

# SPECIFICATION

Customer : \_\_\_\_\_

Customer's Model No. : \_\_\_\_\_

Model No. : **SG800** Gun-type Linear Imager Bar Code  
Scanner Series

Date : \_\_\_\_\_

Sample Serial No. : \_\_\_\_\_

Spec. Version & Revision Date: V00 2018.04.27

Received/Approved by

**CHAMPTEK**<sup>®</sup>

[Http://www.champtek.com](http://www.champtek.com)

E-mail : [sales@champtek.com](mailto:sales@champtek.com)

ChampTek Incorporated

5F, No. 2, Alley 2, Shih-Wei Lane, Chung Cheng Rd.,  
Xindian District, New Taipei City 231, Taiwan

TEL : 886-2-22192385

FAX : 886-2-22192387

**Revision History**

Version	Date	Context
V00	2018.04.27	Release

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## A. General Description



**SG800** is a brand new general purpose gun-type linear imager bar code scanner which is designed especially for retail, logistic and warehousing management market. We include friendly functions with replaceable multiple interface cable options that makes it more easily to be operated by the customers to accommodate it to user environment.

SG800 has most modern design with rugged casing and supports IP42 sealing protection, with its auto-shuttle-emulation alike smart detection, offers superior decoding performance on a reading speed up to 500 scans per second and up to 550mm reading depth for the majority of 1D bar codes and GS1 DataBar™ codes. An optional stand can be ordered to facilitate hand-free reading application.

With its auto-sense mode, it will automatically turns off and senses a object in front of it to switch on reading, can extend its lifespan.

In short, SG800 provides customer with the most cost-effective solution in the market. It is perfectly suitable and definitely the best choice for any retail, logistic and warehousing management environment.

## B. Physical Characteristics

### Weight

Body weight                      Approx. 110g / 3,88 oz

Material                              ABS / Rubber

Cable Length                      5FT. ( 150cm )

Connector                            RJ 45C 10Pins

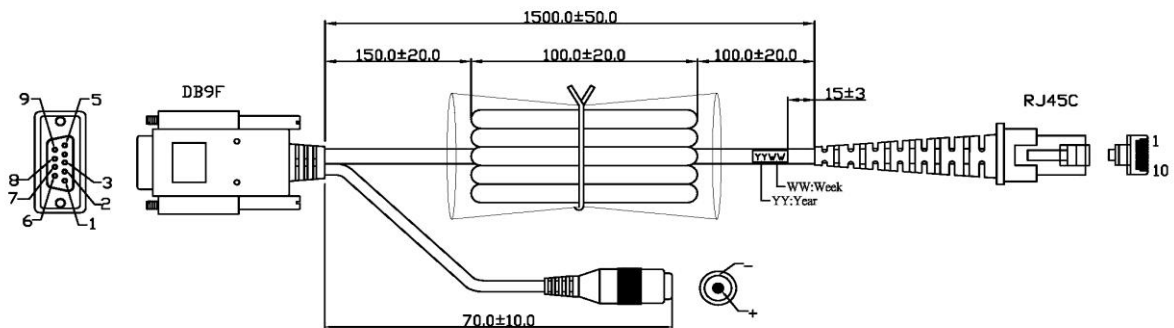
Dimension                            73.5 mm W x 76.2mm H x 173 mm L

