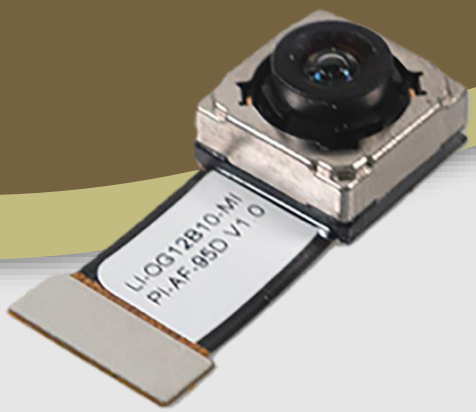
LEOPARD IMAGING

LI-OG12B10-MIPI-AF-95D



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INTRODUCTION

The LI-OG12B10-MIPI-AF-95D is equipped with OmniVision 12MP CMOS digital image color sensor OG12B10 which features PureCel® Plus technology. This camera is assembled with VCM for auto focus and outputs RAW data.

SPECIFICATIONS

Frame Rate	30 fps @ 4032 x 3024 120 fps @ 2016 x 1512
Focusing Range	10 cm ~ Infinity
Output Format	10-bit RGB RAW for normal mode; 12/14-bit for HDRcombination mode; 10/8-bit RGB RAW for ULP mode
Sensor	OmniVision 12MP CMOS digital image sensor OG12B10
Color / Mono	Color sensor
Optical Format	1/3.571"
Pixel Size	1.0 µm x 1.0 µm
Shutter Type	Rolling shutter
Resolution	4032 (H) x 3024 (V) (active pixels)
Auto Focus	Supported
VCM for Auto Focus	Yes
Interface	2-lane MIPI D-PHY with speed up to 2.5 Gbps/lane
Power Consumption	TBD
Operating Temp	TBD
Storage Temp	TBD
Weight	~1 g

