

# SPECIFICATION

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

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

Model No. : **SG600** Gun-type Linear Imager Bar Code  
Scanner Series

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

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

Spec. Version & Revision Date: V02 2018.02.23

Received/Approved by

**CHAMPTEK**<sup>®</sup>

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**Revision History**

Version	Date	Context
V00	2013.07.01	Release for Mass production
V01	2015.12.15	Add IP42 description
V02	2018.02.23	Performance update

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## A. General Description



**SG600** 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 itself to user environment.

SG600 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 500mm reading depth for the majority of 1D bar codes and GS1 DataBar™ codes. A stand option can be ordered to facilitate hand-free reading options.

With its built-in automatically turn off and sense to switch on reading, as it sense a bar code moving in front of it, can extend its lifespan.

In short, SG600 provides customer with the most cost-effective solution in the market. It is perfectly suitable and definitely the best choice for any retail and logistic environment.

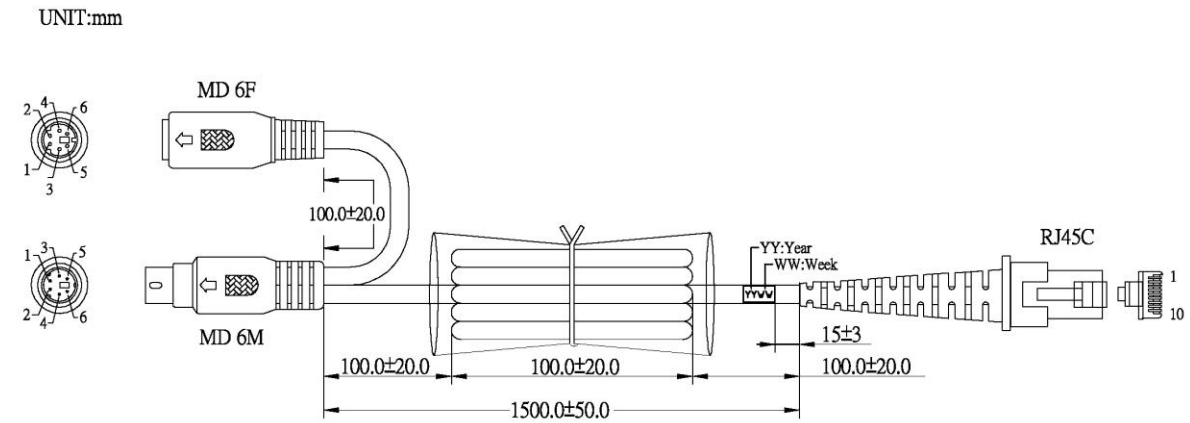


## B. Physical Characteristics

<b>Weight</b>	
Body weight	Approx. 110g / 3,88 oz
Material	ABS / Rubber
Cable Length	5FT. ( 150cm )
Connector	RJ 45C 10Pins
Dimension	71.13 mm W x 62.61mm H x 169.27 mm L
Color Available	Black (Cap & Grip) / Dark Gray(Cap), Beige (Grip)

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

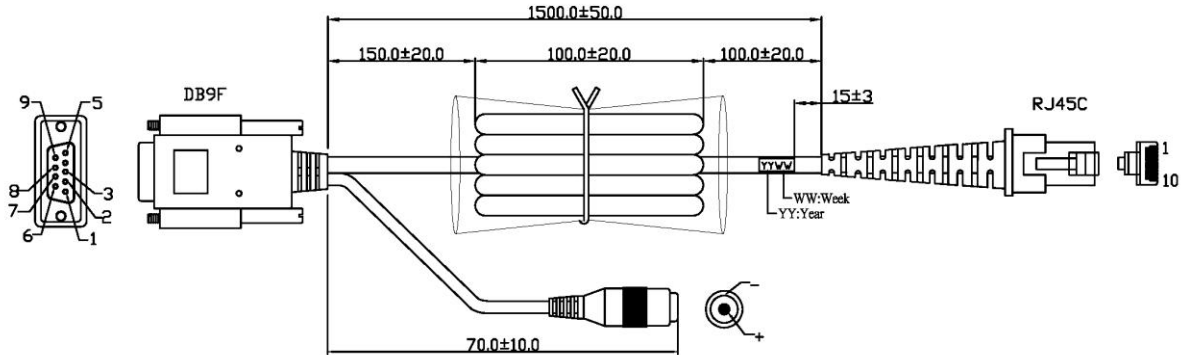
#### (1) Keyboard



MD 6F	MD 6M	RJ45C	FUNCTION	COLOR
2	1		HOST DATA	Green
3	3	3	GND	Brown
4	5		HOST CLK	Blue
5	4	4	VCC	Red
6		5	KB CLK	Orange
8		1	KB DATA	Yellow
Spiral	Shell	Shell	SHELDING	

