


# LANBAO

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Lanbao reserves the right to make changes

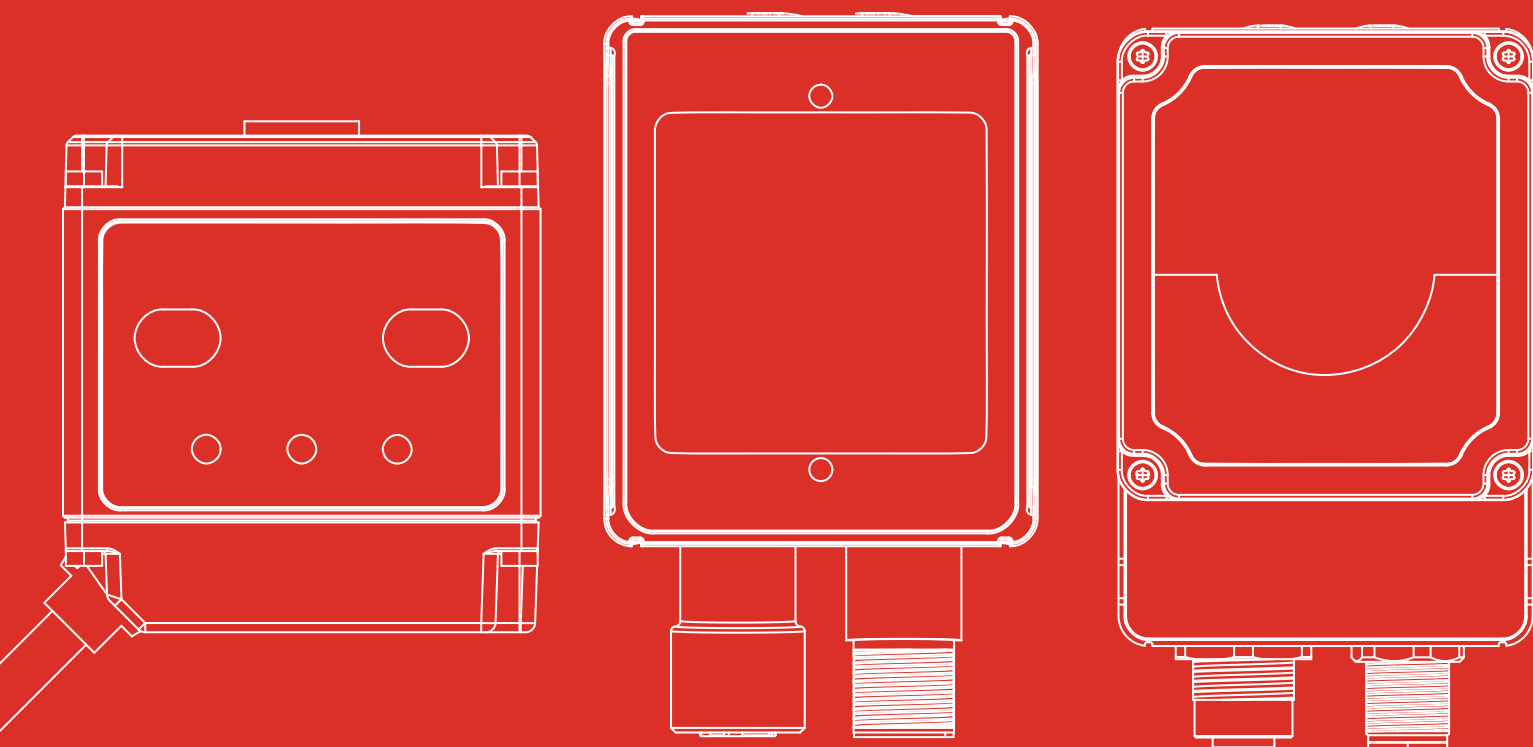




# LANBAO

# Code Reader

# Selection Catalog





Sensing the Dream



## About Us

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Shanghai Lanbao Sensing Technology Co., Ltd., established in 1998, is a leading Chinese provider of industrial automation solutions. We specialize in developing innovative sensing technologies and systems, driving advancements in intelligent manufacturing. Our products are widely used across various industries, including electronics, automotive, and energy, enhancing efficiency, safety, and sustainability.

Lanbao offers a comprehensive range of sensors, including photoelectric, inductive, capacitive, laser, millimeter wave, ultrasonic, and 3D laser measurement. Our solutions cater to diverse applications, from industrial robotics and automation to advanced manufacturing processes.

Recognized for our commitment to quality and innovation, Lanbao sensors are a preferred choice for replacing imported products, contributing to the localization of China's industrial automation sector.



**In 1998**  
Established



**360+**  
Patents and  
copyrights



**99,000m<sup>2</sup>**  
Factory



**120+**  
Countries



**10,000+**  
Products

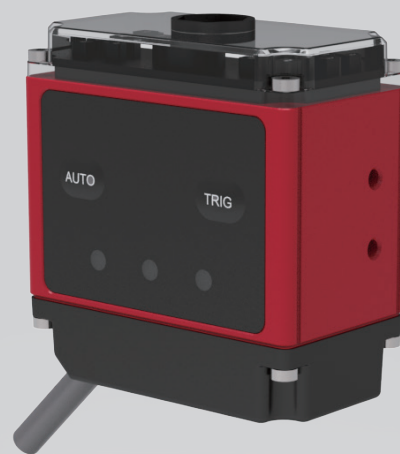


**15,000,000**  
Pcs/year



# PID-P2000G Series Code Reader

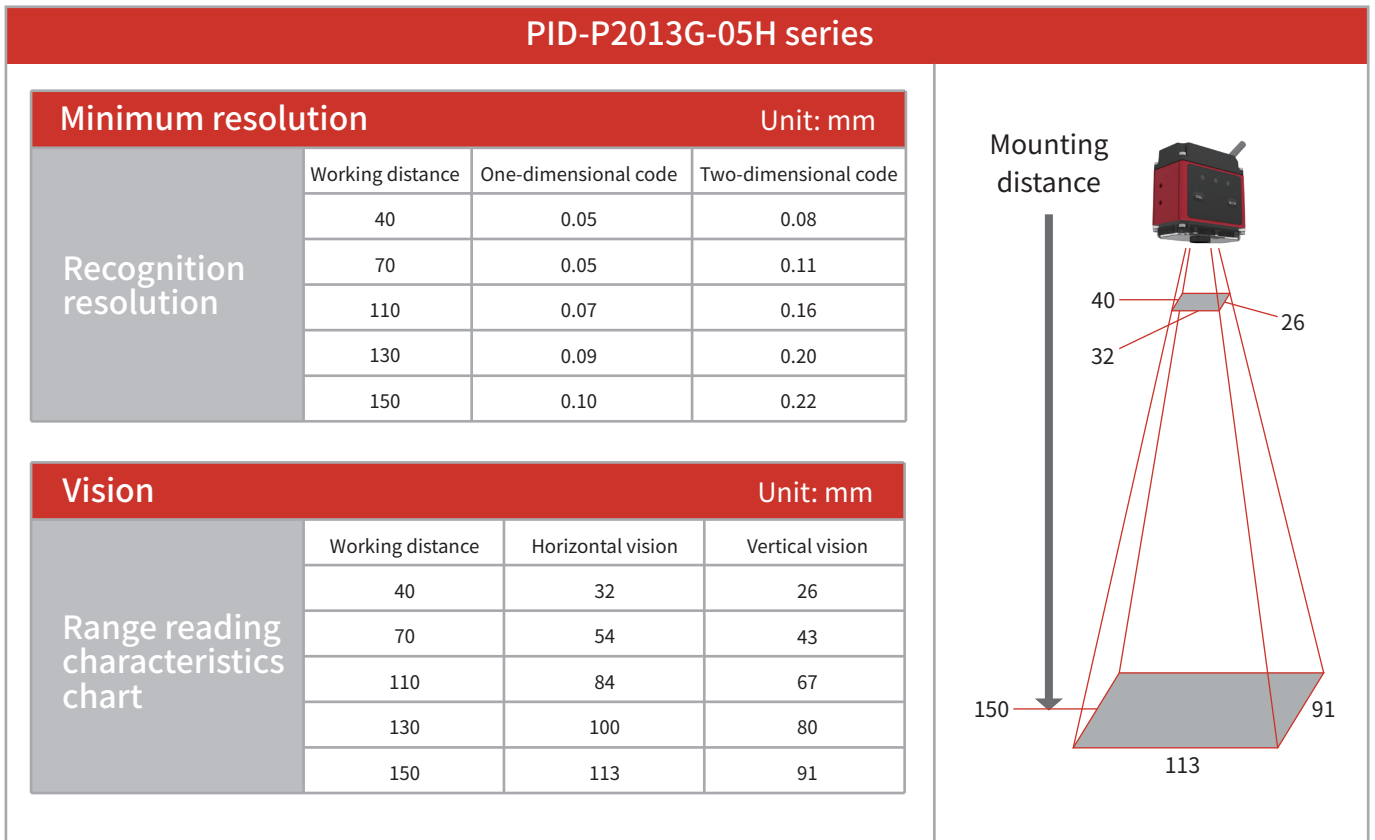
- ◆ Adoption of high-performance image sensors.
- ◆ Built-in deep learning code reading algorithm, efficiently read barcodes and QR codes, impervious to dirt and damage interference.
- ◆ Compact design fits a wider range of industrial application scenarios.
- ◆ Supports transmission protocols such as TCP/IP, Serial, FTP and HTTP.
- ◆ Rich IO interfaces allow for the connection of multiple input and output signals.



