

PRODUCT CATALOGUE 2018





Innovative R&D provides valued professional instruments based on advanced technology, realizing the high performance and service by combination of market requirements.

Measuring.....

- Strong Development Ability
- Strict Supplier Evaluation
- Advanced Production Management System
- Reliable Quality Control
- Best After-sales Service

Company Profile

Shenzhen Jumaoyuan Science And Technology Co., Ltd, locates in Shenzhen city, are a professional manufacturer of instrumental products under our brand "**BENETECH**", such as Infrared Thermometer, Anemometer, Sound Level Meter, Humidity & Temperature Meter, Ultrasonic Thickness Gauge, Film/Coating Thickness Gauge, Vibration Meter, High Voltage Insulation Tester, Earth Resistance Tester, RCD (ELCB) Testers, etc. . We also have much experience in providing OEM/ODM service with good reputation in this field. Our products have won praise from our customers worldwide.

We have implemented a strict and complete quality control system, which ensures that each product can meet quality requirements of customers. Besides, all of our products are passed the CE, ROHS, FCC detection and have been strictly inspected before shipment.

Our company is sticking to the high starting point and strict requirements. Absorbing and introducing advanced technology at home and abroad. Developing and producing high quality, efficient and practical new products independently. Constantly improving the self and actively participating in market competition. With advanced equipment, strict scientific management and firstclass aftersales service to better serve the vast number of new and old customers.



CE



FCC



ROHS

Production&Quality



Specializing in the production of the think tank (the BENETECH) brand infrared thermometer, anemometer, noise, temperature and humidity meter, ultrasonic thickness meter, coating thickness gauge, vibration, high voltage megohmmeter, illuminance meter, micro power monitor, differential pressure gauge, wood moisture meter, grounding resistance tester, leakage switch tester and so on.



Founded in 2004 in nanshan district, shenzhen city, it is a high-tech enterprise integrating professional development, design, production and sales.



Temperature Measurement Series

Infrared Thermometer

• GT750 ^{Now}	P007
• GT950 ^{Now}	P008
• GM270	P009
• GM300	P010
• GM300E	P011
• GM320	P012
• GM333 ^{Now}	P013
• GM333A ^{Now}	P014
• GM533 ^{Now}	P015
• GM533A ^{Now}	P016
• GM550	P017
• GM550E	P018
• GM700	P019
• GM900	P020
• GM1150	P021
• GM1150A	P022
• GM1350	P023
• GM1500	P024
• GM1650	P025
• GM1651	P026
• GM1850	P027
• GM2200	P028
Food Thermometer • GM1311	P029
Thermocouple Thermometer • GM1312	P030

Digital Anemometer

• GM816	P049
• GM8909	P050
• GM8901	P051
• GM8901+	P051
• GM8902	P052
• GM8902+	P053
• GM8903	P054
• GM8904	P055
• GT8907 ^{Now}	P056
• GM8908	P057
• GM8910	P058

Digital Lux Meter

• GM1010	P061
• GM1020	P062
• GM1030 ^{Now}	P064

Micro Power Monitor

• GM86	P067
• GM87	P067
• GM88	P068
• GM89	P068

Environmental Detection

Digital Sound Level Meter

• GM1351	P033
• GM1352	P034
• GM1356	P035
• GM1357	P036
• GM1358	P037

Humidity & Temperature Meter

• GM1360	P040
• GM1360A	P041
• GM1361	P042
• GM1361+	P043
• GM1362	P044

Temperature Logger

• GM1365	P045
• GM1366	P046

Nondestructive Testing

Ultrasonic Thickness Gauge

• GM100	P071
• GM100+	P072
• GM130	P073

Film/Coating Thickness Gauge

• GM220	P074
• GM280	P075
• GM280 F	P076

Vibration Meter

• GM63A	P077
• GM63B	P078

Pressure Manometer

• GM505	P081
• GM510	P082
• GM511	P083
• GM520	P084

Wood Moisture Meter

- GM605 P088
- GM610 P089
- GM620 P090
- GM630 P091

Garin Moisture Meter

- GM640 P092

Tachometer

- GM8905 P095
- GM8906^{Now} P096

Gas detection

Combustible Gas Detector

- GM8800A P099
- GM8800B^{Now} P100

- **Formaldehyde Monitor** • GM8801 P101

- **Carbon Dioxide Meter** • GM8802 P102

Air Quality Detector

- GM8803 P103
- GM8804 P104

Carbon Monoxide Meter

- GM8805 P105

Ammonia Gas Detector

- GM8806 P106

Electrical tools

High Voltage Insulation Tester Series

- GM3123 P109
- GM3125 P110

Wire Teacker/CCTV Tester

- GM60 P111
- GM61 P112
- GM62 P113

Fitting

- **Long/Short Probe tip** P114
- **Calibration Block** P114
- **USB Wire** P114



HD color screen display

Pictures



Models	GM270	GM300	GM300E	GM320	GM333	GM333A	GT450A	GM500	GM533	GM533A	GM550	GM550E	GM700	GT750	GM900	GT950	GM1150	GM1150A	GM1500	GM1250	GM1350	GM1650	GM1651	GM1850	GM2200	GM1311	GM1312	
page	P09	P10	P11	P12	P13	P14	P*	P*	P15	P16	P17	P18	P19	P07	P20	P08	P21	P22	P24	P*	P23	P25	P26	P27	P28	P29	P30	
Temperature Range	-32~280°C -26~536°F	-50~420°C -58~788°F	-50~420°C -58~788°F	-50~380°C -58~716°F	-50~400°C -58~752°F	-50~400°C -58~752°F	-50~530°C -58~988°F	-50~550°C -58~1022°F	-50~530°C -58~988°F	-50~530°C -58~988°F	-50~550°C -58~1022°F	-50~550°C -58~1022°F	-50~700°C -58~1292°F	-50~700°C -58~1292°F	-50~900°C -58~1652°F	-50~900°C -58~1652°F	-50~1150°C -58~2102°F	-18~1150°C 0~2102°F	-30~1500°C -22~2732°F	-50~1250°C -58~1292°F	-30~1350°C -22~2462°F	200~1650°C 392~3002°F	-30~1650°C -22~3002°F	200~1850°C 392~3382°F	200~2200°C 392~3992°F	-50~300°C -58~572°F	-250~1787°C -329~3212°F	
Accuracy	±1.5°C or ±1.5%	±1.5% or ±1.5°C	±1.5% or ±1.5°C	±1.5% or ±1.5°C	±1.5% or ±1.5°C	±1.5% or ±1.5°C	±1.5% or ±1.5°C	±1.5% or ±1.5°C	±1.5% or ±1.5°C	±1.5% or ±1.5°C	±1.5% or ±1.5°C	±1.5% or ±1.5°C	±1.5% or ±1.5°C	±1.5% or ±1.5°C	±1.5% or ±1.5°C	±1.5% or ±1.5°C	±1.5% or ±1.5°C	±1.5% or ±1.5°C	±1.5% or ±1.5°C	±1.5% or ±1.5°C	±1.5% or ±1.5°C	±1.5% or ±1.5°C	±1.5% or ±1.5°C	±2°C/±3°C ±4°C	±1.5% or ±1.5°C	±0.1°C/ ±1.5°C/ ±2°C	±0.1%+0.6°C	
Repeatability	1% or 1°C	1% or 1°C	1% or 1°C	1% or 1°C	1% or 1°C	1% or 1°C	1% or 1°C	1% or 1°C	1% or 1°C	1% or 1°C	1% or 1°C	1% or 1°C	1% or 1°C	1% or 1°C	1% or 1°C	1% or 1°C	1% / 1°C	1% / 1°C	1% / 1°C	1% / 1°C	1% / 1°C	1% / 1°C	1% / 1°C	1% / 1°C	1% / 1°C	1% / 1°C	x	x
Distance Spot Ratio	8:1	12:1	12:1	12:1	12:1	12:1	12:1	12:1	12:1	12:1	12:1	12:1	12:1	12:1	12:1	12:1	20:1	50:1	50:1	20:1	50:1	50:1	50:1	80:1	80:1	x	x	
Emissivity	0.95	0.95	0.1~1.0 Adjustable	0.95	0.95	0.1~1.0 Adjustable	0.95	0.95	0.95	0.1~1.0 Adjustable	0.95	0.1~1.0 Adjustable	0.1~1.0 Adjustable	0.1~1.0 Adjustable	0.1~1.0 Adjustable	0.1~1.0 Adjustable	0.1~1.0 Adjustable	0.1~1.0 Adjustable	0.1~1.0 Adjustable	0.1~1.0 Adjustable	0.1~1.0 Adjustable	0.1~1.0 Adjustable	0.1~1.0 Adjustable	0.1~1.0 Adjustable	0.1~1.0 Adjustable	x	x	
Resolution	0.1°C/1°F	0.1°C/1°F	0.1°C/1°F	0.1°C/1°F	0.1°C/1°F	0.1°C/1°F	0.1°C/1°F	0.1°C/1°F	0.1°C/1°F	0.1°C/1°F	0.1°C/1°F	0.1°C/1°F	0.1°C/1°F	0.1°C/1°F	0.1°C/1°F	0.1°C/1°F	0.1°C/1°F	0.1°C/1°F	0.1°C/1°F	0.1°C/1°F	0.1°C/1°F	0.1°C/1°F	0.1°C/1°F	0.1°C/1°F	0.1°C/1°F	0.1°C/1°F	x	x
Response Time	500ms	500ms	500ms	500ms	500ms	500ms	500ms	500ms	500ms	500ms	500ms	500ms	500ms	500ms	500ms	500ms	500ms	500ms	500ms	1.5s	500ms	500ms	0.5~0.8s	500ms	500ms	x	x	
Wavelength	5-14μm	5-14μm	8-14μm	5-14μm	5-14μm	5-14μm	5-14μm	8-14μm	8-14μm	5-14μm	5-14μm	8-14μm	8-14μm	8-14μm	8-14μm	8-14μm	8-14μm	8-14μm	5-14μm	8-14μm	8-14μm	8-14μm	8-14μm	8-14μm	900~1700 nm	900~1700 nm	x	x
Interface	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	USB	RS232	RS232	x	x	
MAX/AVG/ DIF Reading	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	Max/Min	Max/Min/Avg
High/Low Temperature Alarm Setup	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Data Store Recall Function	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
°C/°F Selection	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Data Hold Function	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Laser Target Pointer ON/OFF Selection	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Backlight ON/OFF Selection	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	x	Backlight
Auto Power Shut Off	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√



标智®仪表

Professional • Safety • Precision • Durable





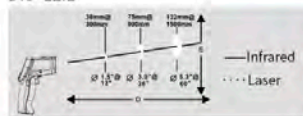
This infrared thermometer is used for measuring the temperature of the object's surface, which is applicable for various hot, hazardous or hard-to-reach objects without contact safely and quickly.

LCD display & buttons

- 1. LCD display:
- A: measuring reading
- B: measuring unit
- C: laser on icon
- D: back light on icon
- E: battery power icon
- F: scanning icon
- G: data hold icon
- H: mode/emissivity indicator
- I: data storage / read icon
- J: low temperature alarm icon
- K: high temperature alarm icon



Distance(D) to Spot size(S)
D:S=12:1



NEW

Specification

Temperature range	-50°C~750°C (-58°F~1382°F)
Accuracy	0°C~750°C(32°F~1382°F):±1.5°C(±2.7°F)or±1.5% -50°C~0°C(-58°F~32°F):±3°C(±5°F) Whichever is greater
Resolution	0.1°C or 0.1°F
Repeatability	1% of reading or 1°C
Response time	500 mSec, 95% response
Spectral response	8um~14 um
Emissivity	0.10~1.00 Adjustable (0.95Preset)
Distance to Spot size	12:1
Operating Temperature	0°C~40°C (32°F~104°F)
Operating Humidity	10%RH~95%RH non-condensing, up to 30°C(86°F)
Storage Temperature	-20°C~60°C (-4°F~140°F)
Power	9V Alkaline or NiCd battery
Typical battery life (Alkaline)	Non-laser mode: 22 hrs; Laser Models:12 hrs
Weight	222g
Dimension	111*50*172mm

Emissivity

Material	Emissivity	Material	Emissivity
Aluminum	0.30	Iron	0.70
Asbestos	0.95	Lead	0.50
Asphalt	0.95	Limestone	0.98
Basalt	0.70	Oil	0.94
Brass	0.50	Paint	0.93
Brick	0.90	Paper	0.95
Carbon	0.85	Plastic	0.95
Ceramic	0.95	Rubber	0.95
Concrete	0.95	Sand	0.90
Copper	0.95	Skin	0.98
Dirt	0.94	Snow	0.90
Frozen food	0.90	Steel	0.80
Hot food	0.93	Textiles	0.94
Glass(plate)	0.85	Water	0.93
Ice	0.98	Wood	0.94

This unit consist of Optics, Temperature Sensor Signal amplifier, Processing circuit and LCD Display. The Optics collected the infrared energy emitted by object and focus onto the Sensor. Then the sensor translates the energy into an electricity signal. This signal will be turned out to be digital shown on the LCD after the signal amplifier and processing circuit.

Specification

Temperature range	-50°C~950°C (-58°F~1742°F)
Accuracy	0°C~950°C(32°F~1742°F):±1.5°C(±2.7°F)or±1.5% -50°C~0°C(-58°F~32°F):±3°C(±5°F) Whichever is greater
Resolution	0.1°C or 0.1°F
Repeatability	1% of reading or 1°C
Response time	500 mSec, 95% response
Spectral response	8um~14 um
Emissivity	0.10~1.00 Adjustable (0.95Preset)
Distance to Spot size	12:1
Operating Temperature	0°C~40°C (32°F~104°F)
Operating Humidity	10%RH~95%RH non-condensing, up to 30°C(86°F)
Storage Temperature	-20°C~60°C (-4°F~140°F)
Power	9V Alkaline or NiCd battery
Typical battery life (Alkaline)	Non-laser mode: 22 hrs; Laser Models:12 hrs
Weight	222g
Dimension	111*50*172mm

Emissivity

Material	Emissivity	Material	Emissivity
Aluminum	0.30	Iron	0.70
Asbestos	0.95	Lead	0.50
Asphalt	0.95	Limestone	0.98
Basalt	0.70	Oil	0.94
Brass	0.50	Paint	0.93
Brick	0.90	Paper	0.95
Carbon	0.85	Plastic	0.95
Ceramic	0.95	Rubber	0.95
Concrete	0.95	Sand	0.90
Copper	0.95	Skin	0.98
Dirt	0.94	Snow	0.90
Frozen food	0.90	Steel	0.80
Hot food	0.93	Textiles	0.94
Glass(plate)	0.85	Water	0.93
Ice	0.98	Wood	0.94



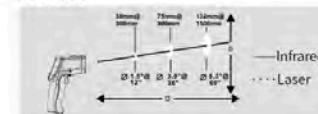
HD color screen display

LCD display & buttons

- 1. LCD display:
- A: measuring reading
- B: measuring unit
- C: laser on icon
- D: back light on icon
- E: battery power icon
- F: scanning icon
- G: data hold icon
- H: mode/emissivity indicator
- I: data storage / read icon
- J: low temperature alarm icon
- K: high temperature alarm icon



Distance(D) to Spot size(S)
D:S=12:1





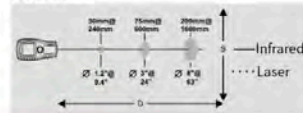
This infrared thermometer is used for measuring the temperature of the object's surface, which is applicable for various hot, hazardous or hard-to-reach objects without contact safely and quickly.