**(2) RS232**

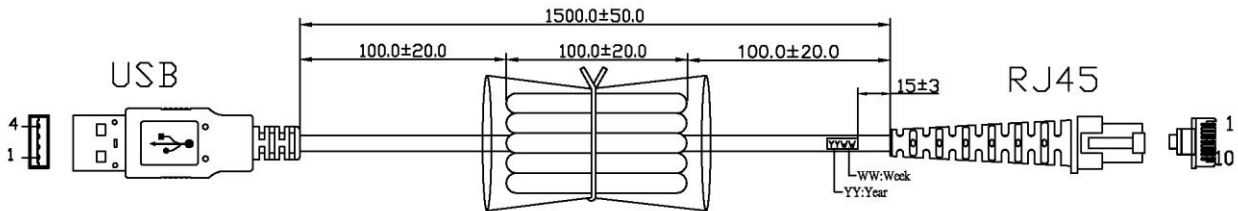
UNIT:mm



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	

**(3) USB**

UNIT:mm



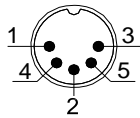
USB	RJ45	FUNCTION	COLOR
1	5	VCC	Red
2	4	D-	Blue
3	2	D+	Green
4	3	GND	Brown
Shell	3	SHIELDING	

**b. Pin Assignment**

**(1) Keyboard Interface**

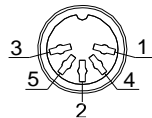
**DIN 5 MALE**

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



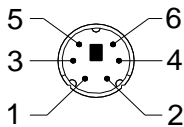
**DIN 5 FEMALE**

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



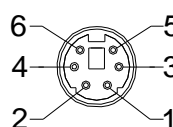
**MiniDIN 6 MALE**

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



**MiniDIN 6 FEMALE**

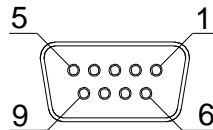
Pin No.	Function
1	KB DATA
3	GND
4	Vcc(+5V)
5	KB CLK



**(2) RS-232 Interface**

**DB 9 Female**

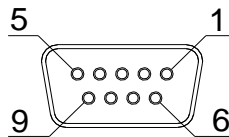
Pin No.	Function
2	TXD
3	RXD
5	GND
7	CTS
8	RTS
9	Vcc/+5V
Power Lead	Vcc/+5V



