LI-IMX219-MIPI-FF-NANO SPECIFICATION

Model:
LI-IMX219-MIPI-FF-NANO-H90
LI-IMX219-MIPI-FF-NANO-H136
LI-IMX219-MIPI-FF-NANO-H145

Rev 1.5
Leopard Imaging Inc.

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Version History

Version	Description	Release Date
1.0	First release.	16. Mar. 2019
1.1	Added H90 and H135 version	22. Mar. 2019
1.2	Updated the dimensions of H90 and H135 modules.	14. Apr. 2019
1.3	Removed H135 module.	26. Apr. 2019
1.4	Added H136 module.	18. Oct. 2019
1.5	Deleted info quoted from sensor spec.	25. May. 2022

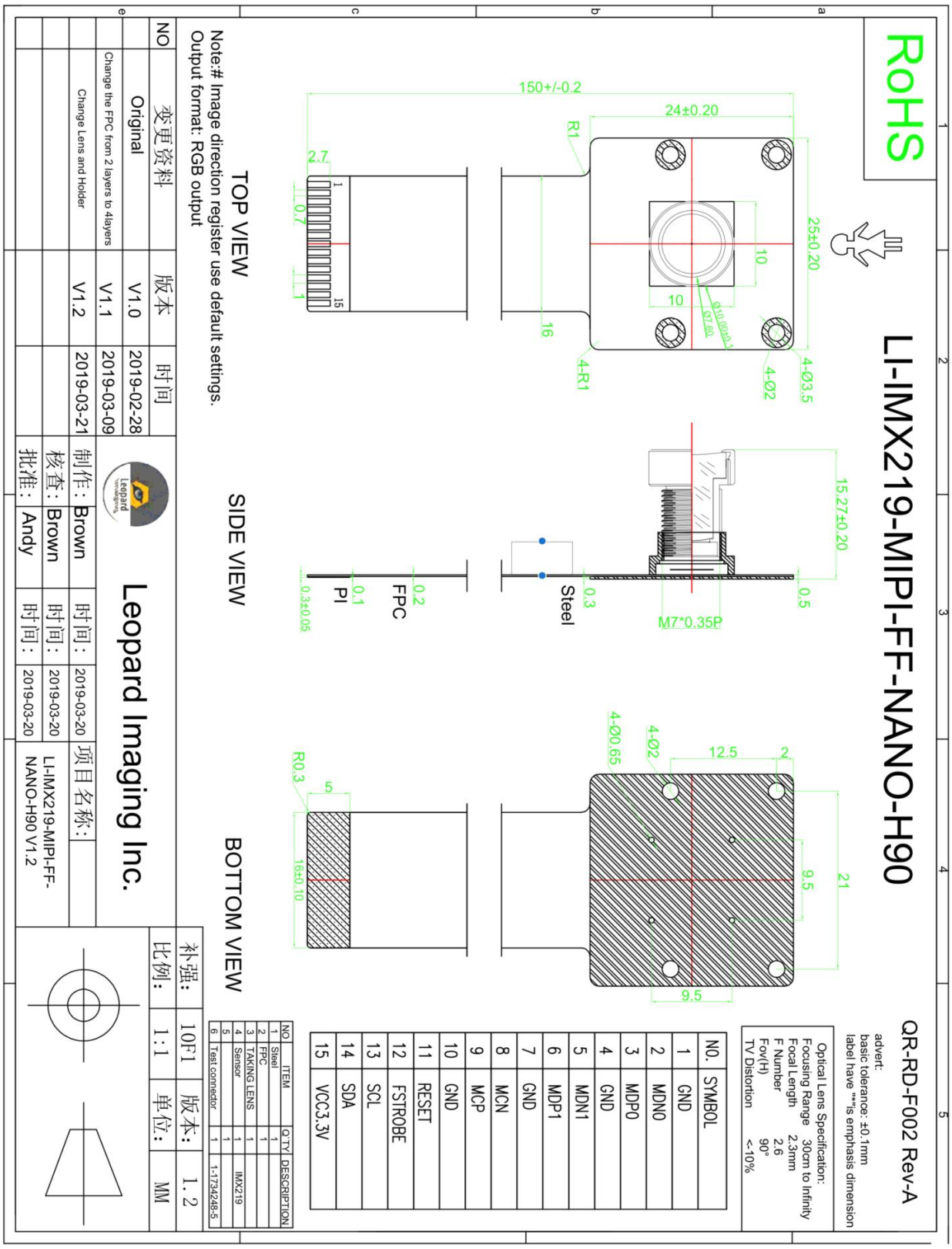
Key Information

Module Part#		LI-IMX219-MIPI-FF-NANO
Compatible Platform		NVIDIA® Jetson Nano™ Developer Kit
Module Size	H90	150.0 (L) x 25.0 (W) x 15.27 (H) mm
	H136	150.0 (L) x 25.0 (W) x 15.3 (H) mm
	H145	150.0 (L) x 25.0 (W) x 14.1 (H) mm
Sensor Type		Sony IMX219 8.08MP Color sensor
Active Pixels		3280 (H) x 2464 (V)
Image Size		Diagonal 4.60 mm (Type 1/4.0)
F/No.		2.6 (H90) / 2.0 (H136) / 2.5 (H145)
Focal Length		2.3 mm (H90) / 1.58 mm (H136) / 1.55 mm (H145)
FOV		90°(H) / 136°(H) / 145°(H)
TV Distortion		< -10% (H90) / < -15%(H136) / < -15% (H145)
Focusing Range		30 cm ~ Infinity
Pixel size		1.12 x 1.12 µm
IR Cutter Filter		Yes
Temperature Range	Operating	-20°C to +60°C
	Storage	-30°C to +80°C
Data Output Interface		CSI-2 MIPI 2-lane
Maximum Image Transfer Rate		3280 x 2464 @ 21 fps
Mating Connector	Part#	1-1734248-5
	Number of Positions	15
	Pitch	0.039" (1.00mm)