LCD display & buttons

1. LCD display:
- a. Data hold icon
- b. Scanning icon
- c. Laser on icon
- d. Back light on icon
- e. Low Battery icon
- f. Temperature unit
- g. Temperature reading



Distance(D) to Spot size(S)
D:S=8:1



Specification

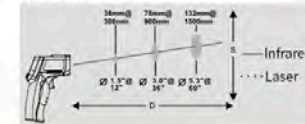
Temperature range	-32 ~ 280°C (-26 ~ 536°F)
Accuracy	0°C-280°C (32°F-536°F) : ±1.5°C(±2.7°F) or ±1.5%
	-32°C-0°C(-26°F-32°F) : ±3°C (±5°F) Whichever is greater
Resolution	0.1°C or 0.1°F
Repeatability	1% of reading or 1°C
Response time	500 mSec, 95% response
Spectral response	8um-14 um
Emissivity	0.95Preset
Distance to Spot size	8:1
Operating Temperature	0°C-40°C (32°F ~ 104°F)
Operating Humidity	10%RH-95%RH non-condensing, up to 30°C(86°F)
Storage Temperature	-20°C ~ 60°C (-4°F-140°F)
Power	1.5V AAA*2 battery
Typical battery life (Alkaline)	Laser off:12 hrs
Weight	78.2g
Dimension	98*53*29.5mm



- Laser
- Thermometer peobe
- Trigger
- Battery:9V 6F 22*1PCS(Not Included)
- Battery Cover



Distance(D) to Spot size(S)
D:S=12:1



Specification

Temperature range	-50 ~ 450°C (-58 ~ 842°F)
Accuracy	0°C-450°C (32°F-842°F) : ±1.5°C(±2.7°F) or ±1.5%
	-50°C-0°C(-58°F-32°F) : ±3°C (±5°F) Whichever is greater
Resolution	0.1°C or 0.1°F
Repeatability	1% of reading or 1°C
Response time	500 mSec, 95% response
Spectral response	5-14 um
Emissivity	0.95Preset
Distance to Spot size	12:1
Operating Temperature	0°C-40°C (32°F ~ 104°F)
Operating Humidity	10%RH-95%RH non-condensing, up to 30°C(86°F)
Storage Temperature	-20°C ~ 60°C (-4°F-140°F)
Power	9V (6F22) battery
Typical battery life (Alkaline)	Non-laser mode: 22 hrs;Laser Models:12 hrs
Weight	147.5g
Dimension	153x101x43mm

LCD display & buttons

1. LCD display:
- a. Data hold icon
- b. Scanning icon
- c. Laser on icon
- d. Back light on icon
- e. Low Battery icon
- f. Temperature unit
- g. Temperature reading



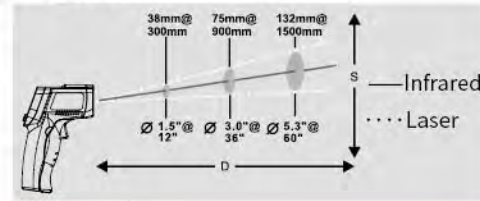
LCD display & buttons

1.LCD display:

- A: measuring reading B: measuring unit
- C: low temperature alarm icon
- D: data hold icon E: scanning icon
- F: high temperature alarm icon
- G: laser on icon H: back light on icon
- I: battery power icon J: mode
- K:emissivity indicator L:functional value



Distance(D) to Spot size(S)
D:S=12:1



Specification

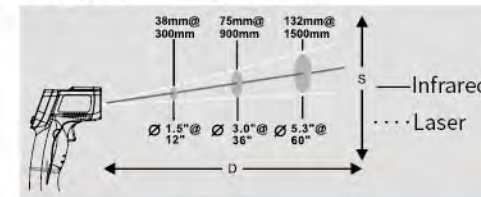
Temperature range	-50~420°C (-58~788°F)
Accuracy	0~420°C(32~788°F) : ±1.5°C(±2.7°F) or ±1.5% -50~0°C(-58~32°F): ±3°C(±5°F) Whichever is greater
Resolution	0.1°C or 0.1°F
Repeatability	1% of reading or 1°C
Response time	500 mSec, 95% response
Spectral response	5-14 um
Emissivity	0.10~1.00 Adjustable (0.95 Preset)
Distance to Spot size	12:1
Operating Temperature	0°C ~40°C (32°F ~ 104°F)
Operating Humidity	10%RH~95%RH non-condensing, up to 30°C(86°F)
Storage Temperature	-20°C ~ 60°C (-4°F~140°F)
Power	9V Alkaline or NiCd battery
Typical battery life (Alkaline)	Non-laser mode: 22 hrs;Laser Models:12 hrs
Weight	147.5g
Dimension	153*101*43mm

Emissivity

Material	Emissivity	Material	Emissivity
Aluminum	0.30	Iron	0.70
Asbestos	0.95	Lead	0.50
Asphalt	0.95	Limestone	0.98
Basalt	0.70	Oil	0.94
Brass	0.50	Paint	0.93
Brick	0.90	Paper	0.95
Carbon	0.85	Plastic	0.95
Ceramic	0.95	Rubber	0.95
Concrete	0.95	Sand	0.90
Copper	0.95	Skin	0.98
Dirt	0.94	Snow	0.90
Frozen food	0.90	Steel	0.80
Hot food	0.93	Textiles	0.94
Glass(plate)	0.85	Water	0.93
Ice	0.98	Wood	0.94



Distance(D) to Spot size(S)
D:S=12:1

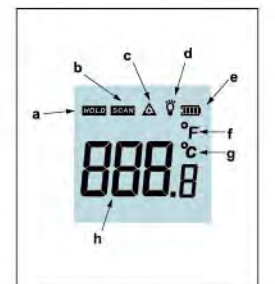


1.5V AAA*2 battery



LCD display & buttons

1. LCD display:
 - a. Data hold icon
 - b. Scanning icon
 - c. Laser on icon
 - d. Backlight on icon
 - e. Low battery icon
 - f. Fahrenheit unit
 - g. Celsius unit
 - h. Temperature reading



Specification

Temperature range	-50 ~ 400°C (-58 ~ 752°F)
Accuracy	0°C~400°C (32°F~752°F) : ±1.5°C(±2.7°F) or ±1.5% -50°C~0°C(-58°F~32°F): ±3°C(±5°F) Whichever is greater
Resolution	0.1°C or 0.1°F
Repeatability	1% of reading or 1°C
Response time	500 mSec, 95% response
Spectral response	5-14 um
Emissivity	0.95 Preset
Distance to Spot size	12:1
Operating Temperature	0°C ~40°C (32°F ~ 104°F)
Operating Humidity	10%RH~95%RH non-condensing, up to 30°C(86°F)
Storage Temperature	-20°C ~ 60°C (-4°F~140°F)
Power	1.5V AAA*2 battery
Typical battery life (Alkaline)	Non-laser mode: 22 hrs;Laser Models:12 hrs
Weight	115.1g
Dimension	144.5*38*93mm

Specification

Temperature range	-50 ~ 400°C (-58 ~ 752°F)
Accuracy	0°C~400°C (32°F~752°F) : ±1.5°C (±2.7°F) or ±1.5%
Resolution	0.1°C or 0.1°F
Repeatability	1% of reading or 1°C
Response time	500 mSec, 95% response
Spectral response	5-14 um
Emissivity	0.95 Preset
Distance to Spot size	12:1
Operating Temperature	0°C ~40°C (32°F ~ 104°F)
Operating Humidity	10%RH~95%RH non-condensing, up to 30°C(86°F)
Storage Temperature	-20°C ~ 60°C (-4°F~140°F)
Power	1.5V AAA*2 battery
Typical battery life (Alkaline)	Laser off:12 hrs
Weight	115.1g
Dimension	144.5*38*93mm

LCD display & buttons

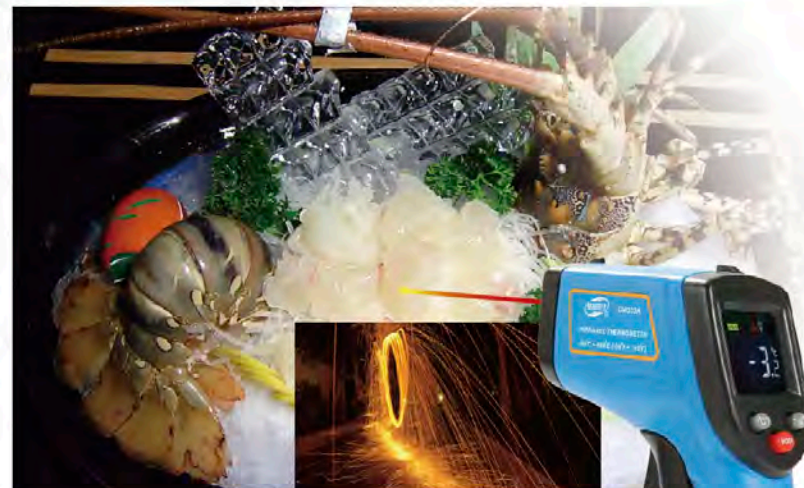
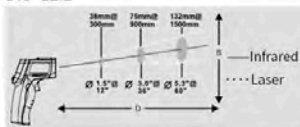
1. LCD display:
- a. Data hold icon
- b. Scanning icon
- c. Laser on icon
- d. Backlight on icon
- e. Low battery icon
- f. Fahrenheit unit
- g. Celsius unit
- h. Temperature reading



Hd color screen display



Distance(D) to Spot size(S)
D:S=12:1

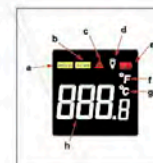


Specification

Temperature range	-50~400°C (-58~752°F)
Accuracy	0~400°C(32~752°F) : ±1.5°C (±2.7°F) or ±1.5%
Resolution	0.1°C or 0.1°F
Repeatability	1% of reading or 1°C
Response time	500 mSec, 95% response
Spectral response	5-14 um
Emissivity	0.10-1.00 Adjustable (0.95 Preset)
Distance to Spot size	12:1
Operating Temperature	0°C ~40°C (32°F ~ 104°F)
Operating Humidity	10%RH~95%RH non-condensing, up to 30°C(86°F)
Storage Temperature	-20°C ~ 60°C (-4°F~140°F)
Power	3V (1.5V AAA battery * 2)
Typical battery life (Alkaline)	Laser Models:12 hrs
Weight	115.1g
Dimension	144.5*38*93mm

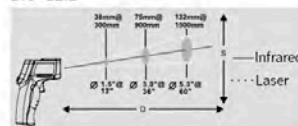
LCD display & buttons

1. LCD display:
- a. Data hold icon
- b. Scanning icon
- c. Laser on icon
- d. Backlight on icon
- e. Low battery icon
- f. Fahrenheit unit
- g. Celsius unit
- h. Temperature reading



Hd color screen display

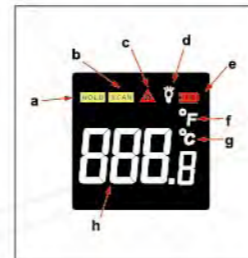
Distance(D) to Spot size(S)
D:S=12:1



Specification	
Temperature range	-50 ~ 530°C (-58 ~ 986°F)
Accuracy	0°C~530°C (32°F~986°F) : ±1.5°C(±2.7°F) or ±1.5%
	-50°C~0°C(-58°F~32°F) : ±3°C (±5°F) Whichever is greater
Resolution	0.1°C or 0.1°F
Repeatability	1% of reading or 1°C
Response time	0.95 Preset
Spectral response	8-14 um
Emissivity	0.95 Preset
Distance to Spot size	12:1
Operating Temperature	0°C ~40°C (32°F ~ 104°F)
Operating Humidity	10%RH~95%RH non-condensing, up to 30°C(86°F)
Storage Temperature	-20°C ~ 60°C (-4°F~140°F)
Power	1.5V AAA*2 battery
Typical battery life (Alkaline)	Laser off:12 hrs
Weight	115.1g
Dimension	144.5*38*93mm

LCD display & buttons

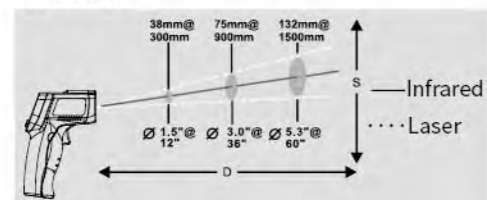
- LCD display:
 - Data hold icon
 - Scanning icon
 - Laser on icon
 - Backlight on icon
 - Low battery icon
 - Fahrenheit unit
 - Celsius unit
 - Temperature reading



Hd color screen display



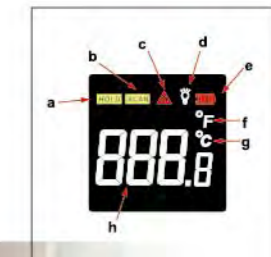
Distance(D) to Spot size(S)
D:S=12:1



Specification	
Temperature range	-50~400°C (-58~752°F)
Accuracy	0~400°C(32~752°F) : ±1.5°C(±2.7°F) or ±1.5%
	-50~0°C(-58~32°F): ±3°C (±5°F) Whichever is greater
Resolution	0.1°C or 0.1°F
Repeatability	1% of reading or 1°C
Response time	500 mSec, 95% response
Spectral response	5-14 um
Emissivity	0.10~1.00 Adjustable (0.95 Preset)
Distance to Spot size	12:1
Operating Temperature	0°C ~40°C (32°F ~ 104°F)
Operating Humidity	10%RH~95%RH non-condensing, up to 30°C(86°F)
Storage Temperature	-20°C ~ 60°C (-4°F~140°F)
Power	3V (1.5V AAA battery * 2)
Typical battery life (Alkaline)	Laser Models:12 hrs
Weight	115.1g
Dimension	144.5*38*93mm

LCD display & buttons

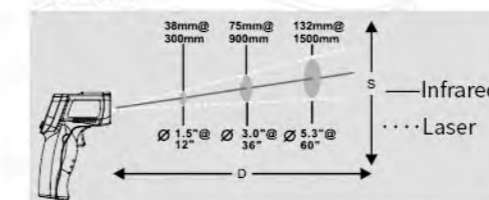
- LCD display:
 - Data hold icon
 - Scanning icon
 - Laser on icon
 - Backlight on icon
 - Low battery icon
 - Fahrenheit unit
 - Celsius unit
 - Temperature reading



Hd color screen display

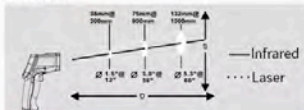


Distance(D) to Spot size(S)
D:S=12:1





Distance(D) to Spot size(S)
D:S=12:1



Laser on/off button
Back light on/off button
Celsius / Fahrenheit switch button



Specification	
Temperature range	-50~530°C (-58~986°F)
Accuracy	0~400°C (32~752°F): ±1.5°C (±2.7°F) or ±1.5%
Resolution	0.1°C or 0.1°F
Repeatability	1% of reading or 1°C
Response time	500 mSec, 95% response
Spectral response	5-14 um
Emissivity	0.10-1.00 Adjustable (0.95 Preset)
Distance to Spot size	12:1
Operating Temperature	0°C ~40°C (32°F ~ 104°F)
Operating Humidity	10%RH-95%RH non-condensing, up to 30°C(86°F)
Storage Temperature	-20°C ~ 60°C (-4°F-140°F)
Power	3V (1.5V AAA battery * 2)
Typical battery life (Alkaline)	Laser Models:12 hrs
Weight	115.1g
Dimension	144.5*38*93mm

LCD display & buttons

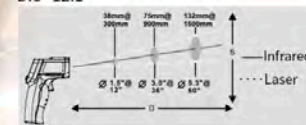
- LCD display:
 - Data hold icon
 - Scanning icon
 - Laser on icon
 - Backlight on icon
 - Low battery icon
 - Fahrenheit unit
 - Celsius unit
 - Temperature reading



Hd LCD display



Distance(D) to Spot size(S)
D:S=12:1



LCD display & buttons

- LCD display:
 - measuring reading
 - measuring unit
 - low temperature alarm icon
 - data hold icon
 - scanning icon
 - high temperature alarm icon
 - laser on icon
 - back light on icon
 - battery power icon
 - mode
 - emissivity indicator
 - functional value



Specification

Temperature range	-50~550°C (-58~1022°F)
Accuracy	0~550°C (32~1022°F): ±1.5°C (±2.7°F) or ±1.5%
Resolution	-50~0°C (-58~32°F): ±3°C (±5°F) Whichever is greater
Repeatability	0.1°C or 0.1°F
Response time	1% of reading or 1°C
Response time	500 mSec, 95% response
Spectral response	5-14 um
Emissivity	0.10-1.00 Adjustable (0.95 Preset)
Distance to Spot size	12:1
Operating Temperature	0°C ~40°C (32°F ~ 104°F)
Operating Humidity	10%RH-95%RH non-condensing, up to 30°C(86°F)
Storage Temperature	-20°C ~ 60°C (-4°F-140°F)
Power	3V (1.5V AAA battery * 2)
Typical battery life (Alkaline)	Non-laser mode: 22 hrs; Laser Models: 12 hrs
Weight	147.5g
Dimension	153*101*43mm



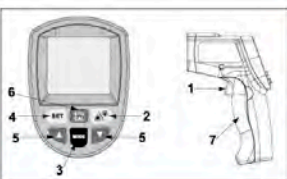
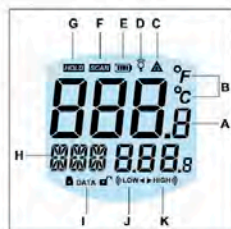