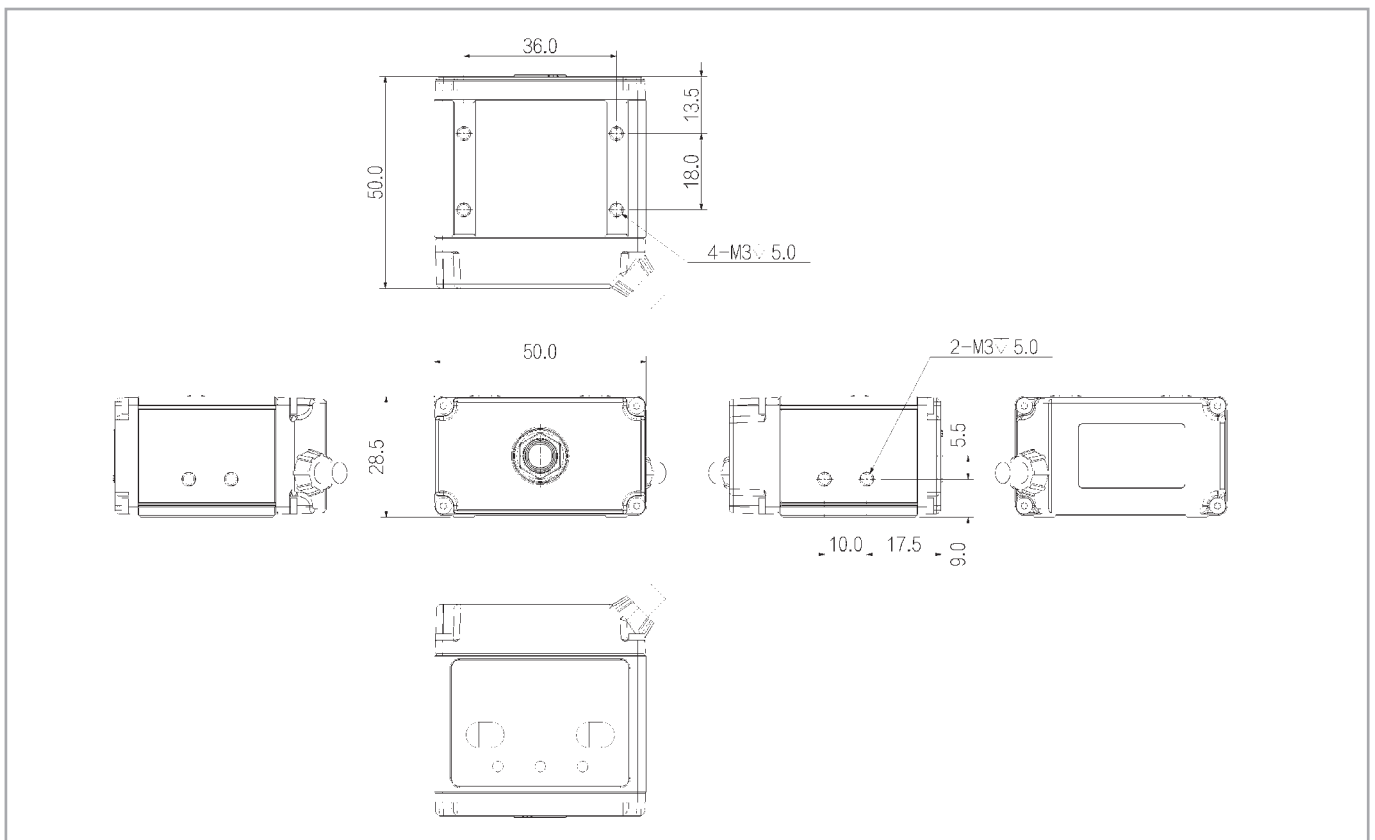
Part number	Light source	Sensor type	Shutter type	Resolution	Maximum processing frame rate (fps)	Maximum read speed(code/s)
PID-P2013G-05-RWN-110	Red and white light source, regular lens cover	CMOS	Global	1280x1024	60	31
PID-P2013G-05H-WN	White light source, regular lens cover	CMOS	Global	1280x1024	60	31
PID-P2013G-05H-RWN	Red and white light source, regular lens cover	CMOS	Global	1280x1024	60	31

Lens focal	4.8mm(Fixed focus/ manual focus)
Lens connection	M8-Mount
Connection type	The M12 connector provides power and I/O:RS232, 1 isolated input, 1 isolated output and 1 configurable input/output
Network interface	100M ethernet
Code type	One-dimensional code: Code39, Code128, EAN8, EAN13, UPC_A, UPC_E, Code93, GS1-128, GS1-DataBar expand, ITF, PHARMACODE, CODABAR etc. Two-dimensional code: QR Code, Data Matrix, PDF417 etc.
Communication mode	SDK, TCP Client, FTP, TCP Server, RS232, Profinet, Modbus, Ether Net/IP, MCUdp, MCTcp, FinsUDP etc.
Sighting device	Red light indicator
Dimensions	50mm × 50mm × 28.5mm(Without cable)
Reading distance	Manual focus: 40-150mm; Fixed focus: 110mm
Weight	<130g
Power consumption	<2.5W
Power supply mode	Support 9V~26V, 0.5A input
Ambient humidity	20%~95%, Non-condensing
Temperature	Operating temperature: -20~50°C; Storage temperature: -30~70°C
Protection degree	IP65













**Range reading characteristics chart**



**Dimensions**



**Interface definition**

Pin	Signal	Description	Matching cable color
1	POWER	Power input	 Red
2	POWER_GND	Power ground	 Black
3	OPT_OUT0	Optocoupled output	 Brown
4	OPT_GND	Optocoupled ground	 Purple+ white
5	OPT_IN0	Optocoupled input	 Yellow
6	GPIO	Configurable IO	 Blue
7	MD1_P	RJ45 interface	 Green
8	MD1_N	RJ45 interface	 Green+ white
9	MD0_P	RJ45 interface	 Orange
10	MD0_N	RJ45 interface	 Orange+white
11	RS232_RXD	Serial port receiver	 Purple
12	RS232_TXD	Serial port transmitter	 Gray

A series of horizontal dashed lines for writing.



# PID-P3000X Series Code Reader

- ◆ Adoption of high-performance image sensors.
- ◆ Built-in deep learning code reading algorithm, efficiently read barcodes and QR codes, impervious to dirt and damage interference.
- ◆ Light sources are controlled separately by zones, adapting to a variety of different lighting environments.
- ◆ Equipped with a motorized lens for automatic focusing, significantly improving the efficiency of setup and adjustment.
- ◆ Supports transmission protocols such as TCP/IP, Serial, FTP and HTTP.
- ◆ Rich IO interfaces allow for the connection of multiple input and output signals.



Part number	Light source	Sensor type	Shutter type	Resolution	Maximum processing frame rate (fps)	Maximum read speed(code/s)
PID-P3013X-XXM-RH	Red light source, semi-polarized lens cover	CMOS	Global	1280x1024	60	60
PID-P3013X-XXM-RF	Red light source, full-polarized lens cover	CMOS	Global	1280x1024	60	60
PID-P3013X-XXM-WN	White light source, regular lens cover	CMOS	Global	1280x1024	60	60
PID-P3013X-XXM-BH	Blue light source, semi-polarized lens cover	CMOS	Global	1280x1024	60	60
PID-P3013X-XXM-BF	Blue light source, full-polarized lens cover	CMOS	Global	1280x1024	60	60

Lens focal	7mm/12mm(Auto focus)
Lens connection	M8-Mount
Connection type	The M12 connector provides power and I/O: RS232, 2 isolated inputs and 3 isolated outputs
Network interface	100M ethernet
Code type	One-dimensional code: Code39, Code128, EAN8, EAN13, UPC_A, UPC_E, Code93, GS1-128, GS1-DataBar expand, ITF, PHARMACODE, CODABAR etc. Two-dimensional code: QR Code, Data Matrix, PDF417 etc.
Communication mode	SDK, TCP Client, FTP, TCP Server, RS232, Profinet, Modbus, Ether Net/IP, MCUdp, MCTcp, FinsUDP etc.
Sighting device	Red LED
Dimensions	47mm × 57.8mm × 38mm(Without cable)
Reading distance	50-500mm
Weight	<180g
Power consumption	<14W
Power supply mode	Support 9V~26V, 1.5A input
Ambient humidity	20%~95%, Non-condensing
Temperature	Operating temperature: -20~50°C; Storage temperature: -30~70°C
Protection degree	IP65