**(3) WAND Emulation Interface**

**DB 9 Female**

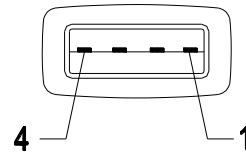
Pin No.	Function
2	DATA
7	GND
9	Vcc



**(4) USB Interface**

**USB A Type Male**

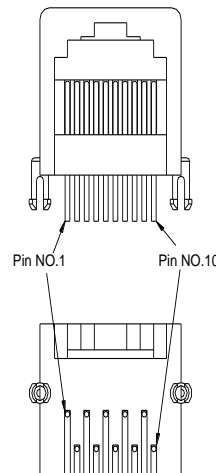
Pin No.	Function
1	Vcc
2	D-
3	D+
4	GND



**Decoder Data Output**

Type RJ45 10P

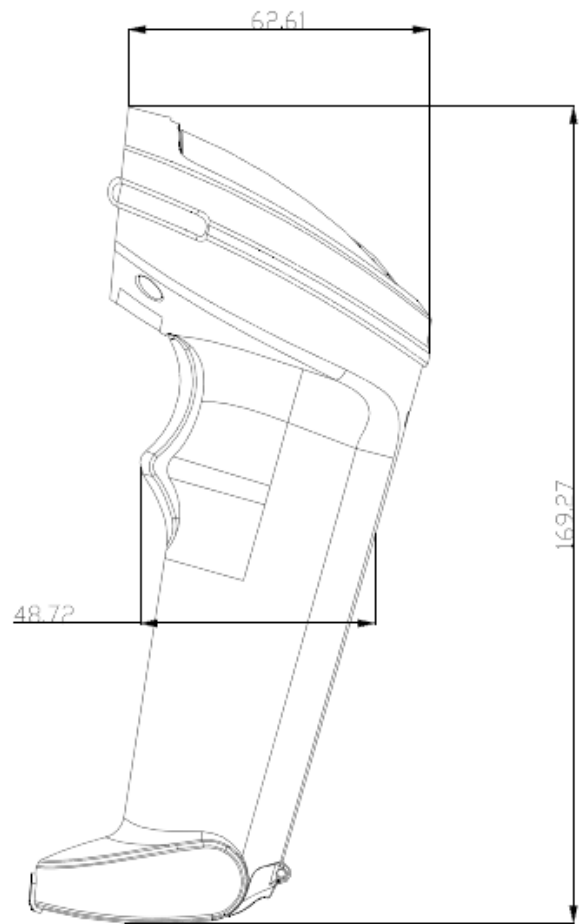
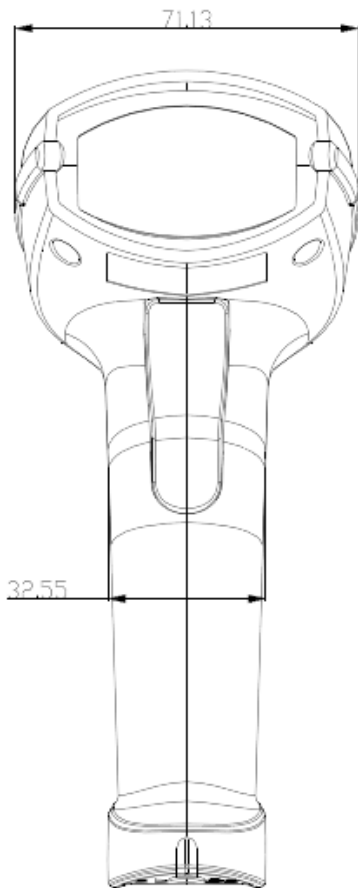
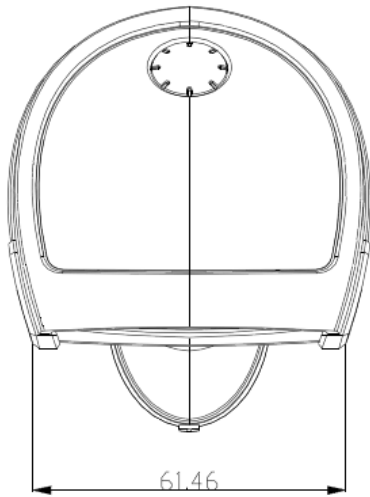
Pin No.	Function
1	RTS
2	HOSTDATA
3	GND
4	HOST CLK
5	Vcc (+5V)
6	KB CLK
7	TXD
8	KB DATA
9	RXD
10	CTS





**c. Mechanical drawing**

Unit: mm



## C. Electrical Characteristics

Interface	RS232	KB	USB
Supply Voltage	DC +5V ±5%		
Output Voltage (Typ.)	±9V	+5V	+5V
Output low Voltage (Max.)	-	0.7V	0.4V
<b>Current Draw</b>			
Power On (Typ.)	170 mA	170 mA	170mA
Stand by (Typ.)	50 mA	50 mA	50 mA
Operation (Typ.)	150mA	150 mA	150 mA

## D. Performance

Light Source	Visible Red light 635nm LED
Sensor	Linear CCD Sensor
Processor Type	ARM Cortex-M3,32-bit
Operating Freq.	8 MHz
Scan Speed	Smart detection, up to 500 scans per second
Reading Distance	Up to 500mm@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	Designed to IP42 water and dust protection