Diagram description

1. Trigger
2. Laser point and a backlight lamp switch
- 3-6. key functions
7. Celsius / Fahrenheit switch

LCD display & buttons

- 1.LCD display:
 A: measuring reading
 B: measuring unit
 C: laser on icon
 D: back light on icon
 E: battery power icon
 F: scanning icon
 G: data hold icon
 H: mode/emissivity indicator
 I: data storage / read icon
 J: low temperature alarm icon
 K: high temperature alarm icon



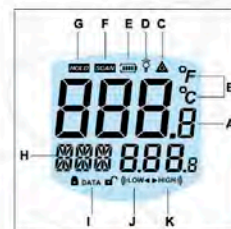
Specification	
Temperature range	-50°C~750°C (-58°F~1382°F)
Accuracy	0°C~750°C(32°F~1382°F):±1.5°C(±2.7°F)or±1.5% -50°C~0°C(-58°F~32°F):±3°C(±5°F)Whichever is greater
Resolution	0.1°C or 0.1°F
Repeatability	1% of reading or 1°C
Response time	500 mSec, 95% response
Spectral response	8um~14 um
Emissivity	0.10~1.00 Adjustable (0.95 Preset)
Distance to Spot size	12:1
Operating Temperature	0°C~40°C (32°F~104°F)
Operating Humidity	10%RH~95%RH non-condensing, up to 30°C(86°F)
Storage Temperature	-20°C~60°C (-4°F~140°F)
Power	9V Alkaline or NiCd battery
Typical battery life (Alkaline)	Non-laser mode: 22 hrs;Laser Models:12 hrs
Weight	222g
Dimension	111*50*172mm

Emissivity			
Material	Emissivity	Material	Emissivity
Aluminum	0.30	Iron	0.70
Asbestos	0.95	Lead	0.50
Asphalt	0.95	Limestone	0.98
Basalt	0.70	Oil	0.94
Brass	0.50	Paint	0.93
Brick	0.90	Paper	0.95
Carbon	0.85	Plastic	0.95
Ceramic	0.95	Rubber	0.95
Concrete	0.95	Sand	0.90
Copper	0.95	Skin	0.98
Dirt	0.94	Snow	0.90
Frozen food	0.90	Steel	0.80
Hot food	0.93	Textiles	0.94
Glass(plate)	0.85	Water	0.93
Ice	0.98	Wood	0.94



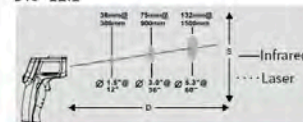
LCD display & buttons

- 1.LCD display:
 A: measuring reading
 B: measuring unit
 C: laser on icon
 D: back light on icon
 E: battery power icon
 F: scanning icon
 G: data hold icon
 H: mode/emissivity indicator
 I: data storage / read icon
 J: low temperature alarm icon
 K: high temperature alarm icon



Emissivity			
Material	Emissivity	Material	Emissivity
Aluminum	0.30	Iron	0.70
Asbestos	0.95	Lead	0.50
Asphalt	0.95	Limestone	0.98
Basalt	0.70	Oil	0.94
Brass	0.50	Paint	0.93
Brick	0.90	Paper	0.95
Carbon	0.85	Plastic	0.95
Ceramic	0.95	Rubber	0.95
Concrete	0.95	Sand	0.90
Copper	0.95	Skin	0.98
Dirt	0.94	Snow	0.90
Frozen food	0.90	Steel	0.80
Hot food	0.93	Textiles	0.94
Glass(plate)	0.85	Water	0.93
Ice	0.98	Wood	0.94

Distance(D) to Spot size(S)
 D:S=12:1



Specification	
Temperature range	-50°C~750°C (-58°F~1382°F)
Accuracy	0°C~750°C(32°F~1382°F):±1.5°C(±2.7°F)or±1.5% -50°C~0°C(-58°F~32°F):±3°C(±5°F)Whichever is greater
Resolution	0.1°C or 0.1°F
Repeatability	1% of reading or 1°C
Response time	500 mSec, 95% response
Spectral response	8um~14 um
Emissivity	0.10~1.00 Adjustable (0.95 Preset)
Distance to Spot size	12:1
Operating Temperature	0°C~40°C (32°F~104°F)
Operating Humidity	10%RH~95%RH non-condensing, up to 30°C(86°F)
Storage Temperature	-20°C~60°C (-4°F~140°F)
Power	9V Alkaline or NiCd battery
Typical battery life (Alkaline)	Non-laser mode: 22 hrs;Laser Models:12 hrs
Weight	222g
Dimension	111*50*172mm

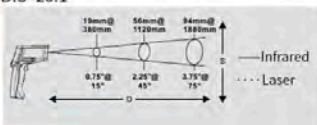
LCD display & buttons:

- 1.LCD display:
- A: measuring reading
- B: measuring unit
- C: laser on icon
- D: back light on icon
- E: battery power icon
- F: scanning icon
- G: data hold icon
- H: mode/emissivity indicator
- I: data storage / read icon
- J: low temperature alarm icon
- K: high temperature alarm icon



Distance(D) to Spot size(S)

D:S=20:1



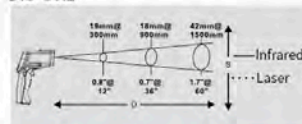
Specification	
Temperature range	-30~1150°C (-22~2102°F)
Accuracy	0~1150°C(32~2102°F): ±1.5°C(±2.7°F) or ±1.5% -30~0°C(-22~32°F): ±3°C(±5°F) Whichever is greater
Resolution	0.1°C or 0.1°F
Repeatability	1% of reading or 1°C
Response time	500 mSec, 95% response
Spectral response	8um~14 um
Emissivity	0.10~1.00 Adjustable (0.95 Preset)
Distance to Spot size	20:1
Operating Temperature	0°C ~40°C (32°F ~ 104°F)
Operating Humidity	10%RH~95%RH non-condensing, up to 30°C(86°F)
Storage Temperature	-20°C ~ 60°C (-4°F~140°F)
Power	9V Alkaline or NiCd battery
Typical battery life (Alkaline)	Non-laser mode: 22 hrs; Laser Models: 12 hrs
Weight	270g
Dimension	141*60*200mm

Specification

Temperature range	-30~1150°C (-22~2102°F)
Accuracy	0~1150°C(32~2102°F): ±1.5°C(±2.7°F) or ±1.5% -30~0°C(-22~32°F): ±3°C(±5°F) Whichever is greater
Resolution	0.1°C or 0.1°F
Repeatability	1% of reading or 1°C
Response time	500 mSec, 95% response
Spectral response	8um~14 um
Emissivity	0.95Preset
Distance to Spot size	50:1
Operating Temperature	0°C ~40°C (32°F ~ 104°F)
Operating Humidity	10%RH~95%RH non-condensing, up to 30°C(86°F)
Storage Temperature	-20°C ~ 60°C (-4°F~140°F)
Power	9V Alkaline or NiCd battery
Typical battery life (Alkaline)	Non-laser mode: 22 hrs; Laser Models: 12 hrs
Weight	270g
Dimension	141*60*200mm

Distance(D) to Spot size(S)

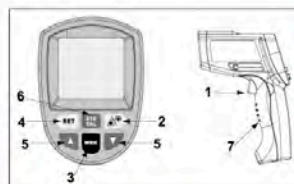
D:S=50:1



Emissivity			
Material	Emissivity	Material	Emissivity
Aluminum	0.30	Iron	0.70
Asbestos	0.95	Lead	0.50
Asphalt	0.95	Limestone	0.98
Basalt	0.70	Oil	0.94
Brass	0.50	Paint	0.93
Brick	0.90	Paper	0.95
Carbon	0.85	Plastic	0.95
Ceramic	0.95	Rubber	0.95
Concrete	0.95	Sand	0.90
Copper	0.95	Skin	0.98
Dirt	0.94	Snow	0.90
Frozen food	0.90	Steel	0.80
Hot food	0.93	Textiles	0.94
Glass(plate)	0.85	Water	0.93
Ice	0.98	Wood	0.94

Diagram description

- 1.Trigger
- 2.Laser / back light button
- 3-6.key functions
- 7.Celsius/Fahrenheit switch



LCD high-definition backlight display

LCD display & buttons

- 1.LCD display:
- A: measuring reading
- B: measuring unit
- C: laser on icon
- D: back light on icon
- E: battery power icon
- F: scanning icon
- G: data hold icon
- H: mode/emissivity indicator
- I: data storage / read icon
- J: low temperature alarm icon
- K: high temperature alarm icon

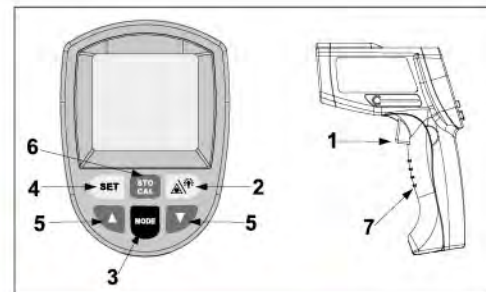


Specification	
Temperature range	-30~1150°C (-22~2102°F)
Accuracy	0~1150°C(32~2102°F): ±1.5°C(±2.7°F) or ±1.5% -30~0°C(-22~32°F): ±3°C (±5°F) Whichever is greater
Resolution	0.1°C or 0.1°F
Repeatability	1% of reading or 1°C
Response time	500 mSec, 95% response
Spectral response	8um~14 um
Emissivity	0.10~1.00 Adjustable (0.95 Preset)
Distance to Spot size	50:1
Operating Temperature	0°C ~40°C (32°F ~ 104°F)
Operating Humidity	10%RH~95%RH non-condensing, up to 30°C(86°F)
Storage Temperature	-20°C ~ 60°C (-4°F~140°F)
Power	9V Alkaline or NiCd battery
Typical battery life (Alkaline)	Non-laser mode: 22 hrs; Laser Models: 12 hrs
Weight	270g
Dimension	141*60*200mm

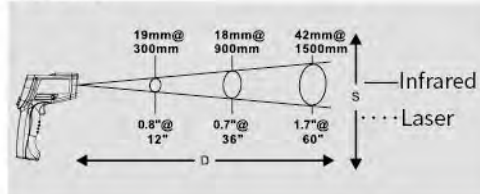


Diagram description

- 1.Trigger
- 2.Laser / back light button
- 3-6.key functions
- 7.Celsius/Fahrenheit switch



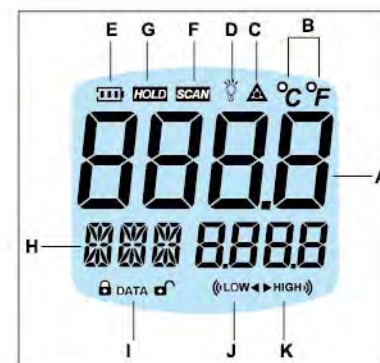
Distance(D) to Spot size(S)
D:S=50:1



Emissivity			
Marterial	Emissivity	Marterial	Emissivity
Aluminum	0.30	Iron	0.70
Asbestos	0.95	Lead	0.50
Asphalt	0.95	Limestone	0.98
Basalt	0.70	Oil	0.94
Brass	0.50	Paint	0.93
Brick	0.90	Paper	0.95
Carbon	0.85	Plastic	0.95
Ceramic	0.95	Rubber	0.95
Concrete	0.95	Sand	0.90
Copper	0.95	Skin	0.98
Dirt	0.94	Snow	0.90
Frozen food	0.90	Steel	0.80
Hot food	0.93	Textiles	0.94
Glass(plate)	0.85	Water	0.93
Ice	0.98	Wood	0.94

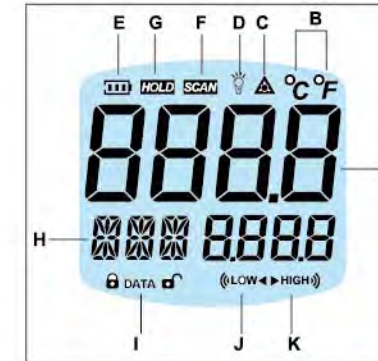
LCD display & buttons

- 1.LCD display:
- A: measuring reading
- B: measuring unit
- C: laser on icon
- D: back light on icon
- E: battery power icon
- F: scanning icon
- G: data hold icon
- H: mode/emissivity indicator
- I: data storage / read icon
- J: low temperature alarm icon
- K: high temperature alarm icon

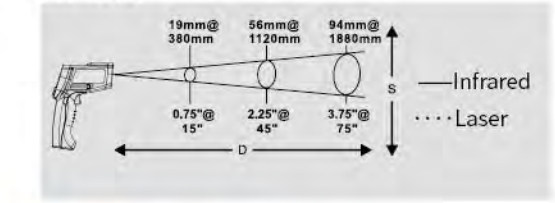


LCD display & buttons

- 1.LCD display:
- A: measuring reading
- B: measuring unit
- C: laser on icon
- D: back light on icon
- E: battery power icon
- F: scanning icon
- G: data hold icon
- H: mode/emissivity indicator
- I: data storage / read icon
- J: low temperature alarm icon
- K: high temperature alarm icon



Distance(D) to Spot size(S)
D:S=20:1



Specification	
Temperature range	-50~1250°C (-58~2282°F)
Accuracy	0~1250°C(32~2282°F): ±1.5°C(±2.7°F) or ±1.5% -50~0°C(-58~32°F): ±3°C (±5°F) Whichever is greater
Resolution	0.1°C or 0.1°F
Repeatability	1% of reading or 1°C
Response time	500 mSec, 95% response
Spectral response	8um~14 um
Emissivity	0.10~1.00 Adjustable (0.95 Preset)
Distance to Spot size	20:1
Operating Temperature	0°C ~40°C (32°F ~ 104°F)
Operating Humidity	10%RH~95%RH non-condensing, up to 30°C(86°F)
Storage Temperature	-20°C ~ 60°C (-4°F~140°F)
Power	9V Alkaline or NiCd battery
Typical battery life (Alkaline)	Non-laser mode: 22 hrs; Laser Models: 12 hrs
Weight	270g
Dimension	141*60*200mm



LCD display & buttons

- 1.LCD display:
 A: measuring reading
 B: measuring unit
 C: laser on icon
 D: back light on icon
 E: battery power icon
 F: scanning icon
 G: data hold icon
 H: mode/emissivity indicator
 I: data storage / read icon
 J: low temperature alarm icon
 K: high temperature alarm icon

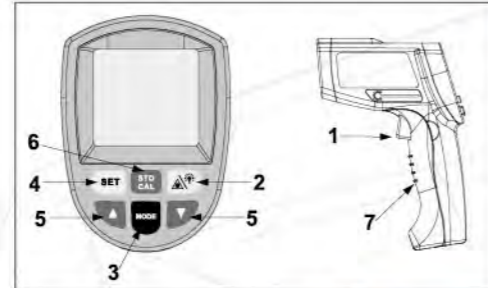
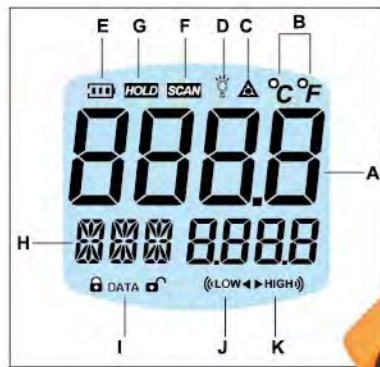
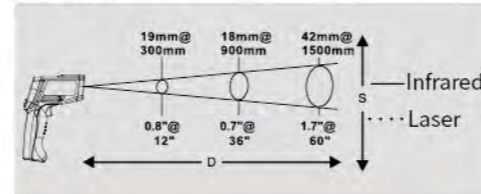


Diagram description

- 1.Trigger
 2.Laser / back light button
 3-6.key functions
 7.Celsius/Fahrenheit switch



