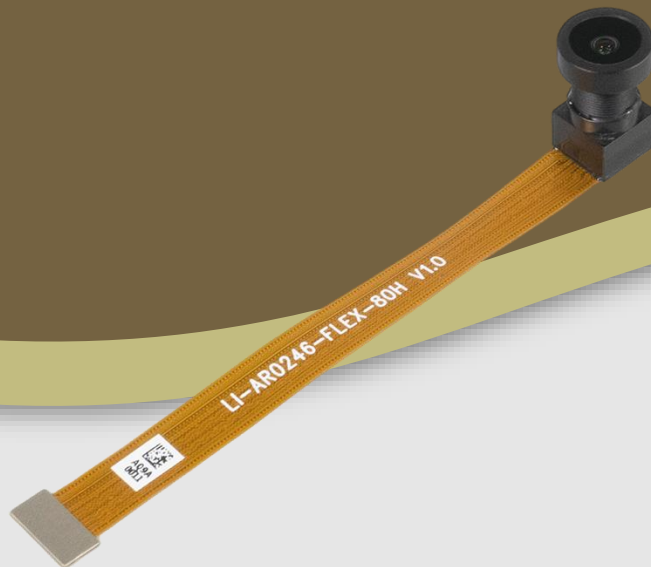




LEOPARD
IMAGING

LI-AR0246-FLEX-80H



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INTRODUCTION

The LI-AR0246-FLEX-80H camera module is equipped with ON Semiconductor 1/4-Inch 2Mp CMOS digital image color sensor AR0246. This camera produces extraordinarily clear, sharp digital pictures, and its ability to capture both continuous video and single frame enhanced NIR response makes it the perfect choice for security applications.

SPECIFICATIONS

Frame Rate	Linear: 1080p @ 60 fps LI-HDR (2exp): 1080p @ 30 fps eHDR (3 exp): 1080p @ 30 fps eDR (1 exp): 1080p @ 30 fps
Output Format	12-bit RAW
Focusing Range	35 cm ~ Infinity
xDR (X-tended Dynamic Range)	Supported
Sensor	ON Semiconductor 1/4-Inch 2Mp CMOS digital image sensor AR0246
Optical Format	1/4"
Color / Mono	Color
Pixel Size	2.0 μm x 2.0 μm , BSI
Resolution	1920 (H) x 1080 (V) (active pixels)
Interface	2-lane MIPI (2 lanes, 1 Gbps/lane)
Power Consumption	TBD
Operating Temp	TBD
Storage Temp	TBD
Weight	~ 2 g