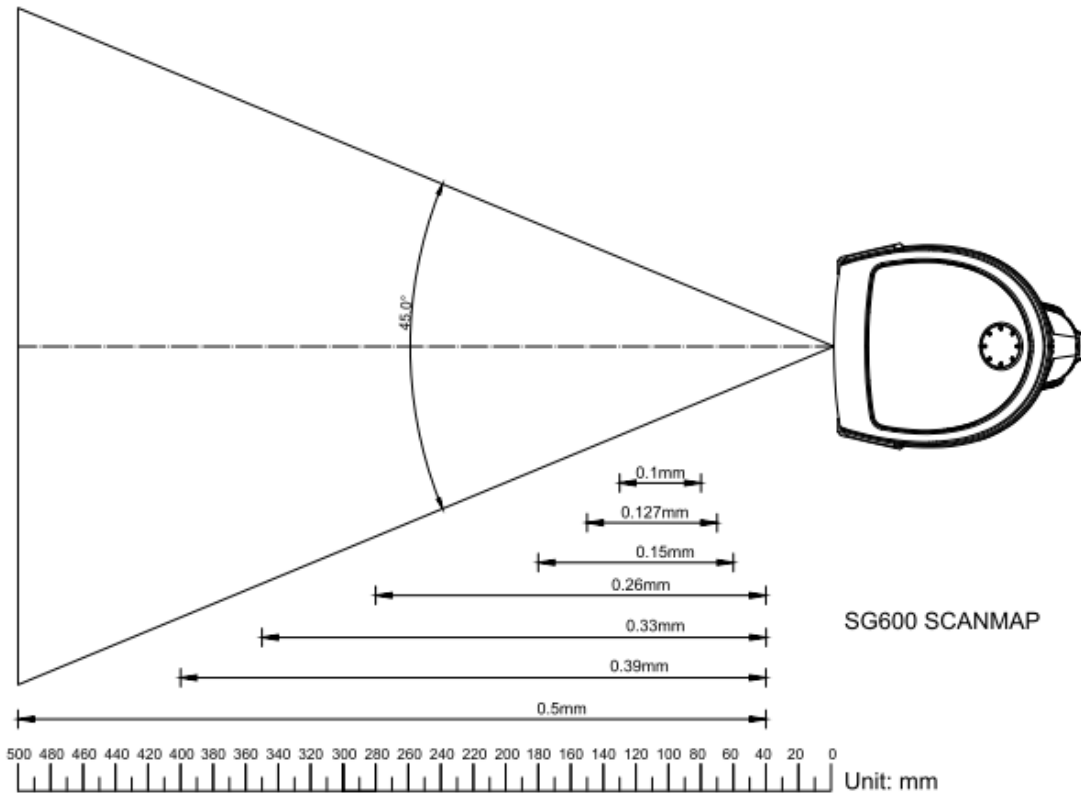
## E. Environmental

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	
Matrix 25	V	
MSI/PLESSEY	V	
Telepen	V	
Code 93	V	
Code 11	V	
China Postage	V	
Code 26	V	
LCD25	V	
GS1 DataBar Omnidirectional & Stacked	V	
GS1 DataBar Limited	V	
GS1 DataBar Expanded & Stacked	V	

**G. Scan Map**



**H. Reliability**

<b>Life Time</b>	
Trigger Switch	1,000,000 times
MTBF(Calculated)	50,000 hours
<b>Thermal Shock</b>	
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	59.05 inches(150cm) drop on concrete surface

**I. Packing**

**Dimension**

Unit	24 cm X 10.9 cm X 8.6 cm
Carton	57 cm X 37.5 cm X 26.5 cm

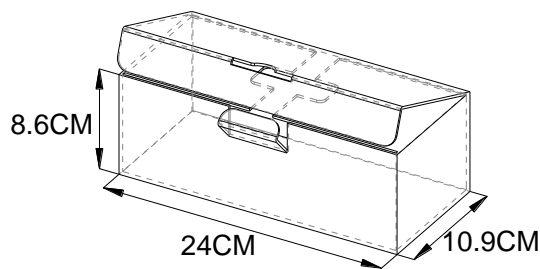
**Weight**

Unit	345 g
Carton	8 Kg ( Q'ty :20 pcs )

**Storage**

Temperature	-20 °C to 60 °C (-4 °F to 140 °F)
Humidity	20% to 95% (Non-condensing)

**Unit :**



**Carton:**