Color Available                    Black / Gray

### a. Cable drawing (Unit:mm)

#### (1) RS232

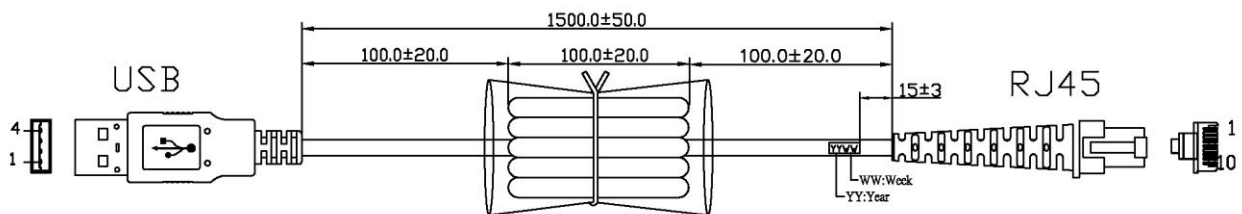
UNIT:mm



DB9F	RJ45C	DC JACK	FUNCTION	COLOR
5	3	Shell	GND	Brown
9	5	CORE	DC +5V	Red
2	7		TXD	Orange
3	9		RXD	Yellow
8	1		RTS	Green
7	10		CTS	Blue
Shell			Spiral	

#### (2) USB

UNIT:mm



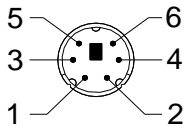
USB	RJ45	FUNCTION	COLOR
1	5	VCC	Red
2	4	D-	Blue
3	2	D+	Green
4	3	GND	Brown
Shell	3	SHIELDING	

**b. Pin Assignment**

**(1) Keyboard Interface**

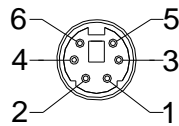
**MiniDIN 6 MALE**

Pin No.	Function
1	HOST DATA
3	GND
4	Vcc(+5V)
5	HOST CLK



**MiniDIN 6 FEMALE**

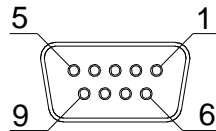
Pin No.	Function
1	KB DATA
3	GND
4	Vcc(+5V)
5	KB CLK



**(2) RS-232 Interface**

**DB 9 Female**

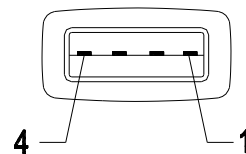
Pin No.	Function
2	TXD
3	RXD
5	GND
7	CTS
8	RTS
9	Vcc/+5V
Power Lead	Vcc/+5V