APPLICATIONS

- Mobile Smart Camera
- Smart glasses

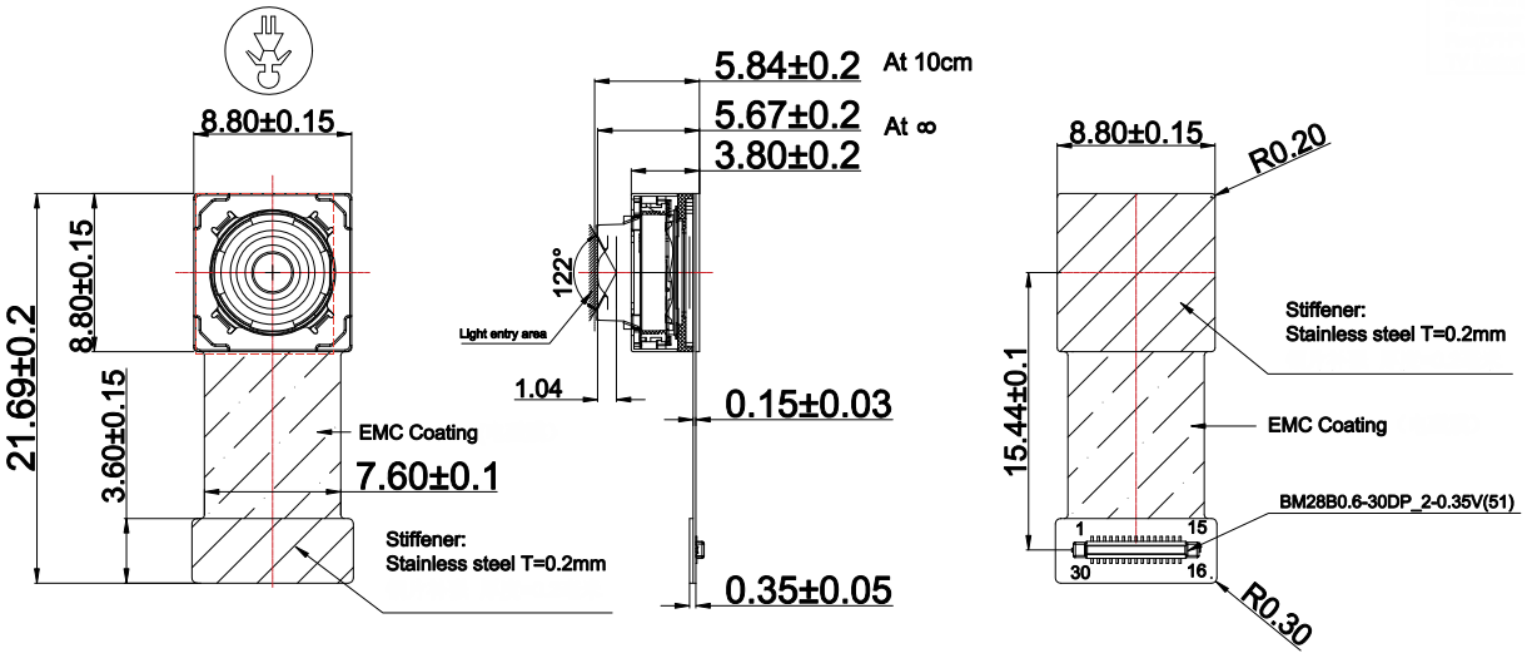
LENS SPECIFICATIONS

Focal Length	2.22 mm
Aperture, F/#	2.2 ±5 %
FOV	95˚ diagonal
	82.5˚ horizontal
	66.5˚ vertical
TV Distortion	<-8 %





DIMENSIONS

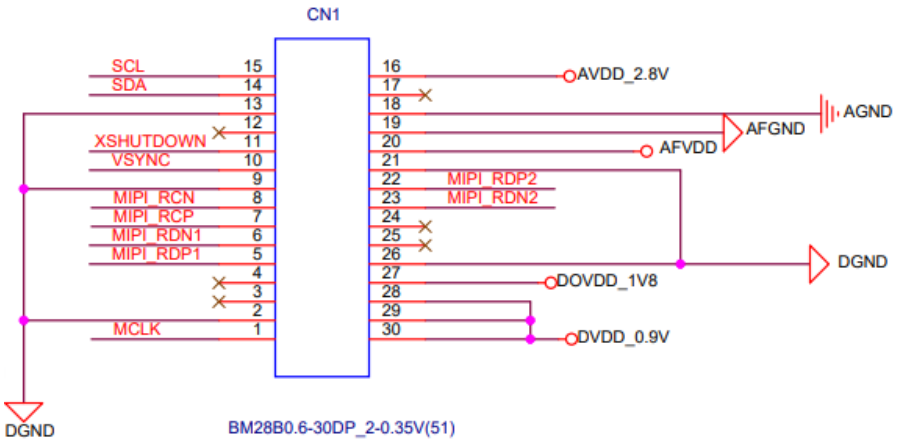


Unit: mm

MODULE CONNECTOR

- Connector Part#:
  BM28B0.6-30DP/2-0.35V(51)
- Number of Positions: 30
- Pitch: 0.35 mm
- Sensor I2C Address: 0X6C (8-bit)
- External Power Supply: 0.9V, 1.8V, 2.8V

Note: 0.9V, 1.8V, 2.8V can rise in any order.



