产品规格书

SPECIFICATIONS

品名 Product Name	红外测距传感器 Infrared range finding sensor	型号 Product No.	SDS1A015-02

在使用本制品时，请注意以下事项.

Please obey the instructions mentioned below for actual use of this device.

1. 本制品是为一般电子产品所设计，主要使用在以下产品中.

   This device is designed for general electronic equipment.

   Main use of this device are as follows;

   ·   计算机   · OA设备   · 通讯设备(终端)   · 测量设备   · 机床
   ·   工业机器人 · AV设备   · 家用电器   等

   *Computer   *OA equipment   *Telecommunication equipment(Terminal)

   *Measuring instrument   *Machine tool   *Industrial robot

   *AV equipment   *Home appliance,etc.

2. 在以下需要高可靠性用途使用的场合，请采取适当的措施以维持其可靠性和安全性.

   Please take proper steps in order to maintain reliability and safety,

   in case this device is used for the uses mentioned below which require high reliability.

   ·   交通工具（飞机、火车、汽车等）中有关控制和安全性的部分.
   ·   交通信号 · 煤气报警器 · 防灾防犯装置 · 各种安全装置   等

   *Unit concerning control and safety of a vehicle (air plane,train,automobile etc.)

   *Traffic signal   *Gas leak detection breaker

   *Fire box and burglar alarm box   *Other safety equipment,etc.

3. 在以下需要极高可靠性用途的场合，请绝对不要使用.

   Please don't use for the uses mentioned below which require extremely high reliability.

   ·   宇航机器   · 通信设备(干线)   · 原子能控制设备
   ·   医疗设备(任何涉及人的生命安全部分)   等

   *Space equipment   *Telecommunication equipment(Trunk)

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修订履历
REVISE RECORD

No.	年月日 Date	页 Page	修订内容 REVISE CONTENTS		担当 DRAWN
			修订前 PRE REVISE	修订后 POST REVISE	
1	2017.07.26	—	—	新建 NEW	黄 华 huanghua

产品规格书

红外测距传感器 Infrared range finding sensor	SDS1A015-02

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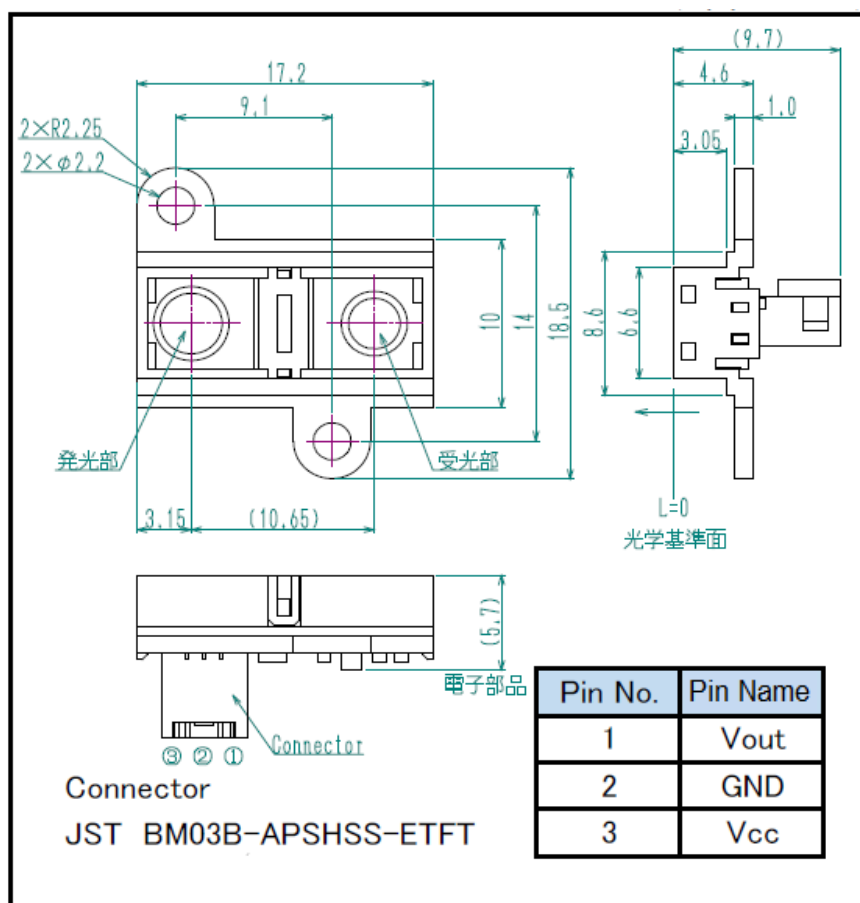| 品名 Product Name	红外测距传感器 Infrared range finding sensor	型号 Product No.	SDS1A015-02