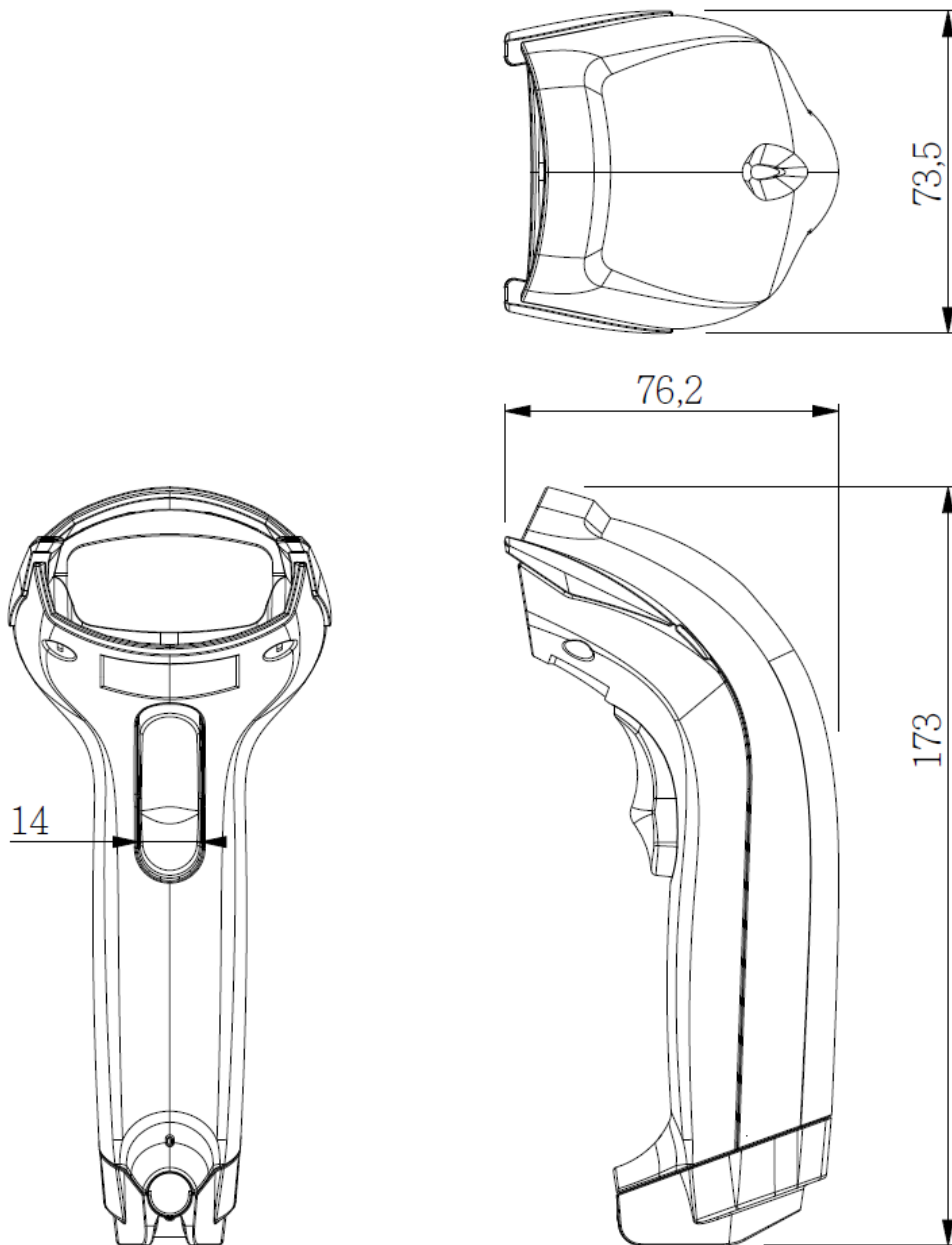
**(3) USB Interface**

**USB A Type Male**

Pin No.	Function
1	Vcc
2	D-
3	D+
4	GND



Unit: mm



## C. Electrical Characteristics

Interface	RS232	USB
Supply Voltage		
Output Voltage (Typ.)	±9V	+5V
Current Draw		
Power On (Typ.)	160 mA	140mA
Stand by (Typ.)	50 mA	45 mA
Operation (Typ.)	110mA	100 mA

## D. Performance

Light Source	Visible Red light 635±5nm LED
Sensor	Linear CCD Sensor
Processor Type	ARM Cortex-M3
Operating Freq.	8 MHz
Scan Speed	Smart detection, up to 500 scans per second
Reading Distance	Up to 550mm@20mil/0.5mm, PCS90%, Code39
Print Contrast Ratio(Minimum)	25%
Resolution	4mil/0.1mm@PCS90%, Code39
Indicator	Beep and LED (Good read Green)
Reading Angle	<i>Test Conditions : Code 39, 10mil/0.25mm, PCS 90%</i>
Forward & Backward(Pitch)	±10°~65°(±5°)
Left & Right(Skew)	± 60°(±5°)
Ambient Light	100,000 Lux Max.
Sealing	IP42 water and dust protection