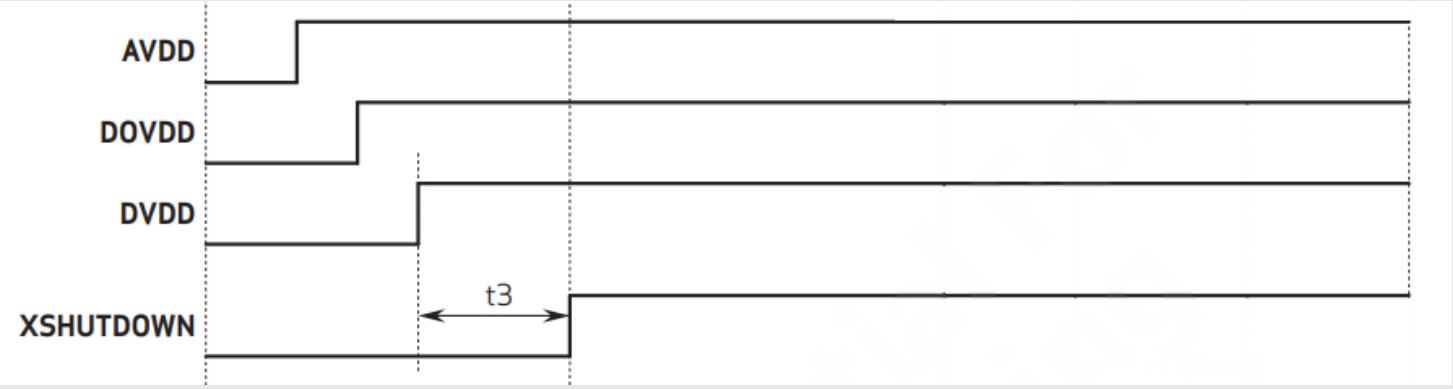
PINOUT DETAILS

Pin No	Signal Name	Pin Type	Description	Voltage Level
1	MCLK	INPUT	Sensor clock signal (Must be provided from the host side)	1.8 V
2	DGND	–	–	–
3	-	–	–	–
4	-	–	–	–
5	MIPI_RDP1	OUTPUT	MIPI Data Lane 1 Differential Pair +	MIPI DPHY
6	MIPI_RDN1	OUTPUT	MIPI Data Lane 1 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	VSYNC	I/O	VSYNC/JTAG_TCK I/O	1.8 V
11	XSHUTDOWN	INPUT	Asynchronous active LOW reset (Require pullup at host side)	1.8 V
12	-	–	–	–
13	DGND	–	–	–

Pin No	Signal Name	Pin Type	Description	Voltage Level
14	SDA	I/O	1.8V IO Camera I2C SDA signal (Require pull-up at the host)	1.8 V
15	SCL	INPUT	1.8V IO Camera I2C SCL signal (Require pull-up at the host)	1.8 V
16	AVDD_2.8V	INPUT	2.8V Analog Power Supply (Must be provided from the host side)	2.8 V
17	-	–	–	–
18	AGND	–	–	–
19	AFGND	–	–	–
20	AFVDD	INPUT	2.8V AF Power Supply	2.8 V
21	DGND	–	–	–
22	MIPI_RDP2	OUTPUT	MIPI Data Lane 2 Differential Pair +	MIPI DPHY
23	MIPI_RDN2	OUTPUT	MIPI Data Lane 2 Differential Pair -	MIPI DPHY
24	-	–	–	–
25	-	–	–	–
26	DGND	–	–	–
27	DOVDD_1V8	INPUT	1.8V I/O Power Supply (Must be provided from the host side)	1.8 V
28	DVDD_0.9V	INPUT	0.9V Digital Power Supply (Must be provided from the host side)	0.9 V
29	DVDD_0.9V	INPUT	0.9V Digital Power Supply (Must be provided from the host side)	0.9 V
30	DVDD_0.9V	INPUT	0.9V Digital Power Supply (Must be provided from the host side)	0.9 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(0.9V) are stable.



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

Power Consumption

Symbol	Min.	Typ.	Max.	Unit
I_{DOVDD}		TBD		mA
I_{DVDD}		TBD		
I_{AVDD}		TBD		

REVISION HISTORY

Revision	Description	Release Date
0.1	Initial draft.	12 Jan 2026
0.2	Corrected the interface info.	10 Jul 2026
0.3	Updated Frame Rate and Interface.	10 Nov 2026

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