**Range reading characteristics chart-P3013X series**

**PID-P3013X-07M series**

**Minimum resolution**

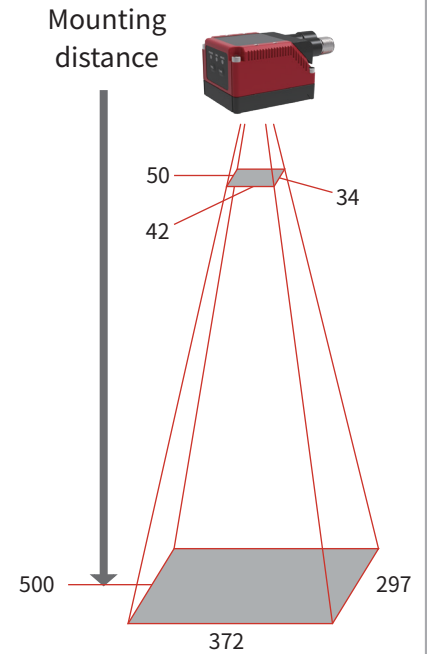
Unit: mm

Recognition resolution	Working distance	One-dimensional code	Two-dimensional code
	50	0.04	0.08
	150	0.10	0.23
	230	0.15	0.34
	300	0.19	0.44
	400	0.26	0.58
	500	0.32	0.73

**Vision**

Unit: mm

Range reading characteristics chart	Working distance	Horizontal vision	Vertical vision
	50	42	34
	150	116	92
	230	173	139
	300	225	180
	400	298	239
	500	372	297



**PID-P3013X-12M series**

**Minimum resolution**

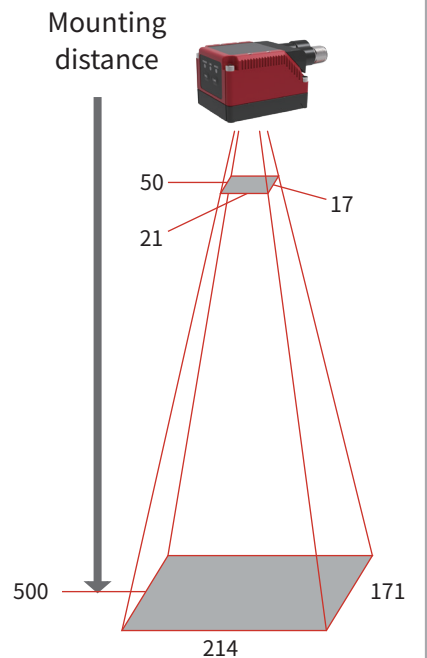
Unit: mm

Recognition resolution	Working distance	One-dimensional code	Two-dimensional code
	50	0.04	0.04
	150	0.06	0.13
	230	0.08	0.19
	300	0.11	0.25
	400	0.15	0.33
	500	0.18	0.42

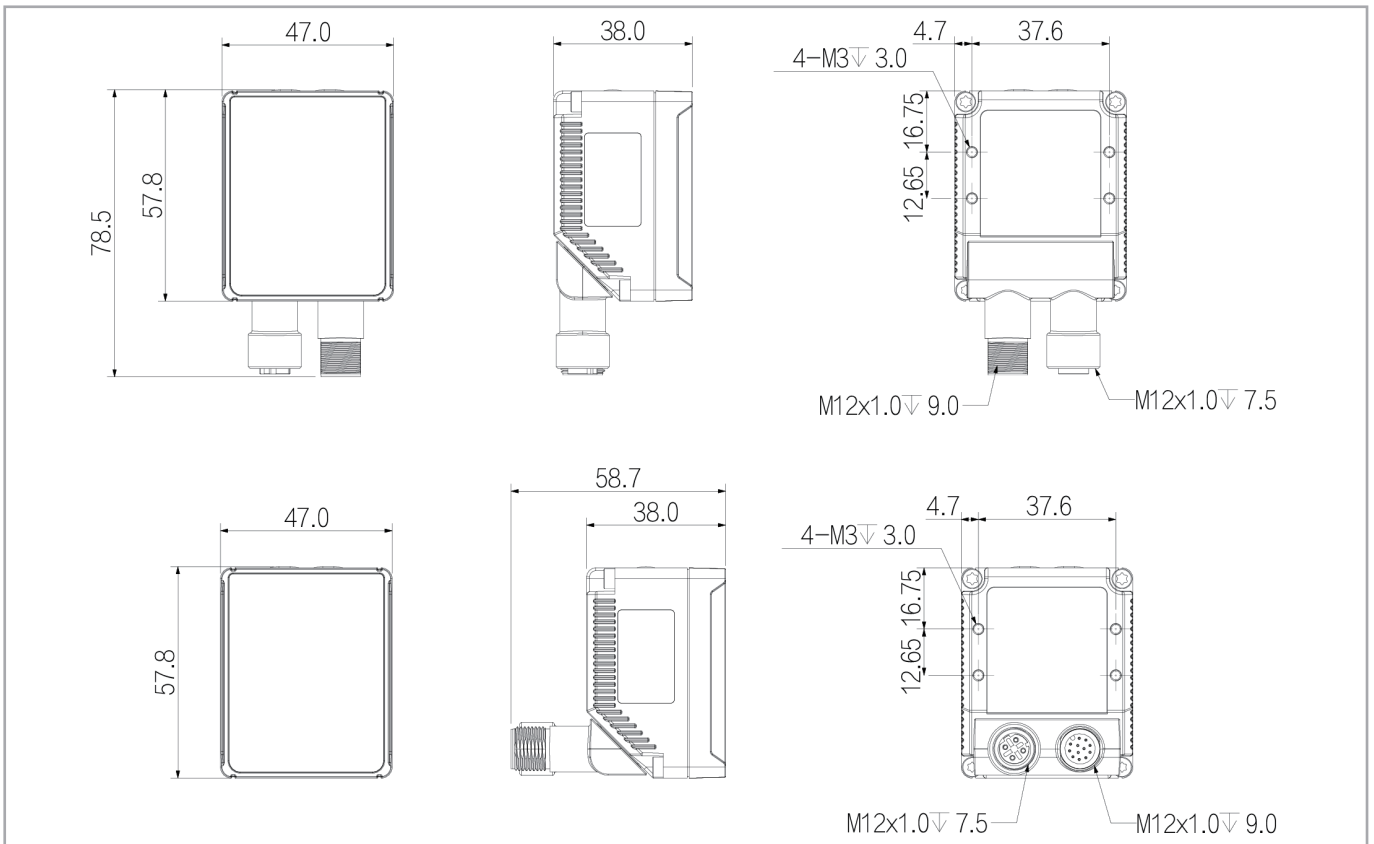
**Vision**

Unit: mm

Range reading characteristics chart	Working distance	Horizontal vision	Vertical vision
	50	21	17
	150	64	51
	230	98	79
	300	128	103
	400	171	137
	500	214	171



**Dimensions**



**Interface definition**

Pin	Signal	Description	Matching cable color
1	OPT_OUT2	Optocoupled isolation output 2 (LINE 4)	Brown+ white
2	RS232_TXD	RS232 Serial port transmitter	Gray
3	RS232_RXD	RS232 Serial port receiver	Purple
4	SIGNAL_GND	RS232 Serial port ground	Black+ white
5	OPT_IN1	Optocoupled isolation input 1 (LINE 1)	Yellow
6	OPT_IN_GND	Optocoupled isolation input ground	Purple+ white
7	POWER	Power supply	Red
8	POWER_GND	Power supply ground	Black
9	OPT_OUT_GND	Optocoupled isolation input ground	Green
10	OPT_IN0	Optocoupled isolation input 0 (LINE 0)	Orange
11	OPT_OUT0	Optocoupled isolation output 0 (LINE 2)	Blue
12	OPT_OUT1	Optocoupled isolation output 1 (LINE 3)	Brown
13		Shielded ground	White

A series of horizontal dashed lines for writing.

# PID-P3000G Series Code Reader

- ◆ Adoption of high-performance image sensors.
- ◆ Built-in deep learning code reading algorithm, efficiently read barcodes and QR codes, impervious to dirt and damage interference.
- ◆ Light sources are controlled separately by zones, adapting to a variety of different lighting environments.
- ◆ Equipped with a motorized lens for automatic focusing, significantly improving the efficiency of setup and adjustment.
- ◆ Supports transmission protocols such as TCP/IP, Serial, FTP and HTTP.
- ◆ Rich IO interfaces allow for the connection of multiple input and output signals.