## E. Environmental

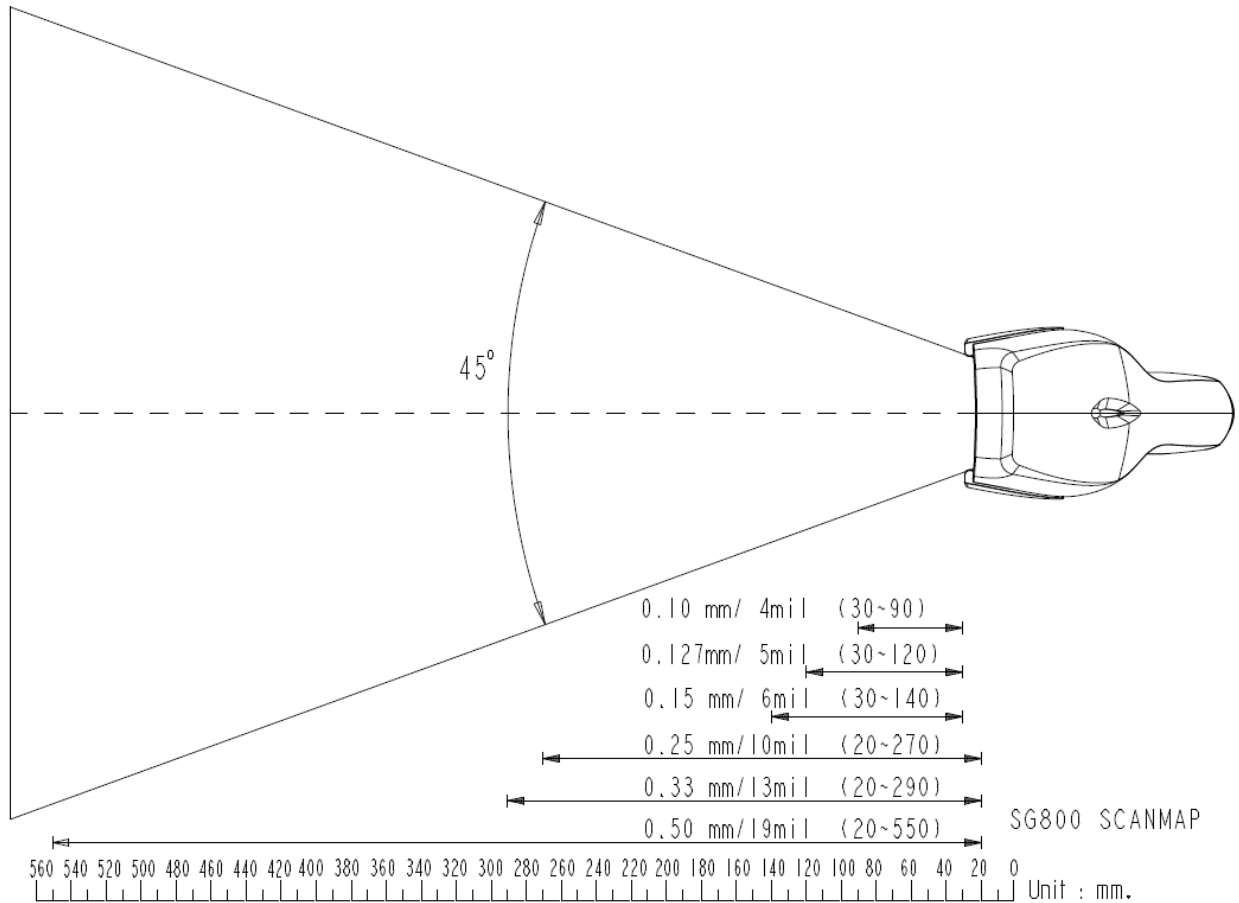
Operating Temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage Temperature	-20 °C to 70 °C (-4 °F to 158 °F)
Relative Humidity	20% to 95% (Non-condensing)



## F. Readable Symbologies

	Readable	Default Enable
All UPC/EAN/JAN	V	V
EAN128 Code	V	
Code 39	V	V
Code 39 Full ASCII	V	
Code32 / Italian Pharmacy	V	
Code 128	V	V
CODABAR/NW7	V	V
Interleave 25	V	V
Industrial 25	V	
MSI/PLESSEY	V	
Code 93	V	
GS1 DataBar Omnidirectional & Stacked	V	
GS1 DataBar Limited	V	
GS1 DataBar Expanded & Stacked	V	

### G. Scan Map



### H. Reliability

#### Life Time

Trigger Switch	1,000,000 times
MTBF(Calculated)	50,000 hours

#### Thermal Shock

High Temp.	50 °C (122 °F)
Low Temp.	-20 °C (-4 °F)
Cycle time	30 minutes for high temp. , 30 minutes for low temp.
Cycles	24 cycles

Cable Bending Test 25,000 times minimum (30 times/min @ 500g/90°)

Drop resistance 70.86 inches(180cm) drop on concrete surface