Pin Assignment

No.	Name	Pin Type	Description
1	GND	Ground	
2	MDN0	O	MIPI data positive output
3	MDP0	O	MIPI data negative output
4	GND	Ground	
5	MDN1	O	MIPI data positive output
6	MDP1	O	MIPI data negative output
7	GND	Ground	
8	MCN	O	MIPI clock negative output
9	MCP	O	MIPI clock positive output
10	GND	Ground	
11	RESET	I	Reset
12	FSTROBE	O	Strobe output
13	SCL	I	
14	SDA	I/O	
15	VCC3.3V	Power	

Mechanical Diagram


RoHS
LI-IMX219-MIPI-FF-NANO-H90
QR-RD-F002 Rev-A
advert:
basic tolerance: ±0.1mm
label have "*"is emphasis dimension
Optical Lens Specification:
Focusing Range 30cm to Infinity
Focal Length 2.3mm
F Number 2.6
Fov(H) 90°
TV Distortion <-10%
NO. SYMBOL
1 GND
2 MDN0
3 MDP0
4 GND
5 MDN1
6 MDP1
7 GND
8 MCN
9 MCP
10 GND
11 RESET
12 FSTROBE
13 SCL
14 SDA
15 VCC3.3V
NO ITEM Q'TY DESCRIPTION
1 Steel 1
2 FPC 1
3 TAKING LENS 1
4 Sensor 1 IMX219
5 1
6 Test connector 1 1-1734248-5
150+/-0.2
24±0.20
25±0.20
4-Ø3.5
4-Ø2
4-R1
R1
16
10
2.7
0.7
15.27±0.20
0.5
0.3
Steel
M7*0.35P
0.2
FPC
0.1
PI
0.3±0.05
4-Ø0.65
12.5
9.5
21
R0.3
16±0.10
TOP VIEW
SIDE VIEW
BOTTOM VIEW
Note:# Image direction register use default settings.
Output format: RGB output
NO 变更资料 版本 时间
Original V1.0 2019-02-28
Change the FPC from 2 layers to 4layers V1.1 2019-03-09
Change Lens and Holder V1.2 2019-03-21
制作: Brown 时间: 2019-03-20
核查: Brown 时间: 2019-03-20
批准: Andy 时间: 2019-03-20
Leopard Imaging Inc.
项目名称:
LI-IMX219-MIPI-FF-NANO-H90 V1.2
补强: 1OF1
比例: 1:1
版本: 1. 2
单位: MM