Part number	Light source	Sensor type	Shutter type	Resolution	Maximum processing frame rate (fps)	Maximum read speed(code/s)
PID-P3013G-XXM-RH	Red light source, Half-polarized lens cover	CMOS	Global	1280x1024	60	90
PID-P3013G-XXM-RF	Red light source, Full-polarized lens cover	CMOS	Global	1280x1024	60	90
PID-P3013G-XXM-WN	White light source, Normal lens cover	CMOS	Global	1280x1024	60	90
PID-P3013G-XXM-BH	Blue light source, Half-polarized lens cover	CMOS	Global	1280x1024	60	90
PID-P3013G-XXM-BF	Blue light source, Full-polarized lens cover	CMOS	Global	1280x1024	60	90
PID-P3016G-XXM-RH	Red light source, Half-polarized lens cover	CMOS	Global	1440x1080	60	90
PID-P3016G-XXM-RF	Red light source, Full-polarized lens cover	CMOS	Global	1440x1080	60	90
PID-P3016G-XXM-WN	White light source, Normal lens cover	CMOS	Global	1440x1080	60	90
PID-P3016G-XXM-BH	Blue light source, Half-polarized lens cover	CMOS	Global	1440x1080	60	90
PID-P3016G-XXM-BF	Blue light source, Full-polarized lens cover	CMOS	Global	1440x1080	60	90
PID-P3050G-XXM-RH	Red light source, Half-polarized lens cover	CMOS	Global	2368x1792	45	90
PID-P3050G-XXM-RF	Red light source, Full-polarized lens cover	CMOS	Global	2368x1792	45	90
PID-P3050G-XXM-WN	White light source, Normal lens cover	CMOS	Global	2368x1792	45	90
PID-P3050G-XXM-BH	Blue light source, Half-polarized lens cover	CMOS	Global	2368x1792	45	90
PID-P3050G-XXM-BF	Blue light source, Full-polarized lens cover	CMOS	Global	2368x1792	45	90
PID-P3060G-XXM-RH	Red light source, Half-polarized lens cover	CMOS	Global	3072x2048	40	90
PID-P3060G-XXM-RF	Red light source, Full-polarized lens cover	CMOS	Global	3072x2048	40	90
PID-P3060G-XXM-WN	White light source, Normal lens cover	CMOS	Global	3072x2048	40	90
PID-P3060G-XXM-BH	Blue light source, Half-polarized lens cover	CMOS	Global	3072x2048	40	90
PID-P3060G-XXM-BF	Blue light source, Full-polarized lens cover	CMOS	Global	3072x2048	40	90

Lens focal	6/8/12/16/25mm(Auto focus)
Lens connection	M8-Mount
Connection type	The M12 connector provides power and I/O: RS232, 2 isolated inputs and 3 isolated outputs
Network interface	GbE (gigabit Ethernet)
Code type	One-dimensional code: Code39, Code128, EAN8, EAN13, UPC_A, UPC_E, Code93, GS1-128, GS1-DataBar expand, ITF, PHARMACODE, CODABAR etc. Two-dimensional code: QR Code, Data Matrix, PDF417 etc.
Communication mode	SDK, TCP Client, FTP, TCP Server, RS232, Profinet, Modbus, Ether Net/IP, MCUdp, MCTcp, Fins UDP etc.
Sighting device	Red light indicator
Dimensions	82mm × 55mm × 53mm(Without cable)
Reading distance	50-500mm
Weight	<350g
Power consumption	<18W
Power supply mode	Support 9V~26V, 2A input
Ambient humidity	20%~95%, Non-condensing
Temperature	Operating temperature: -20~50°C; Storage temperature: -30~70°C
Protection degree	IP65

Range reading characteristics chart-P3013G series

**PID-P3013G-06M series**

Minimum resolution		Unit: mm		
Recognition resolution	Working distance	One-dimensional code	Two-dimensional code	
	80	0.07	0.15	
	150	0.12	0.26	
	230	0.17	0.39	
	300	0.22	0.50	
	400	0.29	0.67	
	600	0.44	0.99	
	1500	1.08	2.45	

Vision		Unit: mm		
Range reading characteristics chart	Working distanc	Horizontal vision	Vertical vision	
	80	76	60	
	150	134	107	
	230	200	160	
	300	258	206	
	400	341	273	
	600	507	405	
	1500	1252	1002	

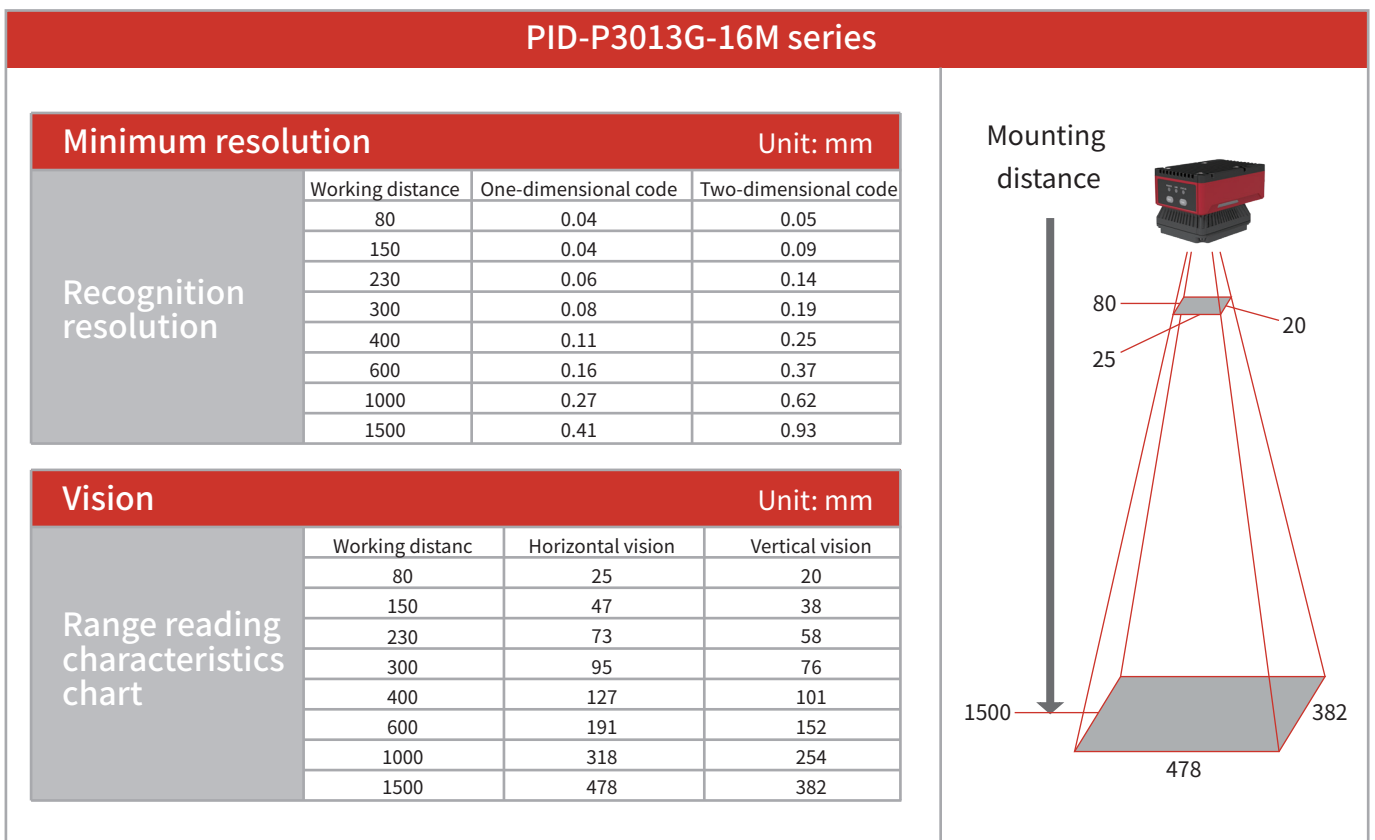
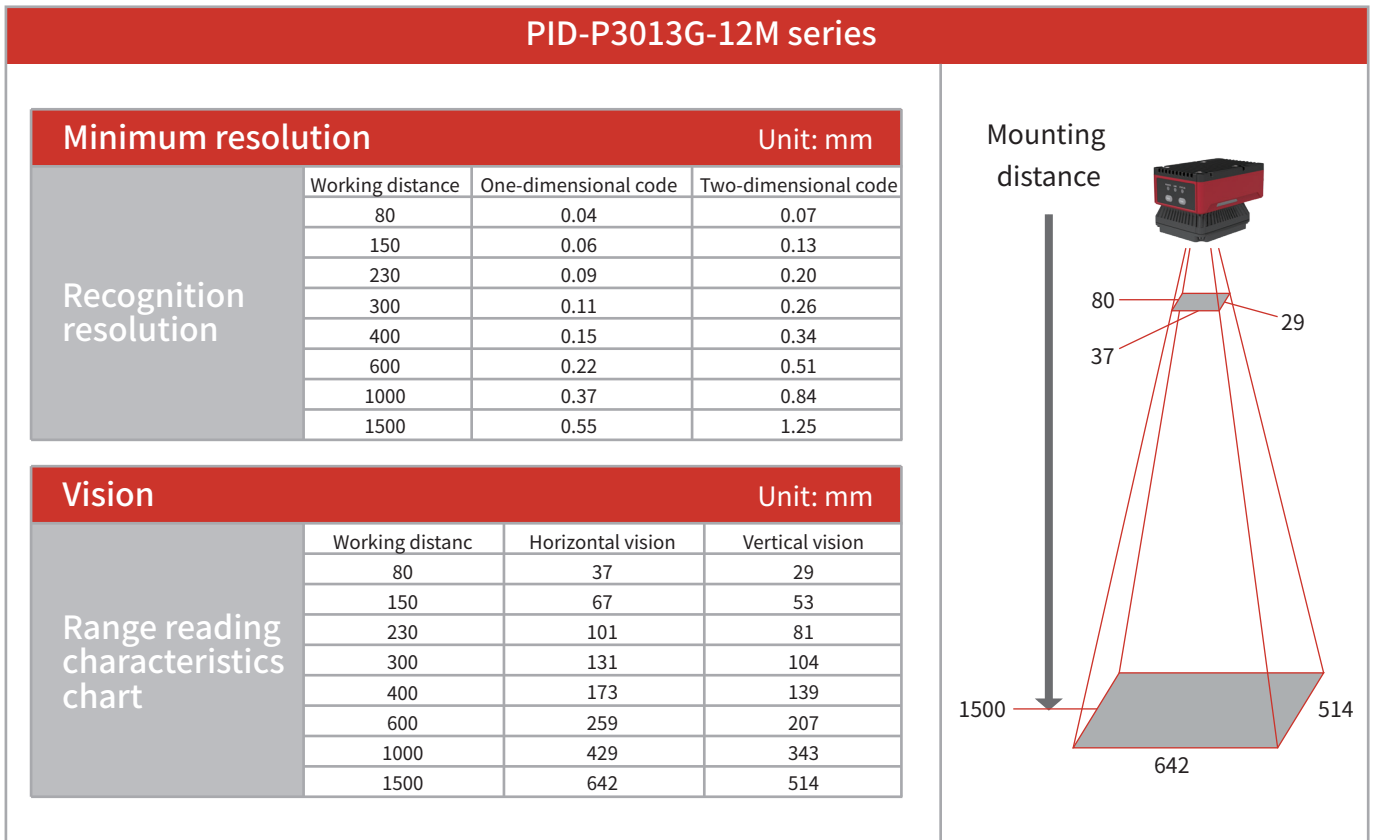
**PID-P3013G-08M series**