Distance(D) to Spot size(S)
 D:S=50:1

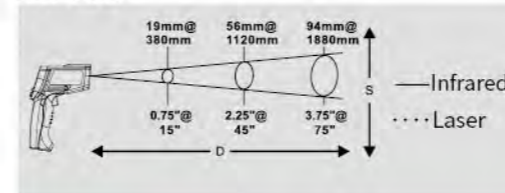


Specification	
Temperature range	200~1650°C (392~3002°F)
Accuracy	±1.5°C(±2.7°F) or ±1.5% Whichever is greater
Resolution	0.1°C or 0.1°F
Repeatability	1% of reading or 1°C
Response time	500 mSec, 95% response
Spectral response	8um~14 um
Emissivity	0.10~1.00 Adjustable (0.95 Preset)
Distance to Spot size	50:1
Operating Temperature	0°C ~40°C (32°F ~ 104°F)
Operating Humidity	10%RH~95%RH non-condensing, up to 30°C(86°F)
Storage Temperature	-20°C ~ 60°C (-4°F~140°F)
Power	9V Alkaline or NiCd battery
Typical battery life (Alkaline)	Non-laser mode: 22 hrs;Laser Models:12 hrs
Weight	270g
Dimension	141*60*200mm

Emissivity			
Material	Emissivity	Material	Emissivity
Aluminum	0.30	Iron	0.70
Asbestos	0.95	Lead	0.50
Asphalt	0.95	Limestone	0.98
Basalt	0.70	Oil	0.94
Brass	0.50	Paint	0.93
Brick	0.90	Paper	0.95
Carbon	0.85	Plastic	0.95
Ceramic	0.95	Rubber	0.95
Concrete	0.95	Sand	0.90
Copper	0.95	Skin	0.98
Dirt	0.94	Snow	0.90
Frozen food	0.90	Steel	0.80
Hot food	0.93	Textiles	0.94
Glass(plate)	0.85	Water	0.93
Ice	0.98	Wood	0.94



Distance(D) to Spot size(S)
 D:S=20:1



Specification	
Temperature range	-30~1650°C (-22~3002°F)
Accuracy	0~1650°C(32~3002°F) : ±1.5°C(±2.7°F) or ±1.5% -30~0°C(-22~32°F): ±3°C (±5°F) Whichever is greater
Resolution	0.1°C or 0.1°F
Repeatability	1% of reading or 1°C
Response time	0.5~0.8 Sec, 95% response
Spectral response	8um~14 um
Emissivity	0.10~1.00 Adjustable (0.95 Preset)
Distance to Spot size	50:1
Operating Temperature	0°C ~40°C (32°F ~ 104°F)
Operating Humidity	10%RH~95%RH non-condensing, up to 30°C(86°F)
Storage Temperature	-20°C ~ 60°C (-4°F~140°F)
Power	9V Alkaline or NiCd battery
Typical battery life (Alkaline)	Non-laser mode: 22 hrs;Laser Models:12 hrs
Weight	270g
Dimension	141*60*200mm

LCD display & buttons

- 1.LCD display:
 A: measuring reading
 B: measuring unit
 C: laser on icon
 D: back light on icon
 E: battery power icon
 F: scanning icon
 G: data hold icon
 H: mode/emissivity indicator
 I: data storage / read icon
 J: low temperature alarm icon
 K: high temperature alarm icon





This product is used for measuring the temperature of the object's surface quickly and safely, which is applicable for various hot, hazardous or hard-to-reach objects without contact directly.

LCD display & buttons

- 1. LCD display:
- A: measuring reading
- B: measuring unit
- C: laser on icon
- D: back light on icon
- E: battery power icon
- F: scanning icon
- G: data hold icon
- H: mode/emissivity indicator
- I: data storage / read icon
- J: low temperature alarm icon
- K: high temperature alarm icon

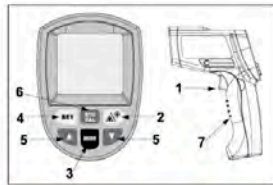


Diagram description

- 1. Trigger
- 2. Laser / back light button
- 3-6. key functions
- 7. Celsius/Fahrenheit switch

Specification	
Temperature range	200 ~ 1850°C (392 ~ 3362°F) 200°C(392°F)~ 450°C(842°F): ±2°C or ±2% 450°C(842°F)~ 1100°C(2012°F): ±3°C or ±3% 1100°C(2012°F)~ 1850°C(3362°F): ±4°C or ±3% whichever is bigger
Accuracy	
Resolution	0.1°C or 0.1°F
Repeatability	1% of reading or 1°C
Response time	500 mSec, 95% response
Spectral response	900-1700 nm
Emissivity	0.10-1.00 Adjustable (0.95 Preset)
Distance to Spot size	80:1
Operating Temperature	0°C ~40°C (32°F ~ 104°F)
Operating Humidity	10%RH-95%RH non-condensing, up to 30°C(86°F)
Storage Temperature	-20°C ~ 60°C (-4°F~140°F)
Power	9V Alkaline battery or 9V 500mA DC IN
Typical battery life (Alkaline)	Laser Models:10 hrs
Weight	270g
Dimension	141*60*200mm



Emissivity			
Material	Emissivity	Material	Emissivity
Aluminum	0.30	Iron	0.70
Asbestos	0.95	Lead	0.50
Asphalt	0.95	Limestone	0.98
Basalt	0.70	Oil	0.94
Brass	0.50	Paint	0.93
Brick	0.90	Paper	0.95
Carbon	0.85	Plastic	0.95
Ceramic	0.95	Rubber	0.95
Concrete	0.95	Sand	0.90
Copper	0.95	Skin	0.98
Dirt	0.94	Snow	0.90
Frozen food	0.90	Steel	0.80
Hot food	0.93	Textiles	0.94
Glass(plate)	0.85	Water	0.93
Ice	0.98	Wood	0.94

LCD display & buttons

- 1. LCD display:
- A: measuring reading
- B: measuring unit
- C: laser on icon
- D: back light on icon
- E: battery power icon
- F: scanning icon
- G: data hold icon
- H: mode/emissivity indicator
- I: data storage / read icon
- J: low temperature alarm icon
- K: high temperature alarm icon



Distance(D) to Spot size(S)
D:S=80:1



Specification	
Temperature range	200 ~ 2200°C (392 ~ 3992°F) 200°C(392°F)~ 450°C(842°F): ±2°C or ±2% 450°C(842°F)~ 1100°C(2012°F): ±3°C or ±3% 1100°C(2012°F)~ 2200°C(3992°F): ±4°C or ±3% whichever is bigger
Accuracy	
Resolution	0.1°C or 0.1°F
Repeatability	1% of reading or 1°C
Response time	500 mSec, 95% response
Spectral response	900-1700 nm
Emissivity	0.10-1.00 Adjustable (0.95 Preset)
Distance to Spot size	80:1
Operating Temperature	0°C ~40°C (32°F ~ 104°F)
Operating Humidity	10%RH-95%RH non-condensing, up to 30°C(86°F)
Storage Temperature	-20°C ~ 60°C (-4°F~140°F)
Power	9V Alkaline battery or 9V 500mA DC IN
Typical battery life (Alkaline)	Laser Models:10 hrs
Weight	270g
Dimension	141*60*200mm



LFGB



Refrigeration



Food processing



Industrial processing



Home kitchen



Water temperature

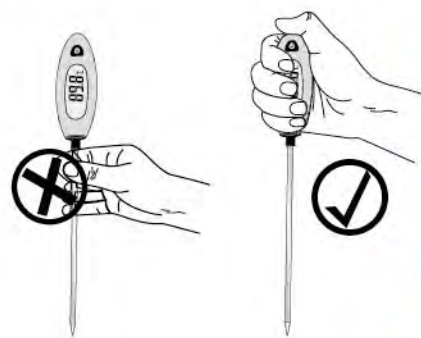


Heating

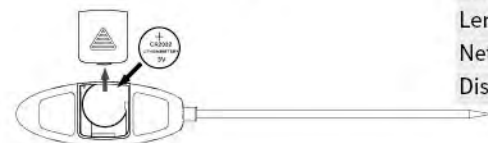
Functional Characteristics

- Temperature locking temperature
- Maximum /minimum measuring function
- Conversion function of °C/°F temperature unit
- Low power prompt
- LCD display
- Automatic shutoff
- Novel handy and portable appearance design

Use this product by correct method
While measuring the high-temperature object don't touch the probe by hand so as to avoid scalding



Open the battery cover and install CR2032 button battery



Specification	
Temperature measuring scope	-50 ~ 300°C (-58 ~ 572°F)
Accuracy	-10 ~ 100°C ±1°C 100 ~ 200°C ±1.5°C Others±2°C
Resolution	0.1°C
Power Source	CR2032 Button Battery*1
The environment temperature	0 ~ 40°C (32 ~ 104°F)
Environmental humidity	10-90% RH
Length of Whole Machine	242.5*33mm
Net Length of Probe Rod	149.5*4mm
Display Dimension	44*18mm

Specification	
Measuring range	J-type:-210°C to 1200°C(-346°F to 2192°F)
	K-type:-200°C to 1372°C(-328°F to 2501°F)
	T-type:-250°C to 400°C(-418°F to 752°F)
	E-type:-150°C to 1000°C(-238°F to 1832°F)
	N-type:-200°C to 1300°C(-328°F to 2372°F)
	R-and S-type:0°C to 1767°C(32°F to 3212°F)
Resolution	0.1t <1000°;1.0t ≥1000°
Accuracy	±0.1%+0.6°C
input	Bouble channel input
Operating Temperature	0°C ~ 40 °C
Storage	- 10 °C ~ 50 °C
Storage Humidity	20-90%
Power supply	3*1.5V AAA Battery
Size	72*29*145.5mm
Weight	159.0g
K-type thermocouple(2 pieces attached)	
Measuring range	0~250°C (300°C in short time)
Error allowed	2.5°C or 0.75%, Class II
Heat response time	The < 10 seconds



- LCD display & buttons**
- 1.Maximum, minimum, average
 - 2.Auto power shut off symbol
 - 3.Low battery indication
 - 4.Thermocouple T1-T2
 - 5.Thermocouple T1 and T2
 - 6.Thermocouple Types
 - 7.Reading Hold symbol
 - 8.Temperature Units
 - 9.Primary Display
 - 10.Sub display

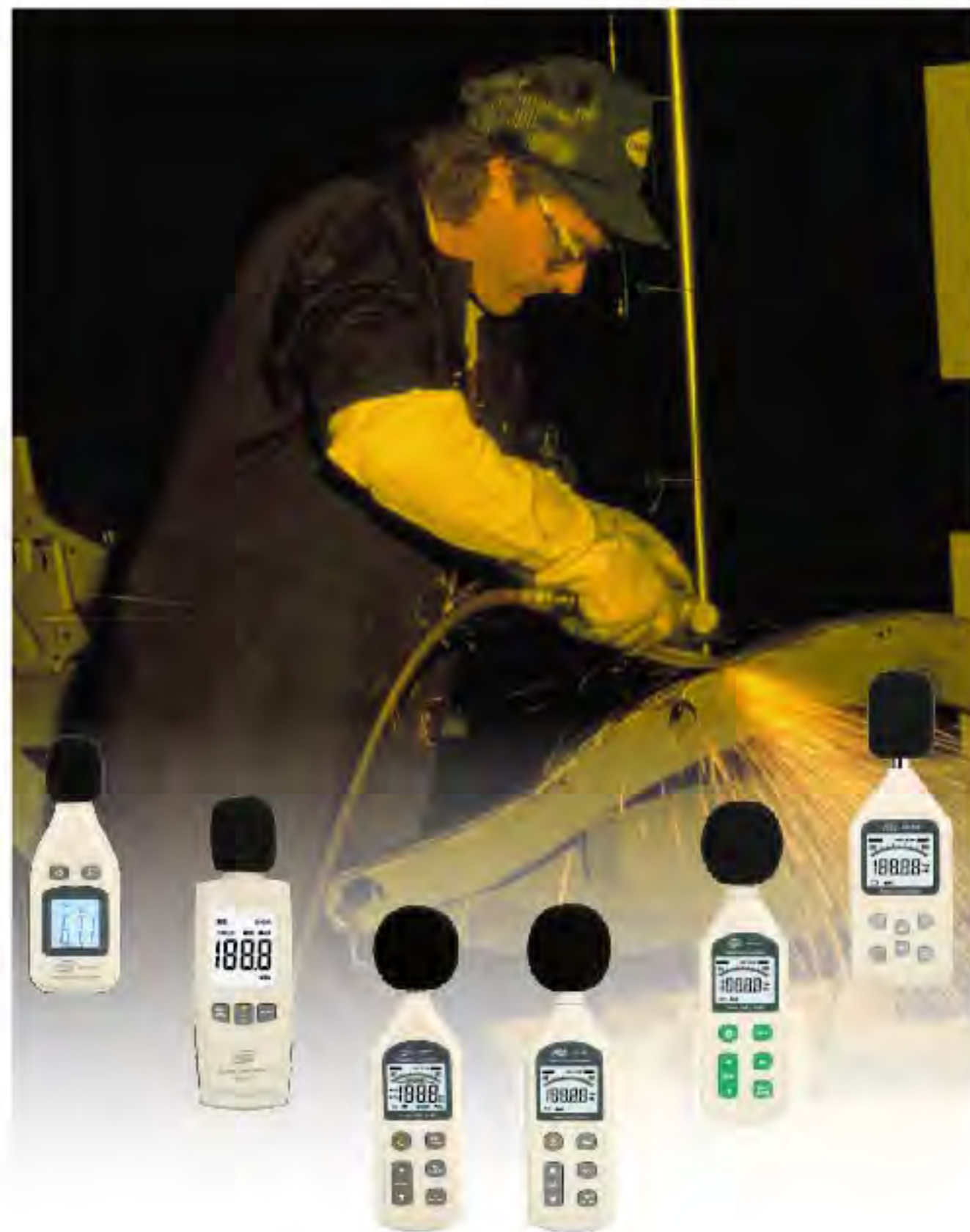
- Features**
- 1.High accuracy: due to direct contact with the measured without intermedia which effects the final output.
 - 2.Convenient operation.
 - 3.Unit Celsius and Fahrenheit unit.
 - 4.Data hold and MAX, MIN, AVG.
 - 5.Human centered design, easy operation.
 - 6.Double display with backlight shows T1/T2 and combination of T1 and T2.
 - 7.To measure the thermocouple of J,K, T,E,N and R type.
 - 8.The electrical compensation function provide the compensation to the thermocouple error so as to improve the overall precision.



Pictures



Models	GM1351	GM1352	GM1356	GM1357	GM1357+	GM1358
page	P33	P34	P35	P36	P37	P37
Level Range	30~130dBA	30~130dBA	30~130dBA 35~130dBC	30~130dBA 35~130dBC	30~130dBA 30~130dBC	30~130dBA 30~130dBC
Accuracy	±1.5dB	±1.5dB	±1.5dB	±1.5dB	±1.5dB	±1.5dB
Digital Display	4 Display	x	4 Display	4 Display	4 Display	4 Display
Resolution	0.1dB	0.1dB	0.1dB	0.1dB	0.1dB	0.1dB
Frequency Response	31.5Hz~8KHz	31.5Hz~8KHz	31.5Hz~8KHz	31.5Hz~8KHz	31.5Hz~8KHz	31.5Hz~8KHz
Measuring Level	x	x	30~80dB 50~100dB 60~110dB 80~130dB 30~130dB	30~80dB 50~100dB 60~110dB 80~130dB 30~130dB	30~80dB 50~100dB 60~110dB 80~130dB 30~130dB	30~80dB 50~100dB 60~110dB 80~130dB 30~130dB
Frequency Weighting Characteristic	A	A	AC	AC	AC	AC
Time Weighting	x	x	FAST/SLOW	FAST/SLOW	FAST/SLOW	FAST/SLOW
Display Sampling Frequency	2 times/sec.	2 times/sec.	Fast 8 times/second Slow: 2 times/second	2 times/sec.	2 times/sec.	2 times/sec.
Microphone	Polarization Capacitance Microphone	1/2 Inch Polarization Capacitance Microphone	1/2 Inch Polarization Capacitance Microphone	1/2 Inch Polarization Capacitance Microphone	1/2 Inch Polarization Capacitance Microphone	1/2 Inch Polarization Capacitance Microphone
USB Interface	x	x	USB	x	x	x
Output	x	x	ACPWM	ACDC	ACDC	ACDC
Data Hold Function	x	√	x	x	x	x
Numerical	Max/Min	Max/Min/AVG	Max	Max	Max	Max
Overload Indication	x	x	OVERUNDER	OVERUNDER	OVERUNDER	OVERUNDER
Backlight ON/OFF Selection	√	√	x	x	√	x
Auto Power Shut Off	√	√	√	√	√	√





Functions

- 1. It is designed according to the IEC651 TYPE2 & ANSI S1.4 TYPE2
- 2. Modern, compact, portable design
- 3. Accuracy up to ± 1.5 dB
- 4. Measurement range: 30dBA-130 dBA
- 5. MAX/MIN Hold
- 6. Auto backlight display
- 7. Auto power OFF



LCD Display

- 1. Low battery indication
- 2. Measuring Value
- 3. Maximum value icon
- 4. Measuring unit: dBA
- 5. Minimum value icon



Specification

Measuring range	30dBA-130dBA
Accuracy	± 1.5 dB (94dB@1KHz)
Frequency range	31.5Hz-8KHz
Frequency weighting	A
Digital Display	4digits
Resolution	0.1dB
Sample rate	2 times/second
Microphone	1/2 inch electret condenser microphone
Power supply	9V Battery
Power life	About 30 hours (alkaline battery)
Operating condition	0-40°C, 10-80%RH
Storage condition	-10-60°C, 10-70%RH
Weight	144g
Dimension	57*26*149mm

Specification

Measuring range	30dBA-130dBA
Accuracy	± 1.5 dB (94dB@1KHz)
Frequency range	31.5Hz-8KHz
Frequency weighting	A
Digital Display	4digits
Resolution	0.1dB
Sample rate	2 times/second
Microphone	1/2 inch electret condenser microphone
Power supply	3*1.5V AAA Batteries
Power life	About 30 hours (alkaline battery)
Operating condition	0-40°C, 10-80%RH
Storage condition	-10-60°C, 10-70%RH
Weight	84g
Dimension	50*33*159.5mm

Functions

- Sound level measurement;
- MIN/MAX/ Lock current value;
- Hold the measurement data;
- LCD backlight function;
- Manual/auto shutoff;
- Backlight alarming;

LCD Display

- 1. Battery power prompt sign
- 2. OVER warning sign/reading exceeding measuring range
- 3. Data retention
- 4. Maximum value
- 5. Minimum value
- 6. Sound level reading value
- 7. Sound level unit of (A weighting)



- Functions:**
- This unit was designed according to following standards:
 - a. International electrician committee standard: IEC PUB 651 TYPE2
 - b. US national standard: ANSI S1.4 TYPE2
 - Accuracy up to +/-1.5dB
 - Measurement range is 30 to 130dB
 - Fast/Slow Time weighting selection
 - Automatic backlight
 - The maximum value holding function
 - Auto power off 10 minutes
 - A/C Frequency weighting selection
 - Both AC and PWM signal output are available
 - Calendar function
 - 4700 data record function
 - Connect with the PC through USB, provides data record downloading, real-time data sampling analysis, and printing graph&data functions.