1. 适用范围
   Applicability
   本规格书适用于红外测距传感器，SDS1A015-02
   This specification is applied to the Infrared range finding sensor,SDS1A015-02.

2. 外形
   Dimensions

Pin No.	Pin Name
1	Vout
2	GND
3	Vcc

Connector
JST BM03B-APSHSS-ETFT

3. 绝对最大定格
   Absolute maximum ratings
   (Ta=25℃)

项目 Item	记号 Symbol	定格值 Rating	单位 Unit	附注 Remarks
电源电压 Supply voltage	Vcc	−0.3～ 7.0	V	−
输出端子电压 Output terminal voltage	Vout	−0.3～Vcc＋0.3	V	−
动作温度 Operating temp	Topr	−10～+60	℃	没有结冰或者结露 No icebound or dew
保存温度 Storage temp	Tstg	−20～+70	℃	没有结冰或者结露 No icebound or dew

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4. 电气光学特性
Electro-optical characteristics (Ta=25℃, Vcc=5V)

| 项目 Item	记号 Symbol	条件 ConditIons	最小值 Min.	标准值 Typ.	最大值 Max.	单位 Unit
电源电压 Operating supply voltage	Vcc	–	4.5	5.0	5.5	V
消耗电流 Current consumption	Icc	平均值 Average	–	18	27	mA
检出距离范围 Detection distance range	ΔL	(*1)	1.5	–	15	cm
输出电压 Output voltage	Vout	L=7cm (*2)	0.65	–	1.05	V
输出振幅 Output voltage amplitude	Δ Vout	L=15cm → 1.5cm (*2)	2.25	–	2.85	V

*1 检出基准对象物(无光泽反射纸,白色,反射率90%)

Standard detecting object(Matte,white,Reflective rate 90%)