Minimum resolution		Unit: mm		
Recognition resolution	Working distance	One-dimensional code	Two-dimensional code	
	80	0.05	0.11	
	150	0.09	0.20	
	230	0.13	0.29	
	300	0.17	0.38	
	400	0.22	0.50	
	600	0.33	0.75	
	1500	0.81	1.84	

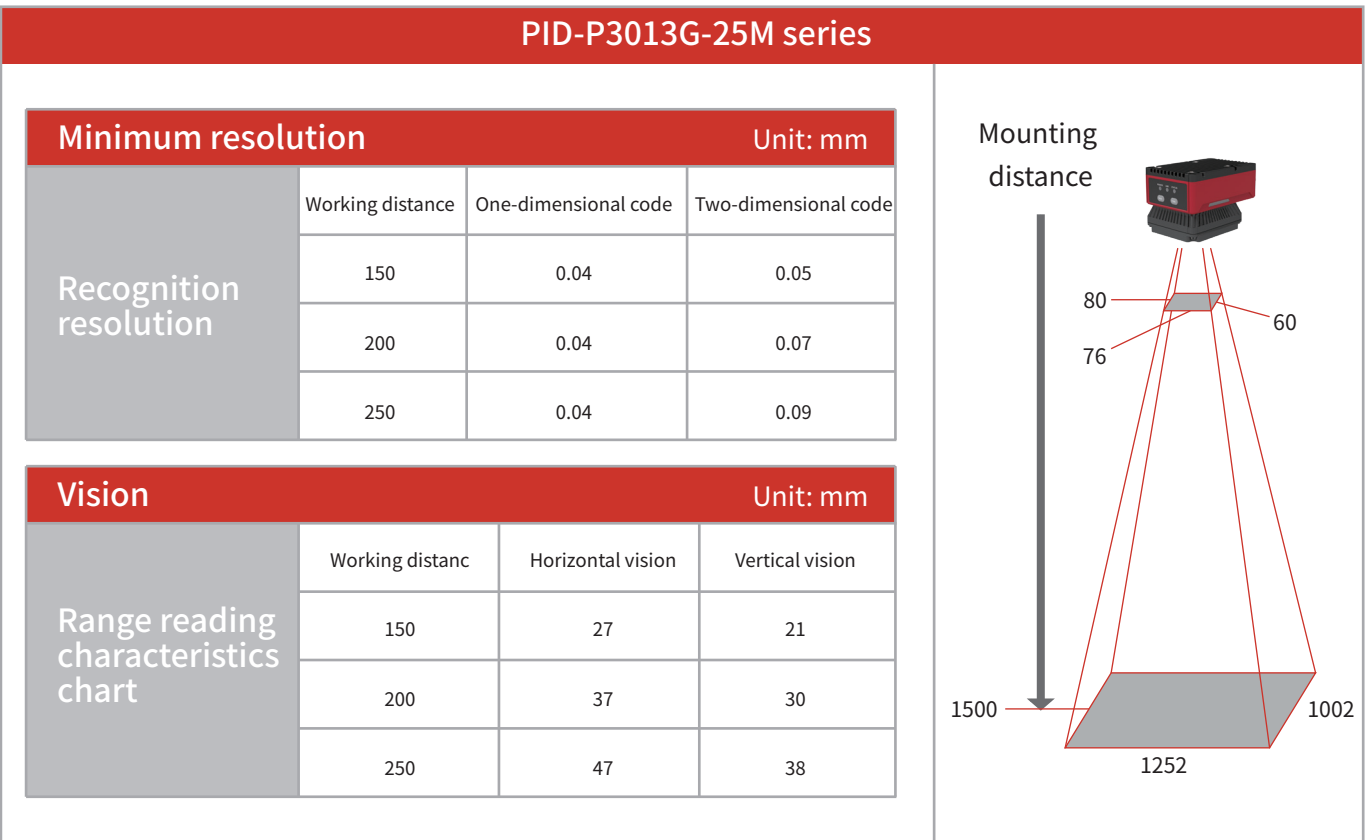
Vision		Unit: mm		
Range reading characteristics chart	Working distanc	Horizontal vision	Vertical vision	
	80	57	46	
	150	101	81	
	230	151	121	
	300	195	156	
	400	257	205	
	600	382	305	
	1500	943	754	

**Range reading characteristics chart**





Range reading characteristics chart



**Range reading characteristics chart-P3016G series**

**PID-P3016G-06M series**

**Minimum resolution**

Unit: mm

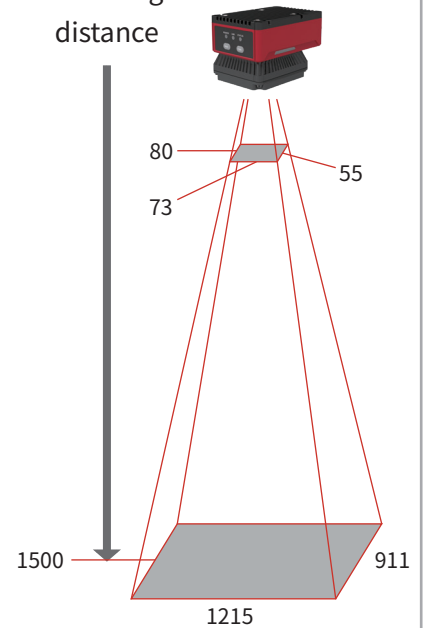
Recognition resolution	Working distance	One-dimensional code	Two-dimensional code
	80	0.06	0.13
	150	0.10	0.23
	230	0.15	0.34
	300	0.19	0.43
	400	0.25	0.57
	600	0.38	0.85
	1500	0.93	2.11

**Vision**

Unit: mm

Range reading characteristics chart	Working distanc	Horizontal vision	Vertical vision
	80	73	55
	150	130	97
	230	194	145
	300	250	188
	400	331	248
	600	491	368
	1500	1215	911

Mounting distance



**PID-P3016G-08M series**

**Minimum resolution**

Unit: mm

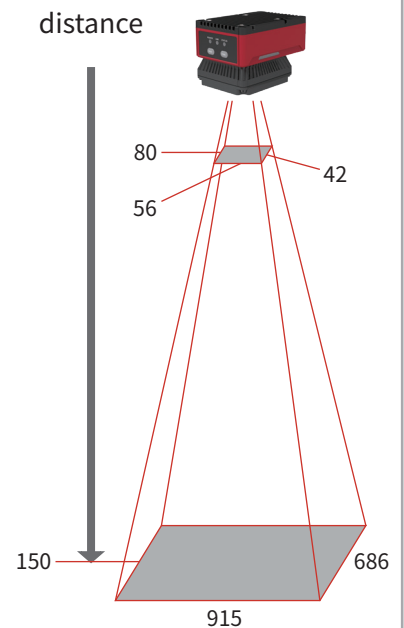
Recognition resolution	Working distance	One-dimensional code	Two-dimensional code
	80	0.04	0.10
	150	0.07	0.17
	230	0.11	0.25
	300	0.14	0.33
	400	0.19	0.43
	600	0.28	0.64
	1500	0.70	1.59

**Vision**

Unit: mm

Range reading characteristics chart	Working distanc	Horizontal vision	Vertical vision
	80	56	42
	150	98	73
	230	146	110
	300	189	141
	400	249	187
	600	370	278
	1500	915	686

Mounting distance



Range reading characteristics chart

PID-P3016G-12M series

Minimum resolution

Unit: mm

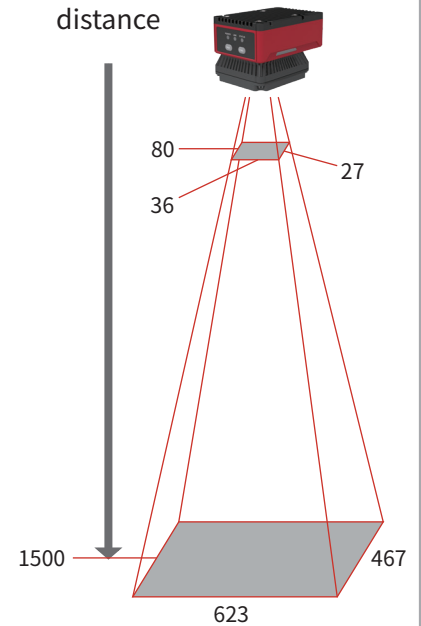
Recognition resolution	Working distance	One-dimensional code	Two-dimensional code
	80	0.04	0.06
	150	0.05	0.11
	230	0.07	0.17
	300	0.10	0.22
	400	0.13	0.29
	600	0.19	0.44
	1500	0.48	1.08