APPLICATIONS

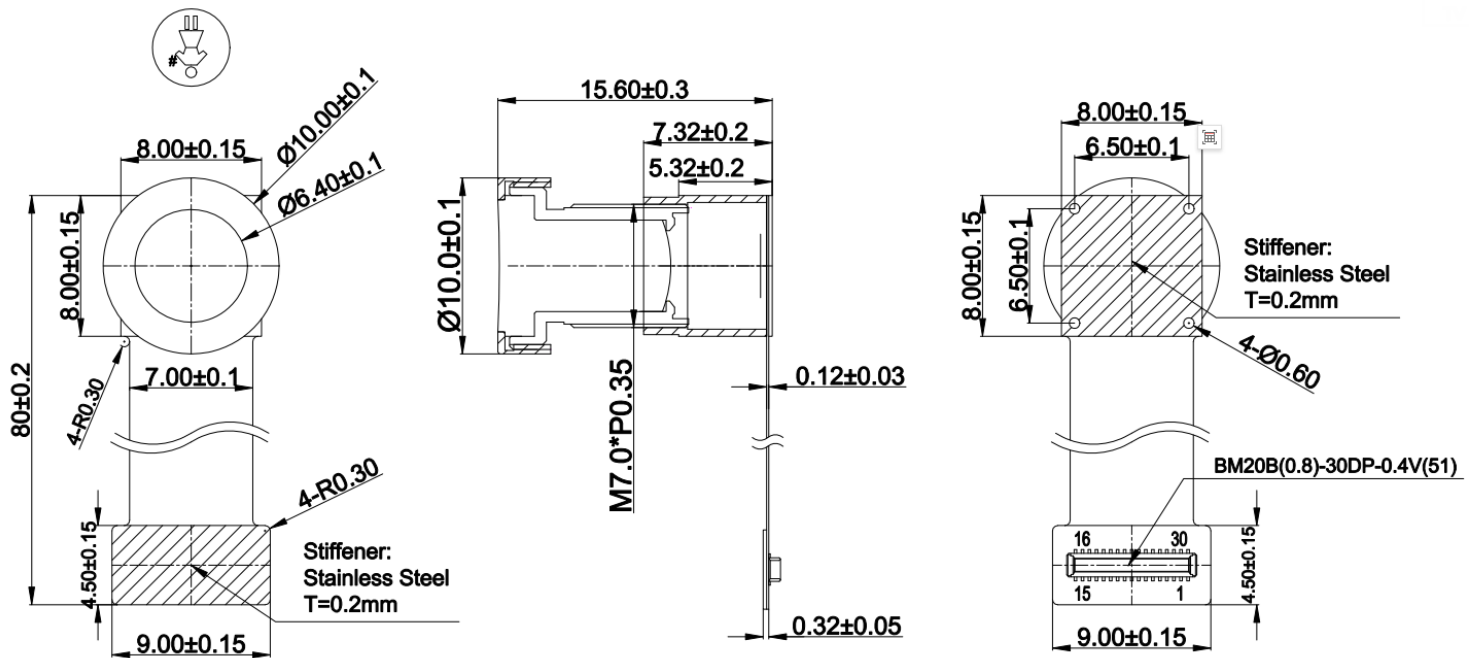
- IoT
- Security
- Robots

LENS SPECIFICATIONS

Effective Focal Length	2.3 $\pm$ 5% mm
Aperture, F/#	2.8 $\pm$ 5%
Field of View (FOV)	40° vertical
	80° horizontal
	90° diagonal
TV Distortion	< -10%



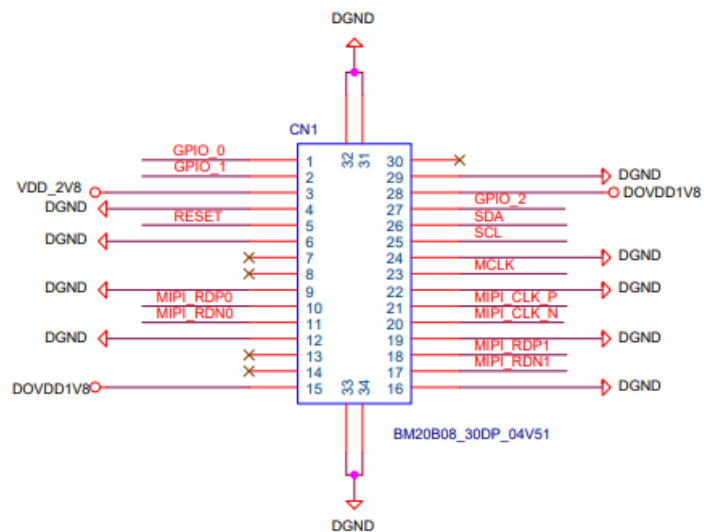
DIMENSIONS



Unit: mm

INTERFACE

- Connector Part#: BM20B(0.8)-30DP-0.4V(51)
- Number of positions: 30
- Pitch: 0.4 mm
- ISP I2C address: 0x20 (8-bit)
- External power supply: 2.8V, 1.8V