RoHS

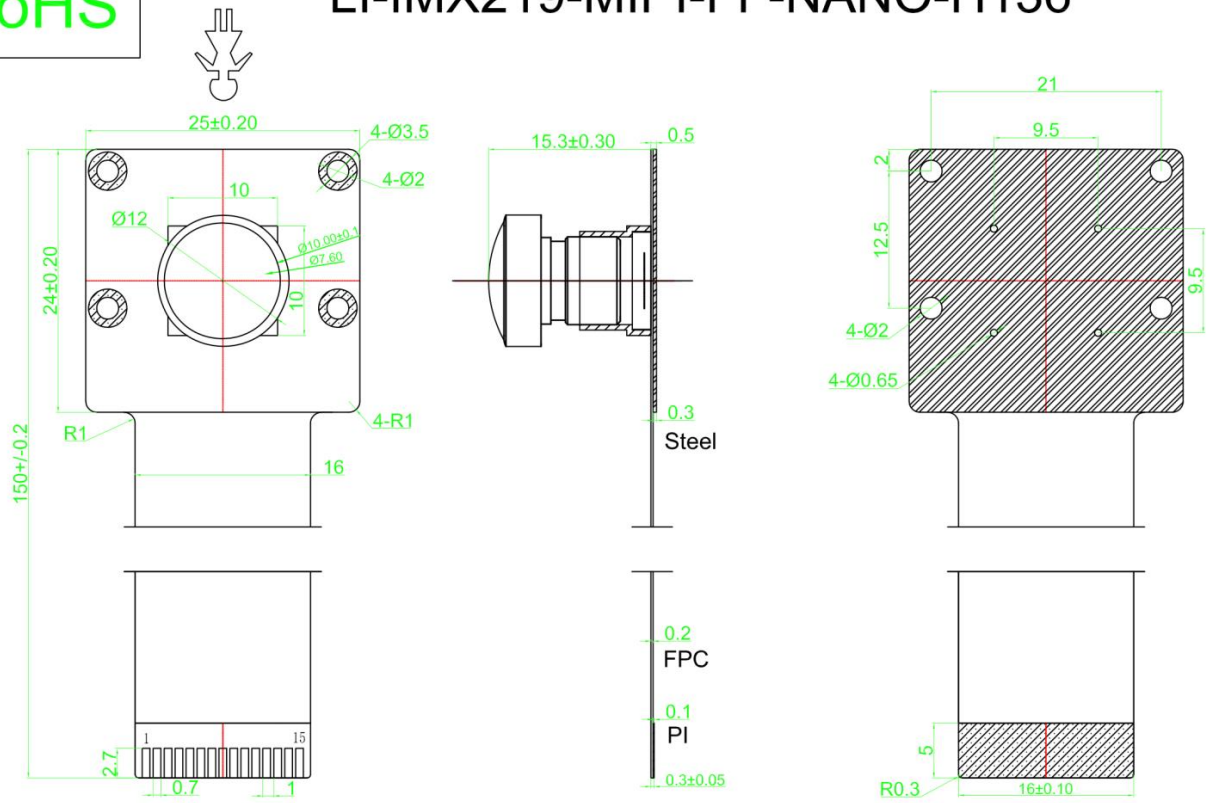
LI-IMX219-MIPI-FF-NANO-H136

QR-RD-F002 Rev-A

advert:
basic tolerance: ±0.1mm
label have "*"is emphasis dimension

Optical Lens Specification:

Focusing Range	30cm to Infinity
Focal Length	1.58mm
F Number	2.0
Fov(H)	136°
TV Distortion	<-15%



TOP VIEW SIDE VIEW BOTTOM VIEW

NO.	SYMBOL
1	GND
2	MDN0
3	MDP0
4	GND
5	MDN1
6	MDP1
7	GND
8	MCN
9	MCP
10	GND
11	RESET
12	FSTROBE
13	SCL
14	SDA
15	VCC3.3V

NO	ITEM	Q'TY	DESCRIPTION
1	Steel	1	
2	FPC	1	
3	TAKING LENS	1	
4	Sensor	1	IMX219
5		1	
6	Test connector	1	1-1734248-5

Note:# Image direction register use default settings.
Output format: RGB output

NO	变更资料	版本	时间
	Original	V1.0	2019-02-28
	Change the FPC from 2 layers to 4layers	V1.1	2019-03-09
	Change FOV and TTL	V1.2	2019-03-21
	Change FPC and Holder	V1.3	2019-10-17

Leopard Imaging Inc.

制作:	Brown	时间:	2019-08-02	项目名称:	
核查:	Brown	时间:	2019-10-17	LI-IMX219-MIPI-FF-NANO-H136	
批准:	Andy	时间:	2019-10-17		