Vision

Unit: mm

Range reading characteristics chart	Working distanc	Horizontal vision	Vertical vision
	80	36	27
	150	65	48
	230	98	73
	300	127	95
	400	168	126
	600	251	188
	1500	623	467

Mounting distance



PID-P3016G-16M series

Minimum resolution

Unit: mm

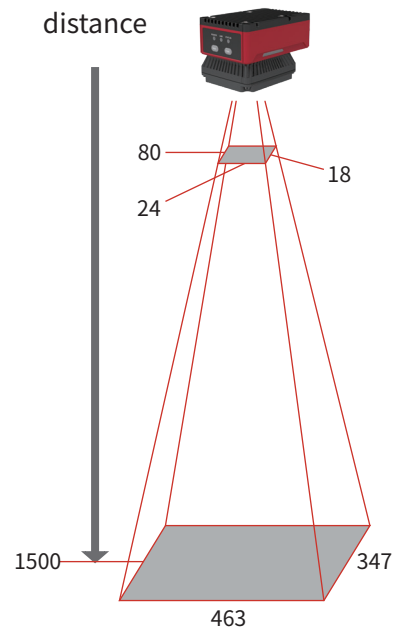
Recognition resolution	Working distance	One-dimensional code	Two-dimensional code
	80	0.04	0.04
	150	0.04	0.08
	230	0.05	0.12
	300	0.07	0.16
	400	0.09	0.21
	600	0.14	0.32
	1500	0.35	0.80

Vision

Unit: mm

Range reading characteristics chart	Working distanc	Horizontal vision	Vertical vision
	80	24	18
	150	46	34
	230	70	53
	300	92	69
	400	123	92
	600	185	139
	1500	463	347

Mounting distance



**Range reading characteristics chart**

PID-P3016G-25M series			
Minimum resolution			Unit: mm
Recognition resolution	Working distance	One-dimensional code	Two-dimensional code
	150	0.04	0.05
	200	0.04	0.06
	250	0.04	0.08
Vision			Unit: mm
Range reading characteristics chart	Working distance	Horizontal vision	Vertical vision
	150	26	19
	200	36	27
	250	46	34

The diagram illustrates the field of view of the code reader at different working distances. At a mounting distance of 150 mm, the horizontal vision is 26 mm and the vertical vision is 19 mm. At a mounting distance of 250 mm, the horizontal vision is 46 mm and the vertical vision is 34 mm.

Range reading characteristics chart-P3050G series

### PID-P3050G-08M series

Minimum resolution		Unit: mm	
Recognition resolution	Working distance	One-dimensional code	Two-dimensional code
	80	0.04	0.09
	150	0.07	0.16
	230	0.10	0.24
	300	0.13	0.30
	400	0.18	0.40
	600	0.26	0.60
	1500	0.65	1.47

Vision		Unit: mm	
Range reading characteristics chart	Working distanc	Horizontal vision	Vertical vision
	80	85	64
	150	150	113
	230	224	169
	300	288	218
	400	381	288
	600	565	428
	1500	1396	1056

Mounting distance: 80mm

Working distance: 1500mm

Field of view at 1500mm: 1396mm (width) x 1056mm (height)

Field of view at 85mm: 64mm (width)

### PID-P3050G-12M series

Minimum resolution		Unit: mm	
Recognition resolution	Working distance	One-dimensional code	Two-dimensional code
	80	0.04	0.06
	150	0.05	0.10
	230	0.07	0.16
	300	0.09	0.20
	400	0.12	0.27
	600	0.18	0.40
	1500	0.44	1.00

Vision		Unit: mm	
Range reading characteristics chart	Working distanc	Horizontal vision	Vertical vision
	80	55	41
	150	99	75
	230	149	113
	300	194	146
	400	257	194
	600	383	290
	1500	951	720

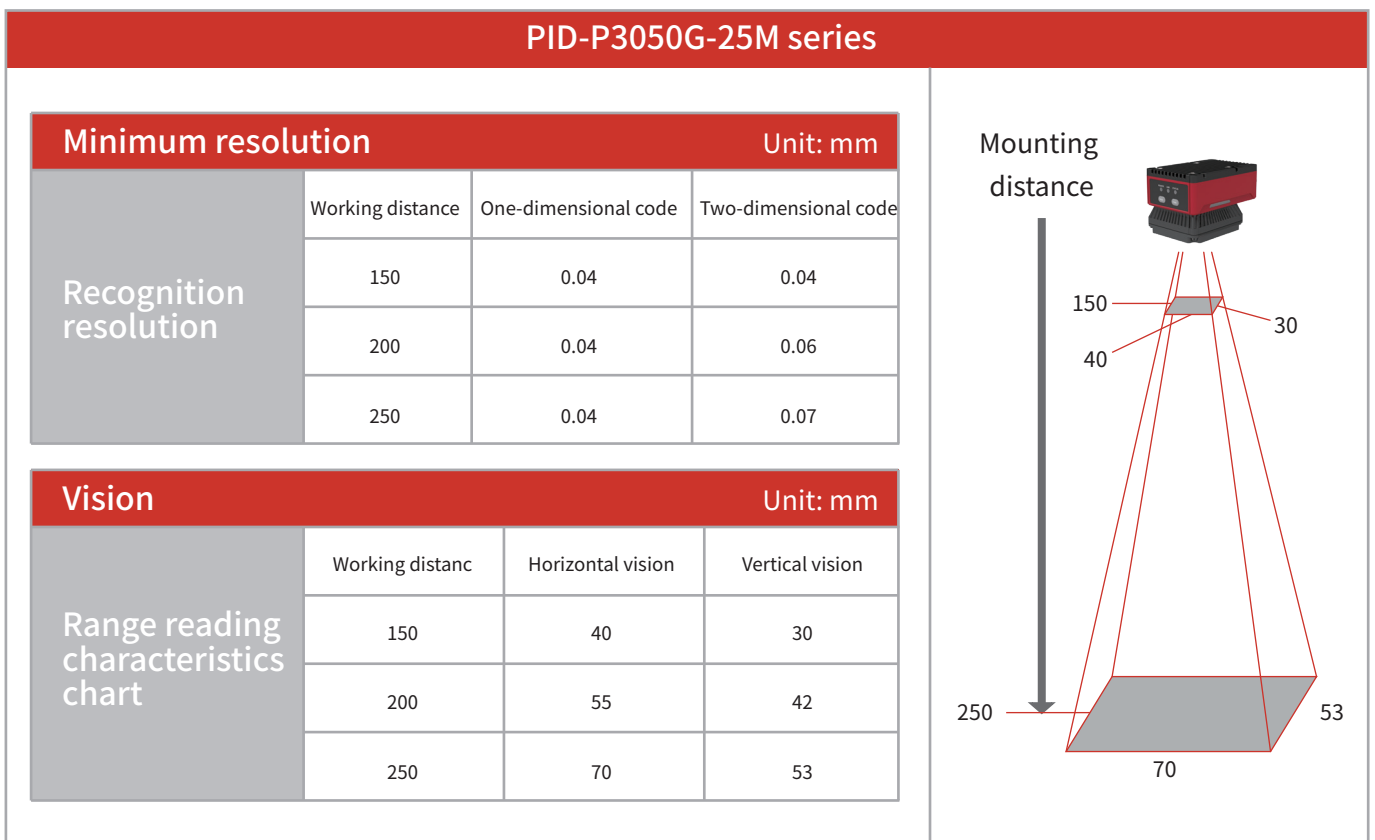
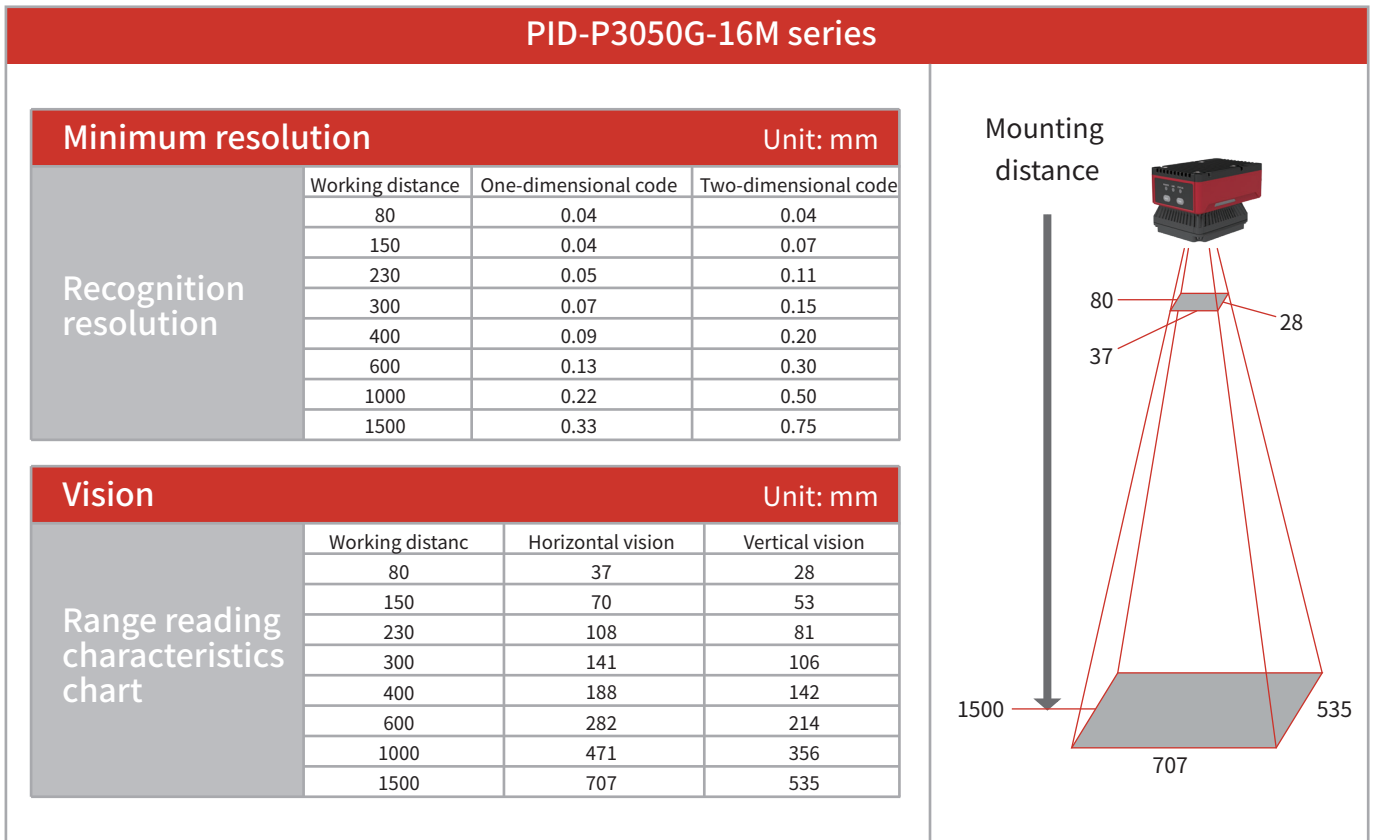
Mounting distance: 80mm