*2 L:到对象物的距离

L:Distance to an object

5. 时序图
Timing chart
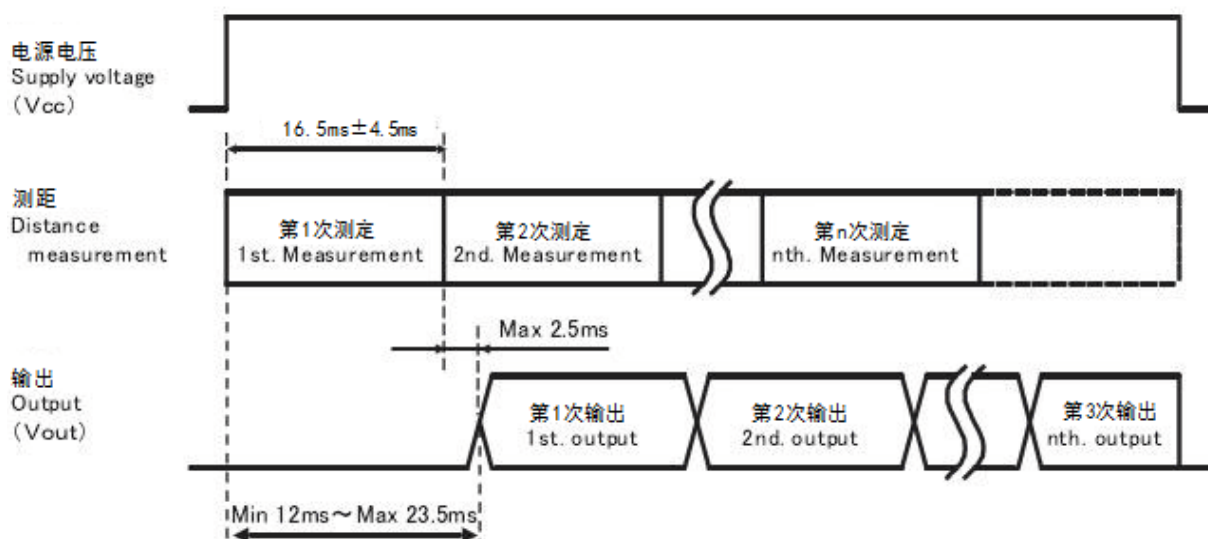
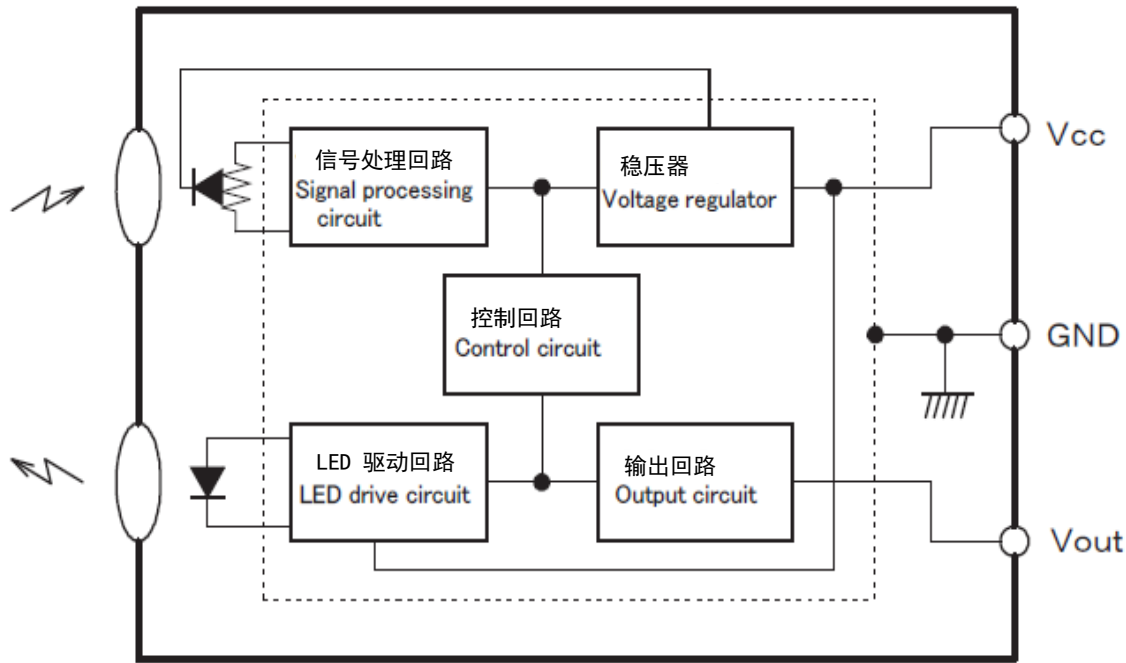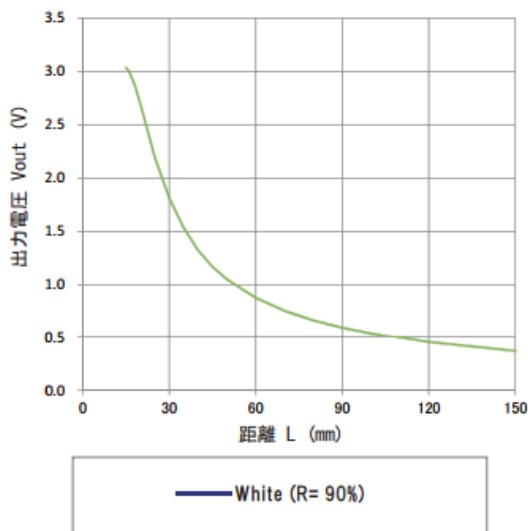产品规格书
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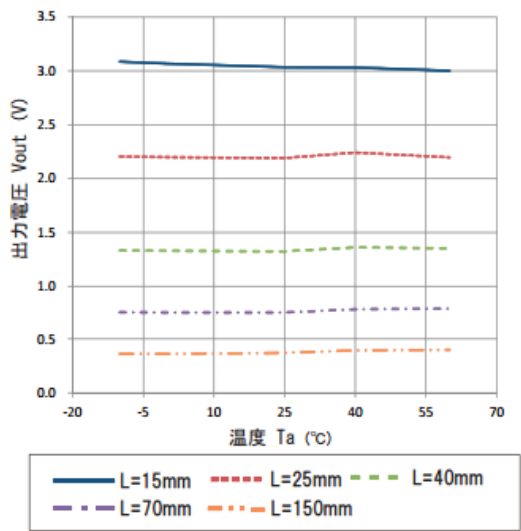| 品名 Product Name	红外测距传感器 Infrared range finding sensor	型号 Product No.	SDS1A015-02