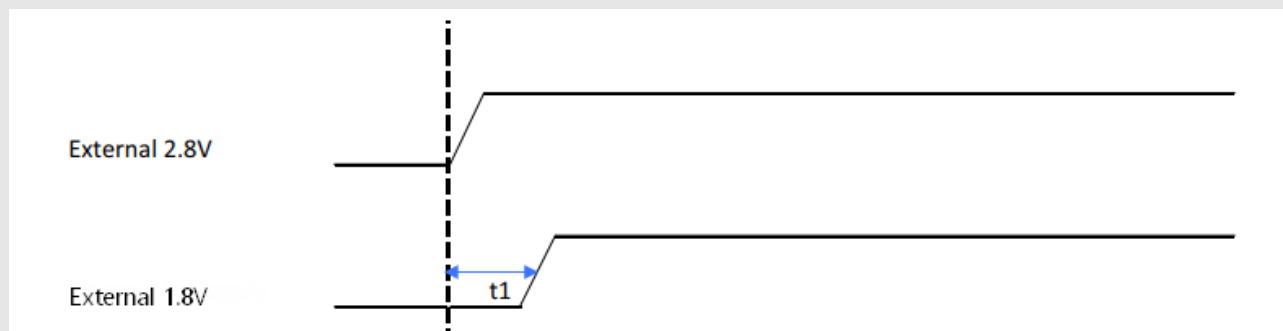
PINOUT DETAILS

Pin No	Signal Name	Pin Type	Description	Voltage Level
1	GPIO_0	I/O	1.8V GPIO connect to sensor Pin-C9	1.8V
2	GPIO_1	I/O	1.8V GPIO connect to sensor Pin-D7	1.8V
3	VDD_2V8	INPUT	2.8V Analog power supply (Must be provided from the host side)	2.8V
4	DGND	-	-	-
5	RESET	INPUT	1.8V IO camera reset signal,active low (Require pull-up at the host)	1.8V
6	DGND	-	-	-
7	-	-	-	-
8	-	-	-	-
9	DGND	-	-	-
10	MIPI_RDPO	OUTPUT	MIPI Data0 Differential Pair +	MIPI DPHY
11	MIPI_RDNO	OUTPUT	MIPI Data0 Differential Pair -	MIPI DPHY
12	DGND	-	-	-
13	-	-	-	-

Pin No	Signal Name	Pin Type	Description	Voltage Level
14	-	-	-	-
15	DOVDD1V8	INPUT	1.8V digital power supply (Must be provided from the host side)	1.8V
16	DGND	-	-	-
17	MIPI_RDN1	OUTPUT	MIPI Data1 Differential Pair -	MIPI DPHY
18	MIPI_RDP1	OUTPUT	MIPI Data1 Differential Pair +	MIPI DPHY
19	DGND	-	-	-
20	MIPI_CLK_N	OUTPUT	MIPI Clock Lane Differential Pair -	MIPI DPHY
21	MIPI_CLK_P	OUTPUT	MIPI Clock Lane Differential Pair +	MIPI DPHY
22	DGND	-	-	-
23	MCLK	INPUT	Sensor clock signal (Must be provided from the host side)	1.8V
24	DGND	-	-	-
25	SCL	INPUT	1.8V IO Camera I2C SCL signal (Require pull-up at the host)	1.8V
26	SDA	I/O	1.8V IO Camera I2C SDA signal (Require pull-up at the host)	1.8V
27	GPIO_2	I/O	1.8V I/O connect to sensor Pin-C8	1.8V
28	DOVDD1V8	INPUT	1.8V digital power supply (Must be provided from the host side)	1.8V
29	DGND	-	-	-
30	-	-	-	-

External Power supply Power On Sequence

1. Turn on external 2.8 V power supply.
2. After t1, turn on external IO power supply.



Timing	Min.	Typ.	Max.	Unit
T1	10	100	-	μs

Power Consumption

MODE	Symbol	Min.	Typ.	Max.	Unit
1920 x 1080 Linear 60 fps	$I_{2.8V}$		26	36.9	mA
	$I_{1.8V}$		6.6	8.8	
1920 x 1080 eHDR 3exp ALTM	$I_{2.8V}$		36.2	50.6	mA
	$I_{1.8V}$		9	14.5	

- REVISION HISTORY

Revision	Description	Release date
0.1	Initial draft.	16 Dec 2025

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