Specification	
Measuring range	30dB-130dB
Accuracy	±1.5dB (reference sound pressure standard, 94dB@1KHz)
Frequency range	31.5Hz-8.5KHz
Frequency weighting	A & C
Digital Display	4digits
Analogy bar graph	1dB/1 bar graph
Resolution	0.1dB
Measuring level	30 to 80 , 50 to 100, 60 to 110, 80 to 130, 30 to 130
Dynamic range	50dB/100dB
Overload indication	OVER / UNDER
AC signal output	4Vrms/ full bar graph, output impedance is about 600 ohm
PWM signal output	Duty cycle =(0.01xdb value÷3.3) x 100%
Dynamic characteristic	FAST(high speed)/SLOW(low speed)
PWM signal output	Duty cycle =(0.01xdb value÷3.3) x 100%
Dynamic characteristic	FAST(high speed)/SLOW(low speed)
Calendar accuracy	±30seconds/day
Data storage quantity	4700
Power supply	6V (4PCS 1.5V Alkaline battery)
Power supply	6V (4PCS 1.5V Alkaline battery)
Power life	20h continuous use(Alkaline batteries)
Maximum value holding	MAX
Auto power off	10 minutes without operation
Microphone	1/2inch polarization capacitance microphone
Storage condition	-10-60°C, 10-70%RH
Weight	244g
Dimension	70*35*256mm



- Insert one end of USB wire into the USB socket on the unit. Plug another end of USB wire into the interface port on PC.

Specification	
Measuring range	30-130dB, 35-130dB
Accuracy	±1.5 dB (under reference conditions)
Frequency range	31.5Hz-8.5KHz
Frequency weighting	A & C
Digital Display	4digits
Sample rate	2 times/second
Resolution	0.1dB
Measuring level	30 to 80 , 50 to 100, 60 to 110, 80 to 130, 30 to 130
Sample rate	2 times/second
Overload indication	OVER / UNDER
AC signal output	0.707Vrms at FS output impedance approx. 600 ohm
Character display	In the range of 30-130 db, scale 1 indicates 2 db while in the other range scale 1 indicates 1 db. 10mV/dB, output impedance approx. 100ohm
DC output	FAST(high speed)/SLOW(low speed)
Dynamic characteristic	Self calibration time 3S
Power supply	6V (4PCS 1.5V Alkaline battery)
Power life	About 30 hours (alkaline battery)
Maximum value holding	MAX
Auto power off	10 minutes without operation
Microphone	1/2inch polarization capacitance microphone
Operating condition	0-40°C, 10-80%RH
Storage condition	-10-60°C, 10-70%RH
Weight	244g
Dimension	70*35*256mm

- Functions:**
- 1. It is designed according to the IEC651 TYPE2 & ANSI S1.4 TYPE2.
 - 2. Accuracy up to +/- 1.5 dB.
 - 3. Measurement range: 30-130 dB.
 - 4. Mode selection between Mode A and Mode C
 - 5. Fast & Slow dynamic characteristic modes.
 - 6. AC/DC signal output, can be connected with the frequency analyzer or X-Y axis recorder for statistical analysis.
 - 7. backlight on/off key.
 - 8. Auto power off

- LCD Display**
- 1. Level range.
 - 2. Under range.
 - 3. Low battery indication.
 - 4. Maximum value is held during measuring.
 - 5. Measuring value.
 - 6. Measuring Unit.
 - 7. Frequency weight A/C.
 - 8. Character display.
 - 9. Over range.
 - 10. Slow time weight.
 - 11. Fast time weight.



Specification

Measuring range	30~130dBA, 35~130dBC
Accuracy	± 1.5 dB (under reference conditions)
Frequency range	31.5Hz~8KHz
Frequency weighting	A & C
Digital Display	4digits
Sample rate	2 times/second
Resolution	0.1dB
Measuring level	30 to 80, 50 to 100, 60 to 110, 80 to 130, 90 to 130
Dynamic range	50dB/100dB
Overload Indication	OVER / UNDER
AC signal output	0.707Vrms at FS output Impedance approx. 600 ohm
Bar graph	Display for 0~30dB: one scale unit denotes 2 dB For other levels: one scale unit denotes 1 dB
DC output	10mV/dB, output impedance approx. 100ohm
Dynamic characteristic	FAST(high speed)/SLOW(low speed)
Self calibration time	35
Power supply	6V (4PCS 1.5V Alkaline battery)
Power life	About 30 hours (alkaline battery)
Maximum value holding	MAX
Auto power off	10 minutes without operation
Microphone	1/2Inch polarization capacitance microphone
Operating condition	0~40°C, 10~80%RH
Storage condition	-10~60°C, 10~70%RH
Weight	230g
Dimension	207*70*29mm

Features

- 1. It is designed according to the IEC651 TYPE2 & ANSI S1.4 TYPE2
- 2. Accuracy up to ± 1.5 dB
- 3. Measurement range: 30~130 dB
- 4. Weight A or weight C selection
- 5. Fast & Slow dynamic characteristic modes.
- 6. AC and DC output for frequency analyzer level recorder, FFT analyzer, graphic recorder etc.
- 7. Auto power off



LCD Display

- 1. Level range.
- 2. Under range.
- 3. Low battery indication.
- 4. Maximum value is held during measuring.
- 5. Measuring value.
- 6. Measuring Unit.
- 7. Frequency weight A/C.
- 8. Character display.
- 9. Over range.
- 10. Slow time weight.
- 11. Fast time weight.

Pictures



Models	GM1360	GM1360A	GM1361	GM1361+	GM1362	GM1365	GM1366
page	P40	P41	P42	P43	P44	P45	P46
Temperature Range	-10~50°C	-30~80°C	-10~50°C	-10~50°C	-30~70°C	-30~80°C	-30~80°C
Humidity Range	5~98%RH	0~100%RH	10~98%RH	10~99.9%RH	0~100%RH	0~100%RH	x
Thermocouple Temperature	x	x	x	-50~1200	x	x	x
Max/Min	√	√	√	√	√	√	√
bluetooth(app)	x	x	√	√	x	bluetooth	x
USB Interface	x	√	√	√	x	√	√
°C/°F Selection	√	√	√	√	√	√	√
Keeping Data	√	√	√	√	√	√	√
Sampling Frequency	2.5 Times/Second	1Times/Second	2.5Times/Second	2Times/Second	x	x	x
K-type Thermocouple Temperature measuring	x	x	√	√	x	x	x
Backlight	x	x	√	√	√	√	√
On/lower limit alarm value	x	x	x	√	x	x	x
Data recording/reading/deleted	x	x	x	x	x	x	x
Alarm set	x	x	x	999	x	32256	61440
LCD Dual Display	√	√	√	√	x	x	x
Auto Power Shut Off	√	√	√	√	√	√	√



Specification	
Measurement range	Temperature: -10°C ~ +50°C (14°F ~ 122°F) Humidity: 5%RH ~ 98%RH
Accuracy	Temperature: ±1°C (±1.8°F) Humidity: ±3%RH (in 25°C, 30~99%RH) ±5%RH (in 25°C, 10~30%RH)
Resolution	Temperature: 0.1°C / 0.1 °F Humidity: 0.1%RH
Sampling time	2.5 times/sec
Operation conditions	Temperature: 0°C ~ 50°C (32°F ~ 122°F) Humidity: < 98%RH
Storage condition	Temperature: -10°C ~ 60°C (14°F ~ 140°F) Humidity: 0%RH~90%
Power supply	9V battery
Size	207*70*30mm
Weight	199.7g

- Feature**
1. Humidity & temperature measurement
 2. MAX/MIN measurement
 3. Data hold
 4. °C/°F
 5. Low battery display
 6. Auto power off



Specification:

Measurement range	Temperature: -30°C~80°C Humidity:0%-100%RH
precision	Temperature:±1°C (±1.8°F) Typical temperature:±0.3°C (max±1°C) Humidity:±3%RH (in 25,20-80%RH) <±5%RH (in 25,0-20%RH-80-100%RH)
Resolution	Temperature: 0.1°C / 0.1 °F Humidity: 0.1%RH
Sampling time	1 times/sec
Operation conditions	-0°C~50°C (32°F~122°F) ≤80%RH no condensation
Storage condition	Temperature: -30°C - 80°C (-22°F - 140°F) Humidity: 0%RH-90%
Power supply	9V 6F22 battery
Size	207*70*30mm
Weight	199.7g

Feature:

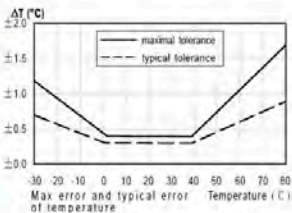
1. Dual display on large LCD
2. Detecting the temperature and humidity
3. MAX/MIN measurement
4. Dew point pick up.
5. Data operation
6. °C/°F unit switch
7. USB interface and data download
8. Low battery alert
9. Auto power off
10. Temperature and humidity memory (setup in PC program included)

LCD display:

1. Lock up icon
2. Maximum reading icon
3. Minimum reading icon
4. Average reading icon
5. Battery volume icon
6. Celsius temperature icon
7. Dew point icon
8. Fahrenheit temperature icon
9. RH unit icon
10. USB connection alert icon
11. Record icon

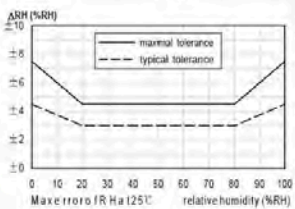
Temperature fig:

Temperature	Parameter
Measurement range	-30~80°C
precision	±1°C (±1.8°F) Typical temperature: ±0.3°C (max±1°C)
Storage condition	Temperature: -30°C - 80°C (-22°F - 140°F) Humidity: 0%RH-90%
resolution	0.1°C/0.1°F



The relative humidity table:

Humidity	Parameter
Measurement range	0~100%RH
precision	±3%RH (in 25,20-80%RH) <±5%RH (in 25, 0-20%RH-80-100%RH)
resolution	0.1%RH

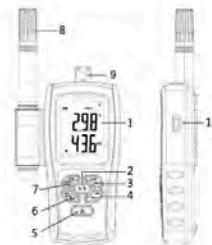


Specification:

Items	Measuring range	Resolution	Response time	Response time
Temperature on thermocouple	-50 ~ 1200°C	0.1°C	±2.0°C or ±0.4%	30S
Environment temperature	-10 ~ 50°C	0.1°C	±1.0°C	30S
Environment RH	0~99.9%RH	0.1%RH	±5%	6S
Dew point temperature	-20 ~ 50°C	0.1°C	±2°C	30S
Wet bulb temperature	-20 ~ 50°C	0.1°C	±2°C	30S

Components:

1. LCD
2. Switch key between temperature units
3. Hold key for temperature reading/Up key
4. Hold key for humidity reading/Down key
5. On/off and backlight key
6. Key to pick up max and/or min humidity reading
7. Key to pick up max and/or min temperature reading
8. Temperature/humidity sensor
9. K-type heat couple
10. Interface with humidity and temperature sensor

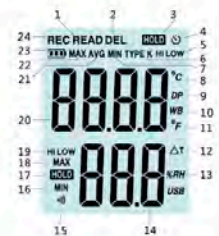


Interface with humidity and temperature sensor



LCD display:

1. Data access
2. Data deleting
3. Temperature reading lock
4. Auto turning off
5. Alarming for over high/ low temperature value preset
6. Heat coupling
7. Minimum temperature value
8. Celsius temperature
9. Dew point temperature
10. Wet Bulb temperature
11. Fahrenheit temperature
12. Record interval
13. Humidity unit
14. Humidity display
15. Sound alarm
16. Minimum humidity
17. Humidity lock
18. Maximum humidity reading
19. Over high/low humidity alarm
20. Temperature display
21. Average temperature
22. Maximum temperature value
23. Battery volume
25. Data record

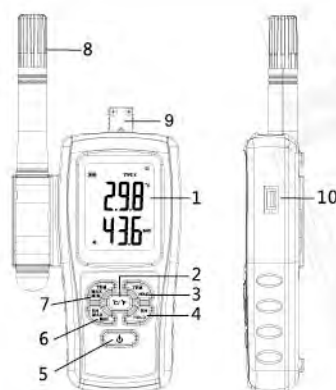


Temperature/humidity sensor

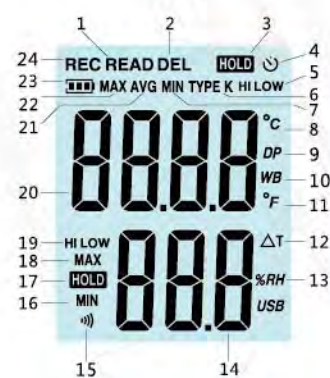
Specification				
Items	Measuring range	Resolution	Response time	Response time
Temperature on thermocouple	-50 ~ 1200°C	0.1°C	±2.0°C or ±0.4%	30S
Environment temperature	-10 ~ 50°C	0.1°C	±1.0°C	30S
Environment RH	0~99.9%RH	0.1%RH	±5%	6S
Dew point temperature	-20 ~ 50°C	0.1°C	±2°C	30S
Wet bulb temperature	-20 ~ 50°C	0.1°C	±2°C	30S
Operation environment	-10°C - 50°C (14°F - 122°F) ≤80%RH non-condensing			
Storage environment	-20°C - 60°C (-4°F - 140°F) 0%RH-90%RH			
Sampling frequency	2.0times/sec			
Powered by	4*1.5V Batteries			

Components

- LCD
- Switch key between temperature units
- Hold key for temperature reading/Up key
- Hold key for humidity reading/Down key
- On/off and backlight key
- Key to pick up max and/or min humidity reading
- Key to pick up max and/or min temperature reading
- Temperature/humidity sensor
- K-type heat couple
- Interface with humidity and temperature sensor