Working distance: 1500mm

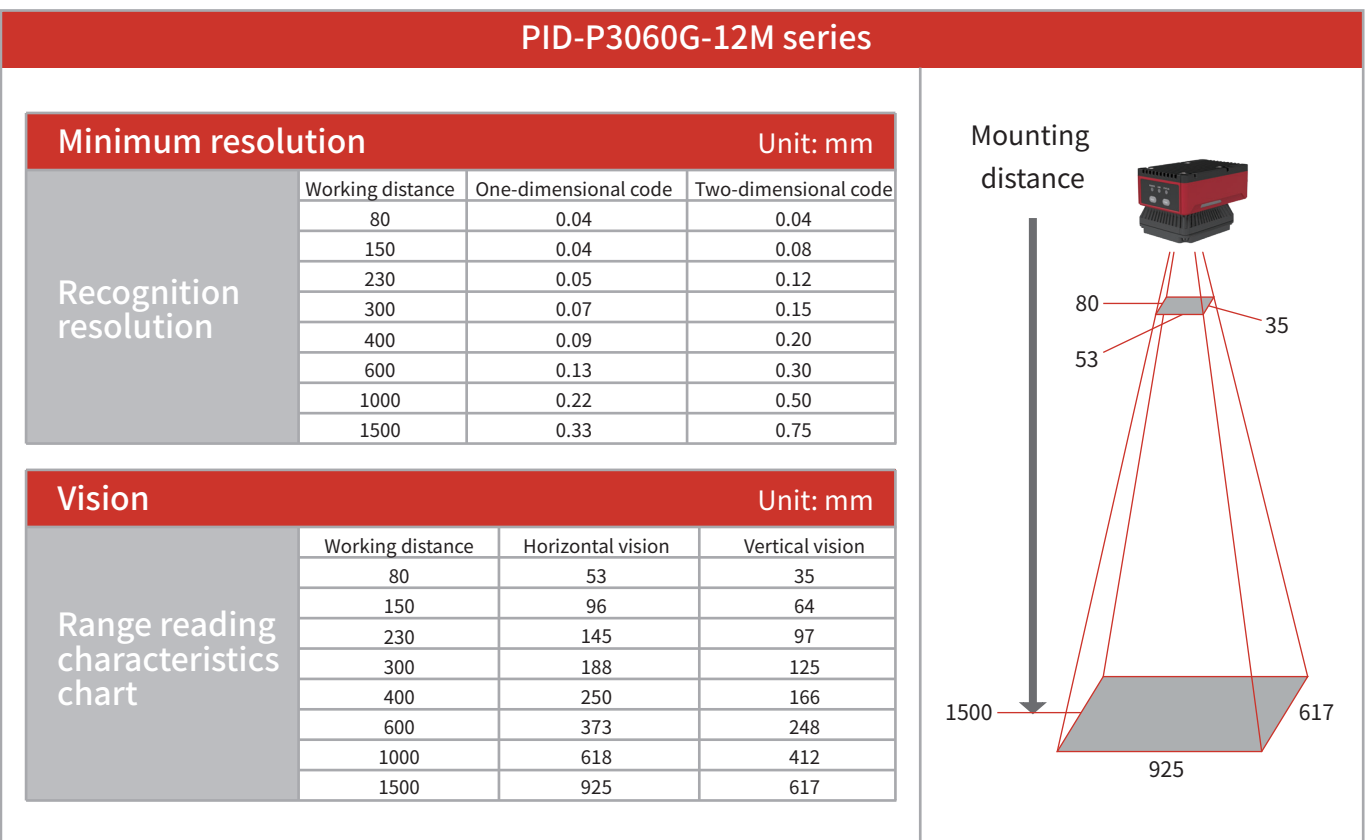
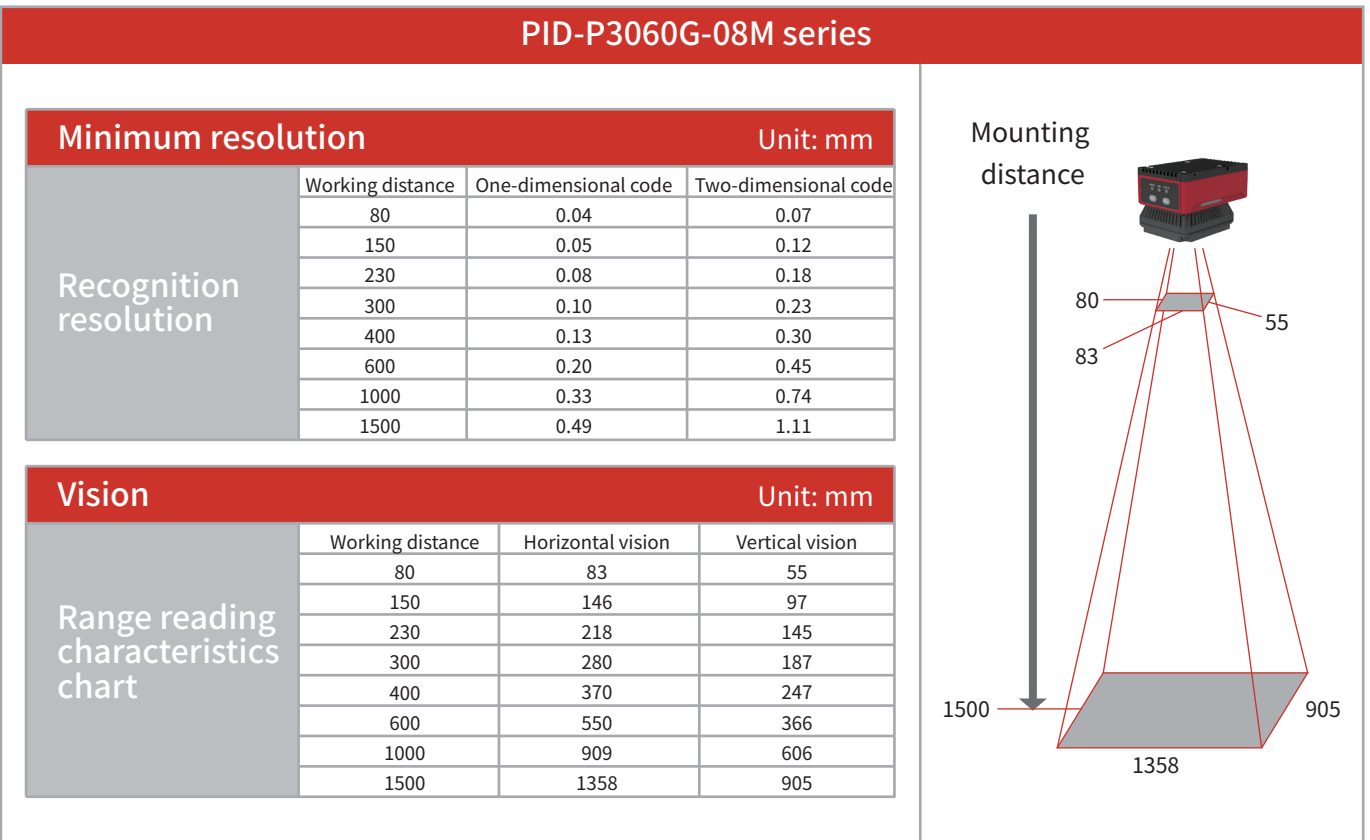
Field of view at 1500mm: 951mm (width) x 720mm (height)