6. 内部回路图
Internal block diagram

7. 距离特性
Distance Characteristic

8. 温度特性
Temperature Characteristic

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9. 出荷检查基准
OQC[Outgoing Quality Control]inspection standard

9-1. 检查方式
Inspection method
采用JIS Z9015、普通检查、抽样检查方式
Normal and sampling inspection underJIS Z9015.

9-2. 检查项目及基准
Inspection items and standards

项目 Item	等级 Grade	判定基准 Judgment	AQL
消耗电流 Current consumption	重大问题 Heavy fault	满足5项光电特性 To satisfy the electro-optical characteristics of article no.5.	0.10
输出电压 Output voltage			
输出振幅 Output voltage amplitude			
外观(断开,缺口,突起,裂纹划痕,异物,赃物,污点) Outwards (Crack,Chip,Dirt,etc.)	轻度问题 Light fault	对5项光电特性有影响的视为不良 To affect the electro-optical characteristics of article no.5.	0.40

10. 使用时的注意事项
Notes on usage

10-1. 为了不让制品发生变形变质以至于对光学及其他特性产生不良影响，在不负重的状态下保存使用。
Keep this part not to be deformed,changed in quality and away from pressure which influences optical characteristics.

10-2 不要在接近硫化氢等腐蚀性气体或海风、油的地方保存及使用。
Keep away from corrosive gas such as hydrogen sulfide,salt breeze or oil.

10-3 注意不要在制品的透镜部分沾上垃圾、灰尘、水、油。
Keep away from dirt,dust,moisture or oil on the lens.

10-4 不要把受光素子放在有外界杂光的地方使用。
Keep the detector away from direct disturbance light.

Sunlight,strobe,inverter or remote control devices may bring sensing malfunction.

10-5 由于有对光学及其它特性产生不良影响的可能性，请不要进行清洗。
如果必要时请用吹风或柔软的布擦拭。如果使用化学药品或洗涤剂对软布进行浸泡，请确定实际制品没有问题。
Washing is strictly prohibited due to fatal influence to its optical and electrical function.If necessary,use air blow or soft cloth to clean up, and in case of using chemical cleaners please check the safety in advance.

10-6 连接器的插拔请在常温下进行。如果在高温或低温下进行可能有破损的危险。
Plug in/out connectors under normal temperature condition, Otherwise,unexpected damage may be brought up.