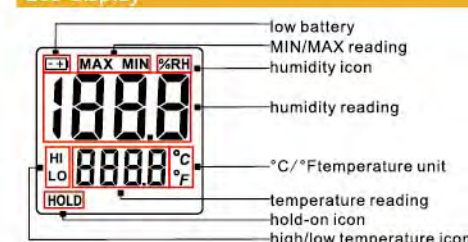


- LCD display**
- Data access
 - Data deleting
 - Temperature reading lock
 - Auto turning off
 - Alarming for over high/ low temperature value preset
 - Heat coupling
 - Minimum temperature value
 - Celsius temperature
 - Dew point temperature
 - Wet Bulb temperature
 - Fahrenheit temperature
 - Record interval
 - Humidity unit
 - Humidity display
 - Sound alarm
 - Minimum humidity
 - Humidity lock
 - Maximum humidity reading
 - Over high/low humidity alarm
 - Temperature display
 - Average temperature
 - Maximum temperature value
 - Battery volume
 - Data record



Specification			
Items	Range	Resolution	Precision
Humidity	0%~20%RH	0.1	4.5%
	20%~80%RH	0.1	3.0%
	80%~100%RH	0.1	4.5%
Temperature	-30°C~0°C	0.1°C/0.2°F	1.0°C
	0°C~70°C	0.1°C/0.2°F	0.5°C
	-22°F~32°F	0.1°C	1.8°F
Sizes	32°F~158°F	0.1°C	0.9°F
	152*35.5*52.5mm	Weight	92.7g

LCD display



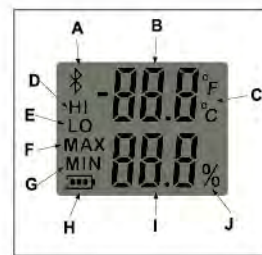
Temperature/humidity sensor



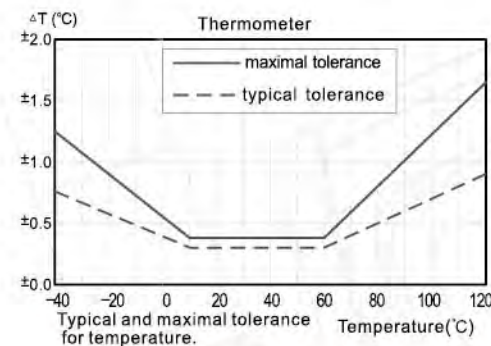
Specification		
Items	Temperature	Humidity
Measuring range	-30~80°C	0~100%RH
Memory size	32256	
Power	1/2AA 3.6V Lithium Battery	
Size	126*28*22mm	
Weight	49g	
Accessories: Cover, Bracket, Screw*2, CD, Lithium Battery		

LCD display

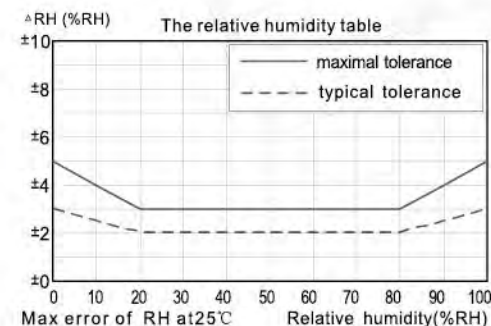
- Blue tooth
- Temperature reading
- Temperature unit
- Upper limit overflow
- Lower limit overflow
- Max value
- Min value
- Battery volume
- Humidity reading
- Humidity unit



Specification					
Parameter	Condition	Min	Typical	Max	Units
Accuracy	-30~80°C		±0.3		°C
Tolerance					°C
Repeatability	Max				°C
Response Time	τ63%	5		30	S
Operating Range	extended	-40		125	°C
Long Term Drift			<0.04		°C/yr

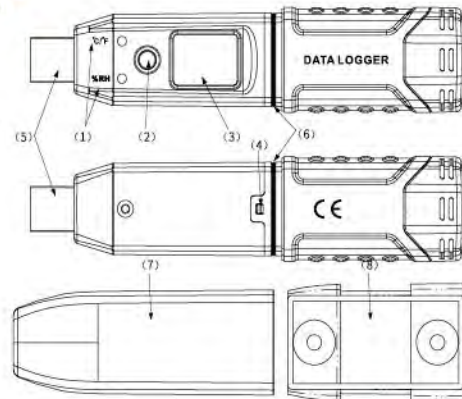


Specification					
Parameter	Condition	Min	Typical	Max	Units
Accuracy	typical		±2		%RH
Tolerance	Max				%RH
Repeatability			±0.1		%RH
Repeatability			±1		%RH
Repeatability			<0.1		%RH
Response Time	τ63%		8		S
Operating Range	extended	0		100	%RH
Long Term Drift	normal		<0.5		%RH/yr

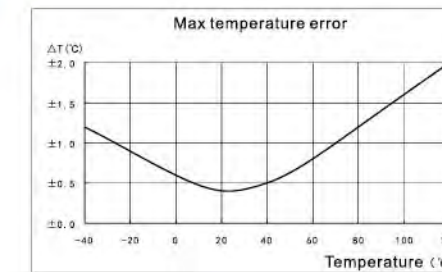


Structure of the device

- Overflow alarm LED
- Key
- LCD
- Position for battery replacement
- USB interface
- Waterproof rubber ring
- Transparent waterproof cover
- Bracket



Specification	
Precision	Typical ±0.5°C (See Fig 5)
Response time	5~30S
Measuring range	-30~80°C
Memory size	61440
Power	1/2AA 3.6V Lithium Battery
Size	126*28*22mm
Weight	49g
Accessories: Cover, Bracket, Screw*2, CD, Lithium Battery	

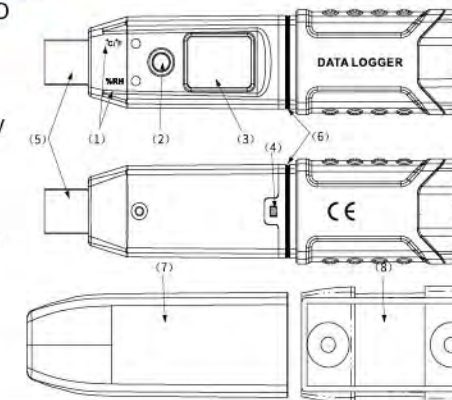


Features

- Suitable for humid and dusty environment with special IP67 water-proof structure.
- High precision and quick response.
- Low power consumption design for continuous operation over 12 months with 1/2 AA3.6V lithium battery which can be replaced quickly.
- Allowing to set upper and lower limits for temperature alarming, the LED light flashes if the reading is beyond limits.
- Large data storage up to 61440 groups of data.
- Attached with PC analysis software for users to manipulate the unit.

Structure of the device

- Overflow alarm LED
- Key
- LCD
- Position for battery replacement
- USB interface
- Waterproof rubber ring
- Transparent waterproof cover
- Bracket



Pictures



Models	GM816	GM8908	GM816A	GM8901	GM8901+	GM8902
Page	P49	P50	P49	P51	P51	P52
Air Velocity	0~30m/s	0~30m/s	0~30m/s	0~45m/s	0~45m/s	0~45m/s
Start wind speed	1.0m/s	1.0m/s	1.0m/s	0.8m/s	0.8m/s	0.8m/s
Temperature	-10~+45°C 14~113°F	-10~+45°C 14~113°F	-10~+45°C 14~113°F	0~+45°C 32~113°F	0~+45°C 32~113°F	0~45°C 32~113°F
Resolution	0.2°C, 0.1m/s	0.2°C, 0.1m/s	0.2°C, 0.1m/s	0.2°C, 0.1m/s	0.2°C, 0.1m/s	0.1°C, 0.001m/s
Air Unit	M/s, Ft/min, Knots, Km/h, Mph	M/s, Ft/min, Knots, Km/h, Mph	M/s, Ft/min, Knots, Km/h, Mph	m/s, Ft/min, Knots, Km/hr, Mph	m/s, Ft/min, Knots, Km/hr, Mph	M/s, Ft/min, Knots, Km/h, Mph
Frozen tip	√	√	√	√	×	√
Beaufort scale	√	√	√	√	√	√
°C/°F Selection	√	√	√	√	√	√
MAX/MIN/AVG/ Two-thirds of the winds	MAX/AVG/ current wind speed	MAX/AVG/ current wind speed	MAX/AVG/ current wind speed	MAX/MIN/ AVG/ current wind speed	MAX/MIN/ AVG/ current wind speed	√
USB Interface	×	×	×	√	√	√
Keeping data	×	×	×	√	√	√
Handle bars scalable	×	×	×	×	√	×
Chinese/English language switching	×	×	×	×	×	×
Temperature humidity	×	×	×	×	×	×
Elevation illumination	×	×	×	×	×	×
Storage/delete data	×	×	×	√	√	√
Backlight ON/OFF Selection	√	√	√	√	√	√
Auto Power Shut Off	√	√	√	√	√	√

Pictures



Models	GM8902+	GM8903	GM8904	GT8907	GM8909	GM8910
page	P53	P54	P55	P56	P57	P58
Air Velocity	0~45m/s	0~30m/s	0~45m/s	0~45m/s	0~45m/s	0.7~30.0m/s
Start wind speed	0.8m/s	×	0.8m/s	0.8m/s	0.8m/s	0.7m/s
Temperature	0~45°C 32~113°F	0~45°C 32~113°F	0~45°C 32~113°F	0~45°C 32~113°F	0~+45°C 14~113°F	-20~60°C -4~140°F
Resolution	0.1°C, 0.001m/s	0.1°C, 0.001m/s	0.1°C, 0.001m/s	0.1°C, 0.001m/s	0.2°C, 0.1m/s	0.1°C, 0.1m/s
Air Unit	M/s, Ft/min, Knots, Km/h, Mph	M/s, Ft/min, Knots, Km/h, Mph	M/s, Ft/min, Knots, Km/h, Mph	M/s, Ft/min, Knots, Km/h, Mph	M/s, Ft/min, Knots, Km/h, Mph	×
Frozen tip	√	√	√	√	√	×
Beaufort scale	√	√	√	√	√	×
°C/°F Selection	√	√	√	√	√	√
MAX/MIN/AVG/ Two-thirds of the winds	√	√	√	√	√	MAX/MIN/ AVG/ current wind speed
USB Interface	√	√	√	√	√	×
Keeping data	√	√	√	√	√	×
Handle bars scalable	√	×	×	×	√	×
Chinese/English language switching	×	×	×	×	×	√
Temperature humidity	×	×	×	×	×	√
Elevation illumination	×	×	×	×	×	√
Storage/delete data	√	√	√	√	×	√
Backlight ON/OFF Selection	√	√	√	√	√	√
Auto Power Shut Off	√	√	√	√	√	√

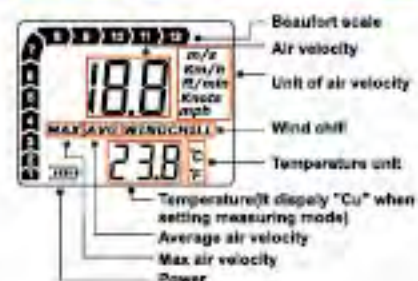
Specification

Air velocity				
Unit	Range	Resolution	Threshold	Accuracy
M/s	0~30	0.1	0.1	±5%
Ft/min	0~5860	19	39	±5%
Knots	0~55	0.219	0.1	±5%
Mph	0~65	0.2	0.2	±5%
Temperature				
Unit	Range	Resolution	Accuracy	
°C	-10°C~+45°C	0.2	±2°C	
°F	14°F~113°F	0.36	±3.6°	
Battery	CR2032 3.0V (Included)			
Thermometer	NTC thermometer			
Operating temperature	-10°C~+45°C (-14°F~113°F)			
Operating humidity	Less than 90%RH			
Store temperature	-40°C~+60°C (-40°F~140°F)			
Current consumption	Approx. 3mA			
Weight	52g			
Dimension	40x18x105mm			

Function

1. Air Velocity & Temperature Measurement;
2. Max/Average/Current air velocity measurement;
3. °C/°F Temperature unit selection;
4. Five units of air velocity:
M/s, Km/h, ft/min, Knots, mph
5. Beaufort scale;
6. Backlight display;
7. Manual/Auto power shut off;
8. Wind chill indication;
9. Low battery indication.

LCD Display



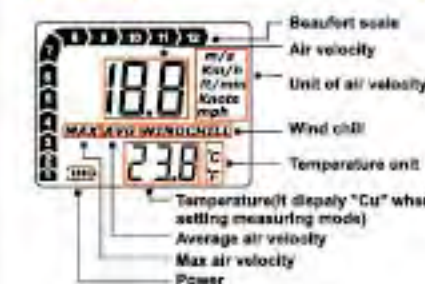
Specification

Air velocity				
Unit	Range	Resolution	Threshold	Accuracy
M/s	0~30	0.1	0.1	±5%
Ft/min	0~5860	19	39	±5%
Knots	0~55	0.2	0.1	±5%
Km/hr	0~90	0.3	0.3	±5%
Mph	0~65	0.2	0.2	±5%
Temperature				
Unit	Range	Resolution	Accuracy	
°C	-10°C~+45°C	0.2	±2°C	
°F	14°F~113°F	0.36	±3.6°	
Battery	CR2032 3.0V (Included)			
Thermometer	NTC thermometer			
Operating temperature	-10°C~+45°C (-14°F~113°F)			
Operating humidity	Less than 90%RH			
Store temperature	-40°C~+60°C (-40°F~140°F)			
Current consumption	Approx. 3mA			
Weight	58.9g			
Dimension	104.3x57.8x19.9mm			

Function

1. Air Velocity & Temperature Measurement;
2. Max/Average/Current air velocity measurement;
3. °C/°F Temperature unit selection;
4. Five units of air velocity:
M/s, Km/h, ft/min, Knots, mph
5. Beaufort scale;
6. Backlight display;
7. Manual/Auto power shut off;
8. Wind chill indication;
9. Low battery indication.

LCD Display



Specification

Air velocity				
Unit	Range	Resolution	Threshold	Accuracy
M/s	0~45	0.1	0.3	±3% ±0.1dpts
Ft/min	0~8800	19	60	±3% ±10dpts
Knots	0~88	0.2	0.6	±3% ±0.1dpts
Km/hr	0~140	0.3	1	±3% ±0.1dpts
Mph	0~100	0.2	0.7	±3% ±0.1dpts

Temperature			
Unit	Range	Resolution	Accuracy
°C	0°C~+45°C	0.2	±2°C
°F	32°F~113°F	0.36	±3.6°

Battery	9V Battery(GM8901)	3*1.5V AAA Batteries(GM8901+)
Weight	239.8g(GM8901)	226.1g(GM8901+)
Operating temperature	-10°C~+45°C(14°F~113°F)	
Operating humidity	40%RH~85%RH	
Store temperature	-20°C~+60°C(-4°F~140°F)	
Store humidity	10%RH~90%RH	
Dimension	72*35*145mm	

Function

1. Air Velocity & Temperature measurement
2. Max/Min/Average/Current reading
3. °C/°F temperature unit selection
4. Five units of air velocity: M/s, Km/h, ft/min, Knots, mph
5. Data Hold
6. LCD backlight display
7. Manual/Auto power shut off
8. Beaufort Scale Indication
9. Wind chill Indication
10. Low battery Indication

LED Display



Specification

Wind Velocity Range				
Unit	Wind Velocity	Resolution	Lowest Point of start value	Accuracy
M/s	0~45	0.001	0.3	±3% ±0.1dpts
Ft/min	0~8800	0.01/0.1/1	60	±3% ±20dpts
Knots	0~88	0.01/0.1	0.6	±3% ±0.1dpts
Km/hr	0~140	0.001	1	±3% ±0.4dpts
Mph	0~100	0.001/0.01	0.7	±3% ±0.2dpts

Wind flow range : CMM:0-999900m³/min CFM:0-999900 ft³/min

Unit	Range	Resolution	Area
CFM(FT ² /MIN)	0-999900	0.001-100	0.001-9999
CMM(M ³ /MIN)	0-999900	0.001-100	0.001-9999

Unit Conversion					
	m/s	Ft/min	Knots	Km/h	Mph
1m/s	1	196.87	1.944	3.60	2.24
1ft/min	0.00508	1	0.00987	0.01829	0.01138
1knots	0.5144	101.27	1	1.8519	1.1523
1km/h	0.2778	54.69	0.54	1	0.6222
1mph	0.4464	87.89	0.8679	1.6071	1

Function

1. Measurement of wind velocity, temperature and flow
2. Unit conversion of wind velocity, temperature and flow
3. Measurement of maximum and minimum wind velocity
4. Measurement of 2/3 Vmax and average wind flow
5. Data holding, storing and deleting function
6. Auto power off function (power off automatically if no further operation for 10 minutes)
7. Memory of 500 records
8. Backlight
9. Connecting to PC with USB cable
10. Audio key pressing alert
11. Large LCD display