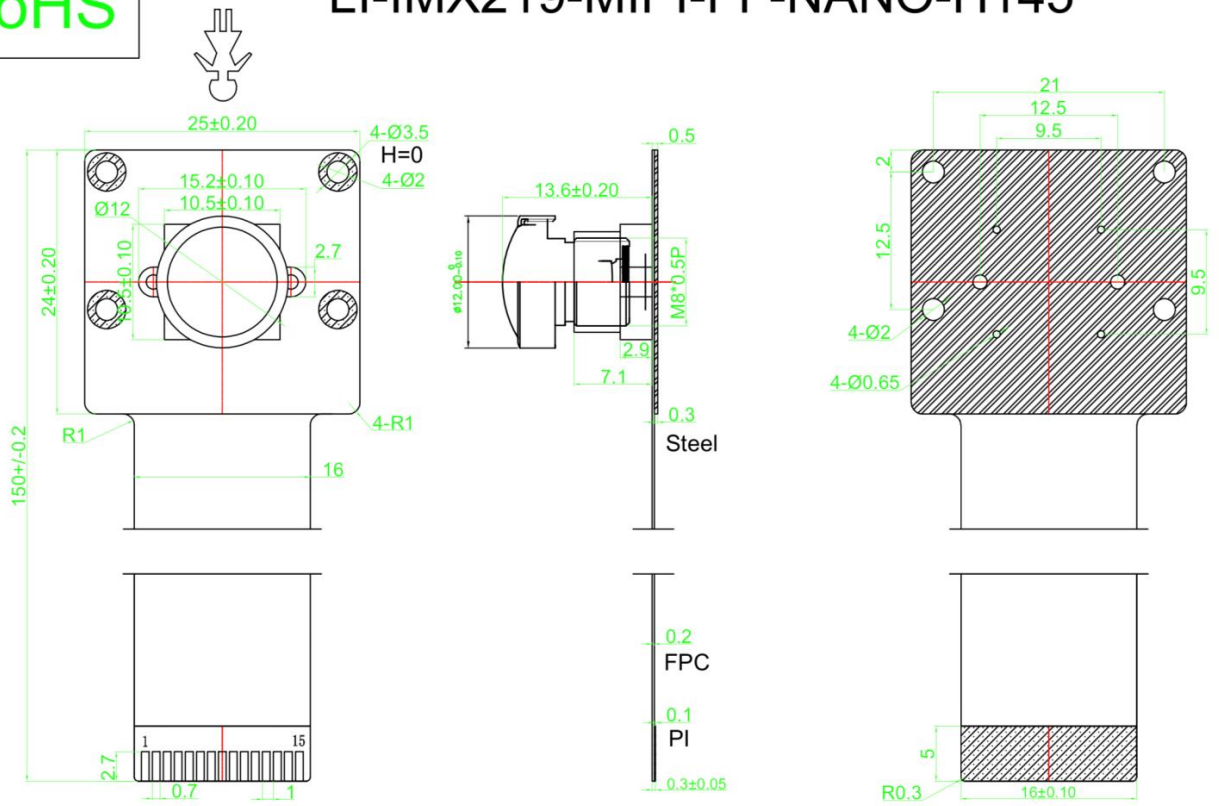
补强:	10F1	版本:	1.2
比例:	1:1	单位:	MM

RoHS

LI-IMX219-MIPI-FF-NANO-H145

QR-RD-F002 Rev-A

advert:
basic tolerance: ±0.1mm
label have "*"is emphasis dimension



TOP VIEW

SIDE VIEW

BOTTOM VIEW

Note:# Image direction register use default settings.
Output format: RGB output FPC 4 Layers

Optical Lens Specification:

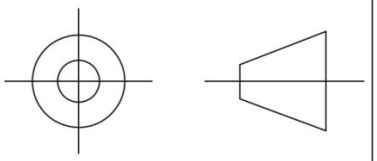
Focusing Range	30cm to Infinity
Focal Length	1.55mm
F Number	2.5
Fov(H)	145°
TV Distortion	<-15%

NO.	SYMBOL
1	GND
2	MDN0
3	MDP0
4	GND
5	MDN1
6	MDP1
7	GND
8	MCN
9	MCP
10	GND
11	RESET
12	FSTROBE
13	SCL
14	SDA
15	VCC3.3V

NO	ITEM	Q'TY	DESCRIPTION
1	Steel	1	
2	FPC	1	
3	TAKING LENS	1	
4	Sensor	1	IMX219
5		1	
6	Test connector	1	1-1734248-5

NO	变更资料	版本	时间
	Original	V1.0	2019-02-28
	Change the FPC from 2 layers to 4layers	V1.1	2019-03-09
	Change FOV and TTL	V1.2	2019-03-18

Leopard Imaging Inc.

制作:	Brown	时间:	2019-03-20	项目名称:	LI-IMX219-MIPI-FF-NANO-H145 V1.2
核查:	Brown	时间:	2019-03-20		
批准:	Andy	时间:	2019-03-20		

补强:	10F1	版本:	1.1
比例:	1:1	单位:	MM