Field of view at 55mm: 41mm (width)

**Range reading characteristics chart**



Range reading characteristics chart



**Range reading characteristics chart**

### PID-P3060G-16M series

Minimum resolution		Unit: mm	
Recognition resolution	Working distance	One-dimensional code	Two-dimensional code
	80	0.04	0.04
	150	0.04	0.06
	230	0.04	0.09
	300	0.05	0.11
	400	0.07	0.15
	600	0.10	0.22
	1000	0.16	0.37
1500	0.25	0.56	

Vision		Unit: mm	
Range reading characteristics chart	Working distanc	Horizontal vision	Vertical vision
	80	36	24
	150	68	45
	230	105	70
	300	137	91
	400	183	122
	600	275	183
	1000	458	305
1500	688	458	

### PID-P3060G-25M series

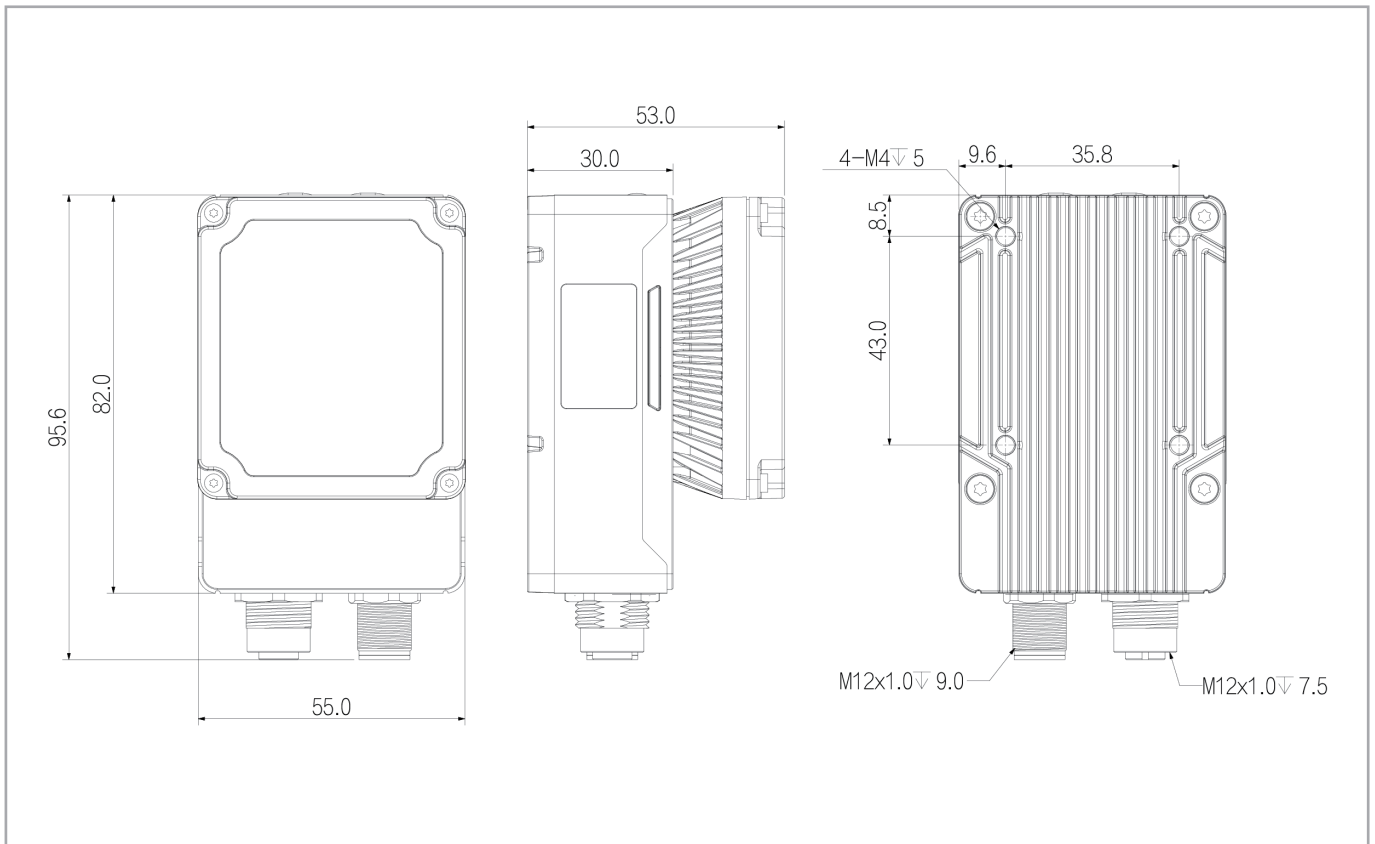
Minimum resolution		Unit: mm	
Recognition resolution	Working distance	One-dimensional code	Two-dimensional code
	150	0.04	0.04
	200	0.04	0.04
	250	0.04	0.06

Vision		Unit: mm	
Range reading characteristics chart	Working distanc	Horizontal vision	Vertical vision
	150	39	26
	200	54	36
	250	69	46



**Dimensions**



**Interface definition**

Pin	Signal	Description	Matching cable color
1	OPT_OUT2	Optocoupled isolation output 2	Brown+ white
2	RS232_TXD	RS232 Serial port transmitter	Gray
3	RS232_RXD	RS232 Serial port receiver	Purple
4	SIGNAL_GND	RS232 Serial port ground	Black+ white
5	OPT_IN1	Optocoupled isolation input 1	Yellow
6	OPT_IN_GND	Optocoupled isolation input ground	Purple+ white
7	POWER	Power supply	Red
8	POWER_GND	Power supply ground	Black
9	OPT_OUT_GND	Optocoupled isolation input ground	Green
10	OPT_IN0	Optocoupled isolation input 0	Orange
11	OPT_OUT0	Optocoupled isolation output 0	Blue
12	OPT_OUT1	Optocoupled isolation output 1	Brown
13		Shielded ground	White

A series of horizontal dashed lines for writing.

# SERVICE AND SUPPORT

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## Excellent service

- One-to-one service, first time response.
- Personalized selection service, ultimate VIP experience.

We are looking forward to your call!

**0086-21-57486188-8806**

## Remarkable quality

Comprehensive quality control from raw materials supply to service.

- Product quality verification of 8 major laboratories.
- Safe production, precise management, and high-quality performance.
- Dynamic system, excellent service, and comprehensive quality control.

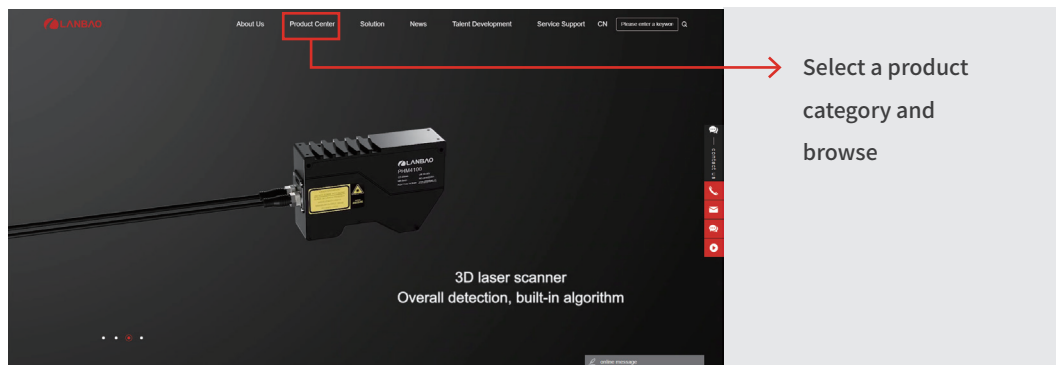


## Personalized selection service

- Website+Catalog for selection, Lanbao professional team offers more efficient online selection services, providing professional customized solutions for different situations.

**Lanbao websites:**

[www.lanbaosensor.com](http://www.lanbaosensor.com)/[www.cnlanbaosensor.com](http://www.cnlanbaosensor.com)



## Full life cycle service

- Lanbao's technical team provides customers with complete services from product selection/personalized customization, sales, system integration, training, operation, customized solutions. Lanbao provides customers with efficient customized services and quality assurance. Standard orders and regular stock products can be shipped immediately. Maintenance, after-sales and upgrade.

## Customized solutions

- Lanbao provides customers with efficient customized services and quality assurance.
- Standard orders and regular stock products can be shipped immediately.



## Quality system with efficiency management

- The reliable and stable manufacturing management system makes Lanbao intelligent production come true. Each product of Lanbao not only strictly implements feasibility and reliability review in the design stage but also has strict control by quality statistical management in the production process. In this way, product's great performance and ability to withstand harsh environment can be ensured. With the ultimate spirit of ingenuity, Lanbao guarantees the best quality of products to satisfy customer's needs.