Diagram of the unit:

1. USB Interface
2. LCD display
3. ⏻: ON/ OFF key
4. 📄: Data holding key
5. 🔄: Unit transform key
6. 🌞: Backlight on/off key
7. 📖: Data read key
8. 📊: Measuring key for average value of wind flow
9. 🔄: Reset key in READ mode/clear recorded
10. 📏: Duct area input and sampling time setting key
11. 📊: Wind flow AVG 2/3 MAX and figure input
12. 📖: Data record key
13. 🔄: Temperature unit switch
14. 🔄: Wind velocity/flow transform
15. 🔄: Max/Min value switch
16. 🔄: Max/Min value switch
17. Connecting wire
18. Fan



Function

- 1.Measurement of wind velocity, temperature and flow
- 2.Unit conversion of wind velocity, temperature and flow
- 3.Measurement of maximum and minimum wind velocity
- 4.Measurement of 2/3 Vmax and average wind flow
- 5.5Data holding, storing and deleting function
- Low battery indicating function
- 6.Auto power off function (power off automatically if no further operation for 10 minutes)
- 7.Memory of 500 records
- 8.Backlight
- 9.Connecting to PC with USB cable
- 10.Audio key pressing alert
- 11.Large LCD display
- 12.Retractable drag rod

LCD Display

- 1.Air flow symbol
- 2.No data store symbol
3. Dynamic Indicator bar of velocity or air flow
- 4.Enter duct area values symbol
- 5.Air multiplier
- 6.Wind velocity and air flow display area
- 7.Duct area display area/Wind temperature display
- 8.Low battery icon
- 9.Indicating duct area in square feet when in flow function ; "F" is used to indicate wind temperature in metric;
- 10.Indicating duct area in square meter in flow function, "C" is used to indicate wind temperature in metric.
- 11.Wind flow unit (cube meter / minute)
- 12.Wind flow unit (cube foot / minute)
- 13.Wind velocity unit (mile / hour)
- 14.Wind velocity unit (sea mile / hour)
- 15.Wind velocity unit (foot / minute)
- 16.Wind velocity unit (kilometer / hour)
- 17.Wind velocity unit (meter / second)
- 18.Data hold
- 19.Windchill symbol
- 20.Velocity sampling rate; Sequential number display area of average wind flow
- 21.When connecting PC with USB cable, this symbol appears
- 22.Wind velocity symbol
- 23.Recording the using number and signals
- 24.Read stored data symbol
- 25.2/3 of maximum value measurement (one of the wind flow measuring method)
- 26.Showing minimum values
- 27.When measuring average values (one of the wind flow measuring Method) this symbol appears.

Specification

Wind Velocity Range

Unit	Wind Velocity	Resolution	Lowest Point of start value	Accuracy
M/s	0~45	0.001	0.3	±3% ±0.1dgts
Ft/min	0~8800	0.01/0.1/1	60	±3% ±20dgts
Knots	0~98	0.01/0.1	0.6	±3% ±0.1dgts
Km/hr	0~140	0.001	1	±3% ±0.4dgts
Mph	0~100	0.001/0.01	0.7	±3% ±0.2dgts

Wind flow range : CMM:0-999900m³/min CFM:0-999900 ft³/min

Unit	Range	Resolution	Area
CFM(FT ³ /MIN)	0-999900	0.001-100	0.001-9999
CMM(M ³ /MIN)	0-999900	0.001-100	0.001-9999

Unit Conversatin

	m/s	Ft/min	Knots	Km/h	Mph
1m/s	1	196.87	1.944	3.60	2.24
1ft/min	0.00508	1	0.00987	0.01829	0.01138
1knots	0.5144	101.27	1	1.8519	1.1523
1km/h	0.2778	54.69	0.54	1	0.6222
1mph	0.4464	87.89	0.8679	1.6071	1



Specification

Wind Velocity Range

Unit	Wind Velocity	Resolution	Lowest Point of start value	Accuracy
M/s	0~30	0.001	0.3	±3% ±0.1dgts
Ft/min	0~5860	0.01/0.1/1	60	±3% ±20dgts
Knots	0~55	0.01/0.01	0.6	±3% ±0.1dgts
Km/hr	0~90	0.001	1	±3% ±0.4dgts
Mph	0~65	0.001/0.01	0.7	±3% ±0.2dgts

Wind flow range : CMM:0-999900m³/min CFM:0-999900 ft³/min

Unit	Range	Resolution	Area
CFM(FT ³ /MIN)	0-999900	0.001-100	0.001-9999
CMM(M ³ /MIN)	0-999900	0.001-100	0.001-9999

Unit Conversatin

	m/s	Ft/min	Knots	Km/h	Mph
1m/s	1	196.87	1.944	3.60	2.24
1ft/min	0.00508	1	0.00987	0.01829	0.01138
1knots	0.5144	101.27	1	1.8519	1.1523
1km/h	0.2778	54.69	0.54	1	0.6222
1mph	0.4464	87.89	0.8679	1.6071	1

Function

- 1.Measurement of wind velocity, temperature and flow
- 2.Unit conversion of wind velocity, temperature and flow
- 3.Measurement of maximum and minimum wind velocity
- 4.Measurement of 2/3 Vmax and average wind flow
- 5.5Data holding, storing and deleting function
- Low battery indicating function
- 6.Auto power off function (power off automatically if no further operation for 10 minutes)
- 7.Memory of 500 records
- 8.Backlight
- 9.Connecting to PC with USB cable
- 10.Audio key pressing alert
- 11.Large LCD display
- 12.Retractable drag rod

Operation Instruction

Hold the Anemometer with your hand , place the probe in the air flow with the air direction matching the direction of the arrows printed on the inner walls of the probe (please do not extrude the sensor tip, which may cause the inaccuracy measurement)



Specification

operating current			
Unit	minimum	typical	maximum
mA	7	8	10
operating voltage			
unit	minimum	typical	maximum
V	3.6	5	9.5

Error

wind speed measuring error				
Unit	rang	resolution	throsold	procision
m/s	0~4.5	0.1	0.8	±3%±0.1dgts
ft/min	0~8800	19	157	±3%±10dgts
knots	0~88	0.2	1.6	±3%±0.1dgts
km/hr	0~140	0.3	2.9	±3%±0.1dgts
mph	0~100	0.7	1.8	±3%±0.1dgts
Wind temperature measuring error				
Unit	rang	resolution	procision	
°C	-10°C~50°C	0.1	±3%±0.1 dgts	
°F	14°F~122°F	0.36	±3.6°F	

Communication port

port definiton	
red	DC power supply(3.6~5V)
green	RXD
white	TXD
black	GND
size	66 * 29.5 * 178mm
weight	93.7g
Operating temperature	0°C ~ 50°C (32°F ~ 122°F)
Storage temperature	-20°C ~ 60°C (-4°F ~ 140°F)



Function

1. Measure current wind speed, temperature and humidity
2. Measure current wind flow and temperature
3. Measure wind speed/ max wind flow/min wind flow
4. Wind speed/flow units and temperature units selection
5. Measure wind direction angle
6. real-time measurement when connecting USB with computer software
7. Backlight and data holding (HOLD)
8. Low battery indication, automatic shutdown setting

LED Display

1. 2/3 of max wind flow
2. maximum value
3. AVG : average wind velocity/ wind flow
4. MIN : minimum value
5. REDA : read recorded data
6. REC : record data
7. DEL : delete recorded data
8. : USB USB connection
9. low battery indicator
10. HOLD : data holding
11. wind level
12. m/s, km/h, wind velocity units, ft/min, knots, mph
13. VEL : wind velocity
14. X100 : wind flow multiplier
15. FLOW : wind flow measurement
16. wind velocity/flow value
17. CFM : wind flow unit (cubic feet/minute)
18. CMM : wind flow unit (cubic meter/minute)
19. wind temperature value/ vent area value
20. oCM 2 : Indicating duct area in square meter in flowfunction, "oC " is used to indicate wind temperature in metric.
- oFT 2 : indicating duct area in square feet when in flow function; oF is used to indicate wind temperature in metric;
21. wind direction angle
22. humidity unit
23. EWSN : wind direction
E: east wind, W: west wind
S: south wind, N: north wind
ES: southeast wind, EN: northeast wind
WS: southwest wind, WN: northwest wind
24. NO DATA : no recorded data



Specification

Wind Velocity Range				
Unit	Wind Velocity	Resolution	Lowest Point of start value	Accuracy
M/s	0~45	0.01	0.3	±3%±0.1dgts
Ft/min	0~8800	0.01/0.1/1	60	±3%±20dgts
Knots	0~88	0.01/0.1	0.6	±3%±0.1dgts
Km/hr	0~140	0.001	1	±3%±0.4dgts
Mph	0~100	0.01	0.7	±3%±0.2dgts
Wind flow range : CMM:0-999900m ³ /min CFM:0-999900ft ³ /min				
Unit	Range	Resolution	Area	
CFM(FT ³ /MIN)	0-999900	0.001-100	0.001-9999ft ²	
CMM(M ³ /MIN)	0-999900	0.001-100	0.001-9999m ²	
Temperature Range				
Unit	Scale	Resolution	Accuracy	
°C	0~45	0.2	±1.0°C	
°F	32~113	0.36	±1.8°F	
Humidity Range				
Unit	MIN/MAX	Resolution	Accuracy	Test Conditions
% RH	10~90	0.1	±5%	90% RH (non-condensing)



Specification

Wind Velocity Range

Unit	Wind Velocity	Resolution	Lowest Point of start value	Accuracy
M/s	0~45	0.001	0.3	±3% ±0.1dgts
Ft/min	0~8800	19	60	±3% ±0.1dgts
Knots	0~88	0.2	0.6	±3% ±0.1dgts
Km/hr	0~140	0.3	1	±3% ±0.1dgts
Mph	0~100	0.2	0.7	±3% ±0.1dgts

Wind flow range : CMM:0-999900m³/min CFM:0-999900 ft³/min

Unit	Range	Resolution	Area
CFM(FT ³ /MIN)	0-999900	0.1-100	0.001-9999
CMM(M ³ /MIN)	0-999900	0.1-100	0.001-9999

Wind Temperature

Unit	Scale	Resolution	Accuracy
°C	0~45	0.2	±2
°F	32~113	0.36	±3.6

Power supply 3*1.5V AAA Batteries
 Operating temperature 0°C~+45°C(32°F~113°F)
 Operating humidity 40%RH~85%RH
 Store temperature -10°C~+50°C(-14°F~122°F)
 Store humidity 10%RH~90%RH

Function

1. Measurement of wind velocity, temperature and flow
2. Selection among max wind speed/min wind speed/average wind speed/current wind speed.
3. Temperature unit selection between °C/°F
4. Inlet area set
5. Selection speed unit among M/S, KM/H, FT/MIN, KNOTS and MPH
6. Reading hold
7. LCD backlight
8. Manual/automatic turning off
9. Beaufort scale
10. Wind chill alert
11. Retractable drag rod
12. Low battery indication

KEYS

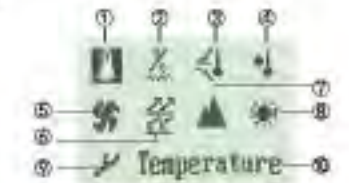
1. Power on/backlight key
2. Unit switch key for wind speed and wind volume
3. Key for temperature unit switch
4. Switch key between the interfaces of wind speed and wind volume
5. Switch key among max/min/average/2 third of max wind volume
6. Data hold
7. LCD
8. Battery door
9. Slip resistant handle
10. Retractable drag rod
11. Blade
12. Handle socket



Main menu interface

Press the button Start to start the anemometer, and then enter the main menu interface after logo image is displayed for 1S. Press the left and right buttons to select items, press the button Confirm to confirm, and then enter the next display interface.

- ① Temperature
- ② Humidity
- ③ Wind chill
- ④ Dew point
- ⑤ Wind speed
- ⑥ Barometric pressure
- ⑦ Altitude
- ⑧ Illumination
- ⑨ Settings
- ⑩ Item name



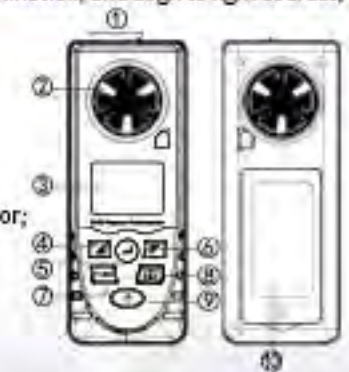
This product is a portable multi-functional anemometer, and it is suitable for measuring temperature, humidity, wind chill, dew point, wind speed, barometric pressure, altitude and illumination.

Specification

Measuring Item	Measuring range	Resolution	Accuracy	Response time
Temperature	-20.0~60.0°C	0.1°C	±1.0°C	1S
Humidity	0~100.0%RH	0.1%RH	±5%RH	1S
Wind chill	-40.0~10.0°C	0.1°C	±2.0°C	1S
Dew point	-40.0~60.0°C	0.1°C	±2.0°C	1S
Wind speed	0.7~30.0m/s	0.1m/s	±3%or±0.3m/s	1S
Barometric pressure	300~1100hPa	0.1hPa	±1.0hPa	1S
Altitude	-500~9000m	1m	-	1S
Illumination	0~55000Lx	1Lx	±3%	1S
Size	48*21.2*122mm			

Component names and button functions

- ① Open this cover when measuring illumination, and align to light sources;
- ② Fan blade;
- ③ LCD display screen;
- ④ Leftwards/upwards/reduce;
- ⑤ Confirm/enter/start;
- ⑥ Rightwards/downwards/increase;
- ⑦ Switching the switching items of sensor;
- ⑧ Unit switch/exit/backlight switch
- ⑨ Startup & shutdown;
- ⑩ Battery door;



Pictures

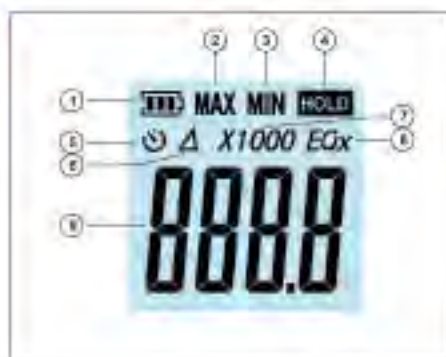


Models	GM1010	GM1020	GM1030
page	P54	P54	P54
Measuring range	0Lux~200,000Lux(0Fc~18,500Fc)	Total Measuring Range: 0~200,000Lux into four ranges: *1 0 199.9Lux; *10 200 1999.9Lux; *100 2000 19999.9Lux; *1000 20000 200000Lux	0~200,000Lux (0~20000Fc), divided into four gears
Accuracy	±3% rdg±0.5%fs(<10,000Lux) ±4% rdg±10dgts.(>10,000Lux)	±3%rdg (below 10000Lux) ±4%rdg (above 10000Lux)	±3% rdg±0.5%fs(<10,000Lux) ±4% rdg±10dgts.(>10,000Lux)
Digital Update	2 times/s	2 times/s	2 times/s
Photometric Sensor	Silicon LED	Silicon Diode	Silicon LED
Battery Life	Over 60 hoursAnd Homidity	10hours (continuous operation with a USB connection)	10hours
Operating Temperature And Homidity	0℃~40℃/10%RH~90%RH	0℃~40℃/10%RH~90%RH	0℃~40℃/10%RH~90%RH
Storage Temperature And Humidity	-20℃~50℃ 10~90%RHRange	-20℃~50℃ 10~90%RHRange	-20℃~50℃ 10~90%RHRange
Temperature Measuring Range	x	0~40℃	-20~50℃ (-4~122℉)
Temperature Accuracy	x	±1.0℃	±1.0℃
Unit OF illuminance and temperature	x	Lux/℃; Lux/℉; Fc/℃; Fc/℉	Lux/℃; Lux/℉; Fc/℃; Fc/℉
Illumination data storage	x	Automatic: Up to 1900 groups of data can be stored. LuxLAB is used to set the storage cycle and whether to start or stop storage. Manual: Up to 60 groups of data can be stored Whether to store is determined manually.	Automatic: Up to 2000 groups of data can be stored.LuxLAB is used to set the storage cycle and whether to start or stop storage. Manual: Up to 60 groups of data can be stored Whether to store is determined manually.
Unit Size	52.5mm*35.5*166mm	54.99*29.53*150.71mm	72*35*145mm
LUX/FC Unit Selection Function	x	√	√
Auto Power OFF	5 Minutes without any Operation	You can set an auto shutdown timer through LuxLAB	Auto-off after no operation for a long time
Backlight Function	√	√	√
Max and Min Measurements	√	√	√
Automatic Measurement Function	√	√	√
Data Rise and Fall Time is short	√	√	√
Low Battery Indication	√	√	√

