POWER	Sensor Digital Power	1.05V
30	VDIG_1.05V	POWER	Sensor Digital Power	1.05V

• REVISION HISTORY

Revision	Description	Release Date
0.1	Initial draft.	15 Oct 2025

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