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10-7 由于本制品使用了较强的锁定、为了防止因线束产生拉力而破坏制品的问题、请在进行线束的拉伸及连接器头的拔出时注意以下问题。

Connector of this product is designed for strong lock.
To avoid troubles such as product destruction, caused by wire harness stress,
in advance, please consider below when you draw around wire harness or pull off
connector housing.

· 不要经常对连接器施加除线束的自然拉力及荷重以外的外力
Do not add external force to connector at all times, except for load or tension,
caused by natural drawing around of wire harness.

· 在电线上设置不会影响连接器插拔工作的松弛、插拔工作请在嵌合轴线上进行。
Please shaken off the electric wire, in order to insert the connector properly.
Please insert on the fitted shaft.

· 请不要对电线施加外力以致弯曲过于严重，过长的电线请注意固定。
Please consider setting margin for length and fixing the electric wire,
when you draw around the electric wire, in order not to add external force
except for that of buckling to connector.

· 在拔出连接器头时请确认按下了防脱扣、在防脱扣没有锁住的时候拔出。
When you pull of connector housing, please restrain housing lock properly,
and pull off under condition of unlocked.
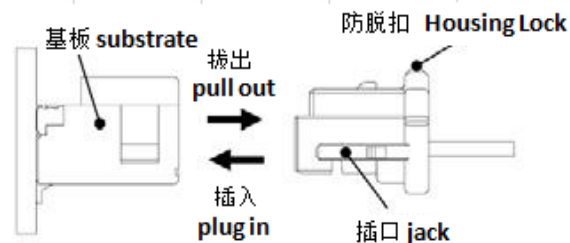
10-8 IC制品可能会被静电破坏。在使用时，请注意使用接地或保护电路等方法防止静电。
IC parts might be destroyed by static electricity, so please keep grounded or surge
protection decices far from the static electricity.

10-9 制品不稳定时，请在电源输入线及地线上接上10μF以上的电容。而且、LED使用脉冲电流驱动、瞬间电流需要300mA左右。请确认使用的电源能够驱动300mA以上的电流。
In case this part is unstable, attach over 10μF condenser on the power supply input line
and GND line of the part. Current of 300mA is necessary so that LED drives pulse.
Power supply which can drive over 300mA current is recommended.

10-10. 请使用大小能够完全遮挡传感器的发光部分和受光部分的物体。
Detecting object should be large enough to cover emitting and detecting sides.

10-11. 在使用镜子或玻璃等镜面反射高的物体、无光泽的黑布或橡胶等反射率极度低的物体、透明体等物体时有不能正常检出的情况。
This part cannot be guaranteed to detect reflective objects such as mirror and glasses,
non-reflective objects such as black cloth and rubber, and transparent objects etc.

10-12. 输出端子请在以下条件下使用
Isink小于30μA, Isource小于小于1mA
Concerning output terminal, please use under the conditions below
Isink=below 30μA, Isouce=below 1mA

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11. 保证期限和保证范围
Period of guarantee and extent of guarantee

11-1. 保证期限
Perood of guarantee
在贵公司接收后一年。

11-2. 保证范围
Extent of guarantee
在保证期限内因本公司的责任产生的故障由制品的替换作为基本保证。
而且，由制品引发的损害我方会根据双方协议怀着诚意来处理。
In the event of a defect within the guarantee period, replacement equivalent to the product will be made with our own responsibility
Also, in case of damage caused by the defect of the delivered product, we will handle the case with sincerity under mutual negotiation and consent.

12. 其他
others

12-1. 本制品没有耐放射线、耐电磁波、耐强电粒子线的设计
This product is not designed against radioactive rays, electromagnetic waves or rays that have heavily charged particles.

12-2. 封装使用合成树脂
The package contains the svnthetic resin.

12-3. 电气输入输出
Electricity is used for input snd output.

12-4. 对本仕样书产生异议时由双方共同协议解决问题。
Any doubts concerning on this specification will be discussed and solved by both parties concerned.

12-5. 本制品没有使用含铅焊锡。
Lead solder is not contained in this product.

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Lot No.表示
Lot No.Indication

1. Lot No.的意思
   Definition of Lot No.
   投入制造时期以2.的方法表示年月周。
   Production "Year","Month" and "Week"will be implied by the classification
   tables below
2. 表示方法
   Classification tables
   使用激光打出的数字表示制造年月。
   Marking tool:laser marking in numbers

制造年* Production year	数字 Number
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
0	0

制造月 Production month	数字 Number
1月 January	1
2月 February	2
3月 March	3
4月 April	4
5月 May	5
6月 June	6
7月 July	7
8月 August	8
9月 September	9
10月 October	X
11月 November	Y
12月 December	Z

制造周 Production week	数字 Number
1周 Week 1	1
2周 Week 2	2
3周 Week 3	3
4周 Week 4	4
5周 Week 5	5

*注 显示最后一个数字。
Remark.Show the last
digit of the year.

例）2017年2月2周生产
（Example）Manufactured on 2017.February.2nd week

批量编号表示位置
Lot No.marking position
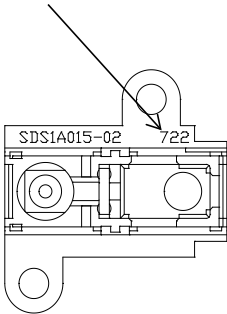
数字表示（激光）
Number type（Laser）

SDS1A015-02   722

7	2	2

2017年："7"
Year2017:"7"

2月："2"
February:"2"

2周："2"
Week 2:"2"

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包装方法
Packing method
　　制品的包装使用盘子。
　　The tray is used for the packing of the product.

1. 内装
　　Inner packaging
　　制品用盘子包装并叠放。　　　　　　　　[图1参照]
　　（最大 100个/盘）
　　Products are packed in tray and piled up. [Refer to fig.1]
　　(MAX 100pcs/tray)

　　盘子与纸箱间的缝隙太大时使用缓冲物填
　　充使其不晃动。　　　　　　　　　　　　[图2参照]
　　Empty space between the tray and the box
　　will be filled with styrene foam　　　　[Refer to fig.2]

　　在内箱里放入叠起的盘子。　　　　　　　[图3参照]
　　Bundles of trays are put in inner box.　[Refer to fig.3]

2. 外装
　　Outer packaging
　　用纸箱包装。　　　　　　　　　　　　　[图4·5参照]
　　Products are delivered in outer carton [Refer to fig.4&fig.5]
　　将明确记载了以下内容的标签纸贴在外箱　[图5参照]
　　显眼的位置。
　　Packing slip with the following information
　　will be put on the surface of outer carton. [Refer to fig.5]

　　·发送日　　　　　　·品番(品名)
　　　Shipping Date　　　Item No.
　　·包装数量　　　　　·受入Lot No.
　　　Quantity　　　　　Lot No.

图1

苯乙烯泡沫
Styrene foam

图2
fig. 2

图3
fig. 3

内箱
Inner box

外箱
Outer carton

图4
fig. 4

捆包带
Packing tape

装箱单
Packing slip

纸壳盒
Card board box

图5
fig. 5
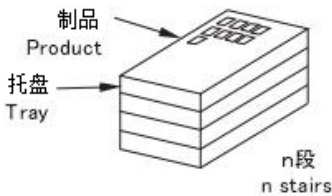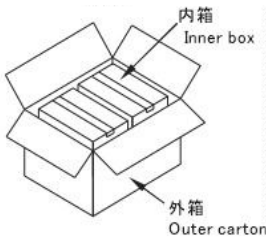
表1:包装箱规格　　　Table1:Outer carton size

	名称 Box name	Size (W*L*H[mm])	内箱 Inner box	员数 Numbers
内箱 Inner box	2号箱 Box No. 2	250*360*240	–	最大1500个 Max 1,500pcs
外箱 Outer carton	3号箱 Box No. 3	380*530*290	2号*2 No. 2*2	最大3000个 Max 3,000pcs |