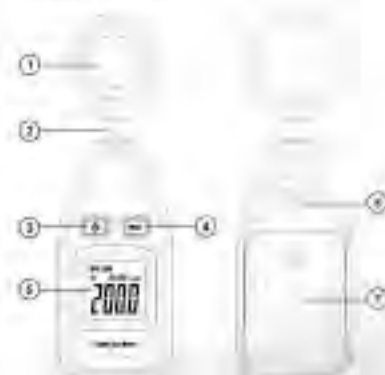


Specification	
Measuring range	0~200000Lux / 0~18500Fc
Accuracy	±3%rdg±0.5%f.s. (<10,000Lux) ±4%rdg±10dpts. (>10,000Lux)
Digital Updates	2 times / s
Photometric sensor	Silicon diode
Battery life	18 hours(continuous operation)
Operating temperature and humidity	0°C~ 40°C, 10%RH~ 90%RH
Storage temperature and humidity	9V battery
Unit size	52.5mm*35.5mm*166mm
Auto power off	After 5 minute

- LCD display**
1. Battery Icon
 2. Maximum reading
 3. Minimum reading
 4. Reading hold
 5. Power off timing icon
 6. Difference icon
 7. Multiplication
 8. Fc/Lux Unit Icon
 9. Lux reading



- Function**
1. LUX/FC Unit selection function
 2. Backlight function
 3. MAX/MIN measurements
 4. Automatic measurement function
 5. Data rise and fall time is short
 6. Low battery indication
 7. After 5 minute Auto power off
- Part description**
1. Battery icon
 2. Maximum reading
 3. Minimum reading
 4. Reading hold
 5. Power off timing icon
 6. Difference icon
 7. Multiplication
 8. Fc/Lux Unit icon
 9. Lux reading



Specification	
Measurable objects	Illuminance and temperature, illuminance difference, maximum and minimum illuminance and temperature, Integrating illuminance and Integrating time, and average Integrating illuminance
Photoelectric element	Silicon diode
Thermal probe	NTC thermistor
Illuminance measuring range	Total measuring range:0~200,000 Lux, into four ranges ×1:0~199.9 Lux ×10:200~1999.9Lux ×100:2000~19999.9Lux ×1000:20000~200000Lux
Temperature measuring range	18 hours(continuous operation)
Operating temperature and humidity	0~40°C
Illuminance accuracy	±3%rdg (below 10000 Lux);±4%rdg (above 10000 Lux)
Temperature accuracy	±1.0 °C
Units of illuminance and temperature	Four combinations of units are available. Lux/°C Lux/°F FC/°C FC/°F
Illumination data storage	Automatic:Up to 1900 groups of data can be stored, LuxLAB is used to set the storage cycle and whether to start or stop storage. Manual:Up to 60 groups of data can be stored. Whether to store is determined manually.
LCD display update frequency	Twice per second
Operating temperature/humidity	0~40°C, 10~90%RH
Storage temperature/humidity	-20~50°C, 10~90%RH
Power supply	Two AAA batteries
Battery life	10 hours (continuous operation with a USB connection)
Auto shutdown	You can set an auto shutdown timer through LuxLAB.



- Function**
1. Powerful measurement functions: It can measure not only current values, maximums, and minimums of illuminance and temperature, but also illuminance difference, Integrating illuminance, and average Integrating illuminance.
 2. Support for automatic storage of illuminance data (up to 1900 groups) and manual storage of illuminance data (up to 60 groups)
 3. Wide measuring range (0 to 200,000 lux) and support of automatic range shift
 4. Delivered with computer-based analysis software, allowing users to operate the meter with ease
 5. Quick response, high portability, and operable by a single hand
 6. The sensor can be rotated
 7. Backlight

- Part description**
1. Battery capacity
 2. Max/Auto store
 3. Min/Manual store
 4. Data hold
 5. Scheduled shutdown
 6. Difference
 7. Illuminance range
 8. Unit of illuminance: Lux
 9. Unit of illuminance: candela
 10. Integrating illuminance unit
 11. Average
 12. Integrating
 13. Read of illuminance
 14. Memory
 15. Deletion
 16. Query
 17. Unit of temperature
 18. Unit of time/Data query range
 19. USB connection
 20. Read of temperature





Specification

Illumination probe	Silicon Diode		
Illumination range	0 ~ 200,000Lux (0 ~ 20000Fc), divided into four gears		
Gear	Gear range	Minimum resolution	Accuracy
X1 gear	0.0 ~ 199.9Lux	0.1 Lux	±3%rdg+5dpts
X10 gear	20.0*10 ~ 199.9*10Lux	1 Lux	±3%rdg+10dpts
X100 gear	20.0*100 ~ 199.9*100Lux	10 Lux	±4%rdg+10dpts
X1000 gear	20.0*1000 ~ 199.9*1000Lux	100 Lux	±4%rdg+10dpts
Repeatability	±2%		
Refresh rate	2 times/second		
Temperature probe	NTC Thermistor		
Temperature range	-20 ~ 50°C (-4 ~ 122°F)		
Temperature accuracy	±1.0 °C		
Power	Three AAA batteries		

Function

- Not only can split type illuminometer measure current value, maximum value, minimum value and difference value of illumination and temperature, but also hold illumination and temperature data, calculate illuminance integral and average integral averaging and record data.
- 1. Switch illumination unit and (Lux/Fc) temperature unit (°C/°F)
- 2. Two recording modes: automatic storage of illumination data (up to 2000 groups) and manual storage (up to 60 groups)
- 3. Automatic range and quick response, measurement in environment with insufficient light.
- 4. Screen backlight for darkroom operation.
- 5. Auto-off after no operation for a long time (the default span is 10 mins and can be reset)

Names and functions of parts

1. Power/backlight
2. Back/difference value
3. Mode/return
4. Data holding/setting
5. Forward/integral
6. Record/confirm
7. Illumination head
8. Lens cover
9. UART connector (TTL)



LCD display

- a. Data recording
- b. Max value/auto storage
- c. Min value/manual storage
- d. Data holding
- e. Bluetooth
- f. Power off timing icon
- g. Low battery indicator
- h. Illumination unit—symbol of lux
- i. USB connection symbol
- j. Hour
- k. Temperature unit
- l. Temperature value and measurement values
- m. Illumination value gear
- n. Illumination value and parameter setting
- o. Difference icon
- p. Integral value symbol
- q. Average value symbol



APP operation instruction

After Bluetooth device is connected, the app automatically synchronizes various states of the instrument, such as unit, and time interval of automatic storage.



App main interface



Extreme value interface



Bluetooth connection interface



Data display interface

Pictures



Models	GM86	GM87	GM88	GM89
page	P67	P67	P68	P68
maximum rated current	10A	1A	10A	16A
Most powerful	2200W	220W	2200W	3520W
Measuring range	0.2~2200W	0.1~220W	0.2~2200W	0.1~3520W
Precision	Level 1.0	Level 1.0	Level 1.0	Level 1.0
Constant	6400impkWh	6400impkWh	6400impkWh	6400impkWh
Power consumption	< 1W	< 1W	< 1W	< 1W
Working temperature	0~45℃	0~45℃	0~45℃	0~45℃
Storage temperature	-20~60℃	-20~60℃	-20~60℃	-20~60℃
Monitoring current power value	√	√	√	√
Monitoring current voltage/ current/frequency	√	√	√	√
Record total time electricity	√	√	√	√
Record total power consumption	√	√	√	√
Carbon dioxide emissions	√	√	√	√
power factor detection	√	√	√	√
Load alarm threshold can be set up	√	√	√	√
Clock display	x	x	√	x
Over current protection	x	x	√	x
Buzzer alarm	x	x	√	x



Chinese specifications



European specifications



British specifications



British specifications

Application cases

1. When selling various kinds of energy-saving appliances, power metering function can be used to demonstrate energy saving situation of electrical appliances for users.
2. For normal users, use power/ electric quantity metering functions to test various working conditions of domestic electrical appliances (refrigerator, air conditioner, washing machine, computer, fan, energy-saving lamp, etc.) to clearly know power consumption situation of each electrical appliance to better guide users to use electricity.
3. One can find that it can timely eliminate risks due to power abnormality caused by appliance electricity leakage by testing working power of domestic appliances and comparing with marked power of appliances.

LED display and keys

Specification

Applicable power supply	220V 50Hz
Working voltage range	180.0V~260.0V
Maximum rated current	10A (GM86)/1A (GM87)
Maximum power	2200W
Measurable range	0.2W~2200W
Maximum accumulated electric quantity	99999KWh
Maximum accumulated time	99999minutes
Power factor	0.001-1.000
Backlight function	ON/OFF can be set
Precision	Level 1.0
Constant	6400Imp/kWh
Power dissipation	<1W
Working temperature	0~45°C
Storage temperature	-20~60°C
Product dimension	60.0*55.7*120mm
Weight	129.6g


Specification

Applicable power supply	220V 50Hz
Working voltage range	180.0V~260.0V
Maximum rated current	10A (GM88)/16A (GM89)
Maximum power	2200W (GM88)/3520W (GM89)
Measurable range	0.2W~2200W (GM88)/0.1~3520W (GM89)
Maximum accumulated electric quantity	99999KWh
Maximum accumulated time	99999minutes
Power factor	0.001-1.000
Backlight function	ON/OFF can be set
Precision	Level 1.0
Constant	6400Imp/kWh
Power dissipation	<1W
Working temperature	0~45°C
Storage temperature	-20~60°C
Product dimension	60.0*55.7*120mm
Weight	129.6g

Application cases

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3. One can find that it can timely eliminate risks due to power abnormality caused by appliance electricity leakage by testing working power of domestic appliances and comparing with marked power of appliances.

LED display and keys


Pictures



Models	GM100	GM100+	GM130	GM220
page	P71	P72	P73	P74
Measuring range	1.2~220 mm (steel)	1.2~300 mm (steel)	1.0~300 mm (steel)	0~1800um
Vibration Pickup	±(1%H+0.1mm)	±(1%H+0.1mm)	±(1%H+0.1mm)	±(3%H+0.1um)
Resolution	0.1mm	0.1mm	0.01mm	0.01um/1um
Numerical	Max/Min/AVG	Max/Min/AVG	Max/Min/AVG	Max/Min/AVG
Zero point two basic check	x	x	x	√
Auto calibration	√	√	√	x
Data output	x	x	x	x
Measurement model	x	x	x	√
Measure Sound Velocity	√	√	√	√
System error correction	x	x	x	√
Working temperature	0~40°C	0~40°C	0~40°C	0~45°C
Working humidity	10~95%RH	10~95%RH	10~95%RH	10~95%RH
WoHigh sensitive probe	x	x	x	√
Storage/query/delete data	Storage/Delete	Storage/Delete	Storage/Delete	Storage/query/delete
Standard deviation/number statistical measurement	x	x	x	√
Buzzer hint	x	x	x	√
Backlight	√	√	√	√
Auto Power Shut Off	√	√	√	√

Pictures



Models	GM280	GM280F	GM63A	GM63B
page	P75	P76	P77	P78
Measuring range	0~1500um	0~1800um	Acceleration: 0.1 ~ 199.9 m/s² Speed: 0.1 ~ 199.9 m/s Displacement: 0.001 ~ 1.999 mm P-P	Acceleration: 0.1 ~ 199.9 m/s² Speed: 0.1 ~ 199.9 m/s Displacement: 0.001 ~ 1.999 mm P-P
Vibration Pickup	±(3%H+0.1um)	±(3%H+0.1um)	±5%	±5%
Resolution	0.01um/1um	0.01um/1um	x	x
Numerical	Max/Min/AVG	Max/Min/AVG	x	Max
Zero point two basic check	√	√	x	x
Auto calibration	x	x	x	x
Data output	x	x	AC	x
Measurement model	√	√	x	x
Measure Sound Velocity	√	√	x	x
System error correction	√	√	x	x
Working temperature	0~40°C	0~45°C	0~40°C	0~40°C
Working humidity	10~95%RH	10~95%RH		
WoHigh sensitive probe	√	√	√	√
Storage/query/delete data	Storage/query/delete	Storage/query/delete	x	x
Standard deviation/number statistical measurement	√	√	x	x
Buzzer hint	√	√	x	x
Backlight	√	√	√	√
Auto Power Shut Off	√	√	√	√

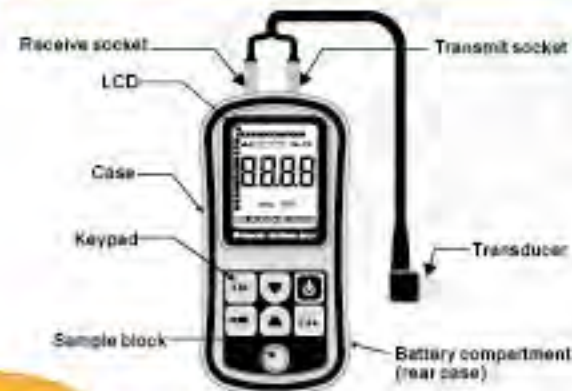
Specification

Display	4-digit LCD display
Minimum display unit	0.1 mm
Working frequency	5MHz
Measuring range	1.2 to 225.0mm (steel)
Minimum limit for tube measuring	Φ20*3mm (steel)
Accuracy	+/- (1%H+0.1)mm H denotes the measured thickness.
Sound velocity range	1000 to 9999 m/s
Measuring sound velocity with a given thickness	When the given thickness over 20mm, the accuracy is +/-1%; when the given thickness less than 20mm, the accuracy is +/-5%.
Operation temperature	0°C to 40°C
Power supply	3*1.5V AAA alkaline batteries
Operation current	Normal operation current ≤50mA With Backlight turn on current ≤120mA Stand-by current: ≤20uA
Size	72*146*29mm
Weight	202g

Sound velocities of common materials

Material	Velocity(m/s)	Material	Velocity(m/s)
Aluminum	6320	Acetate resin	2670
Zinc	4170	Phosphor bronze	3530
Silver	3600	Turpentine	4430
Gold	3240	Glass	5440
Tin	3230	Incoloy alloy	5720
Iron/Steel	5900	Magnesium	6310
Brass	4640	Monel alloy	6020
Copper	4700	Nickle	5630
SUS	5790	Steel 4330 (mild)	5850
Acrylic resin	2730	Steel 330	5660
Water (20°C)	1480	Titanium	6070
Glycerin	1920	Zirconium	4650
soluble glass	2350	Nylon	2620

Part description



LCD diagram



- Low battery indicator
- Coupling indicator
- m/s Sound velocity unit
- mm Thickness unit
- VEL Sound velocity indicator
- THICKNESS Thickness indicator
- Store / recall indicator
- Stored unit indicator
- Calibration indicator



Specification

Display	4-digit LCD display
Minimum display unit	0.01mm(1.20 to 99.99mm)
Working frequency	5MHz
Measuring range	1.2 to 300.00mm (steel)
Minimum limit for tube measuring	Φ20*3mm (steel)
Accuracy	+/- (1%H+0.1)mm H denotes the measured thickness.
Sound velocity range	1000 to 9999 m/s
Measuring sound velocity with a given thickness	When the given thickness over 20mm, the accuracy is +/-1%; when the given thickness less than 20mm, the accuracy is +/-5%.
Operation temperature	0°C to 40°C
Power supply	3*1.5V AAA alkaline batteries
Operation current	Normal operation current ≤45mA With Backlight turn on current ≤55mA Stand-by current: ≤20uA
Size	72*146*29mm
Weight	202g

Sound velocities of common materials

Material	Velocity(m/s)	Material	Velocity(m/s)
Aluminum	6320	Acetate resin	2670
Zinc	4170	Phosphor bronze	3530
Silver	3600	Turpentine	4430
Gold	3240	Glass	5440
Tin	3230	Incoloy alloy	5720
Iron/Steel	5900	Magnesium	6310
Brass	4640	Monel alloy	6020
Copper	4700	Nickle	5630
SUS	5790	Steel 4330 (mild)	5850
Acrylic resin	2730	Steel 330	5660
Water (20°C)	1480	Titanium	6070
Glycerin	1920	Zirconium	4650
soluble glass	2350	Nylon	2620

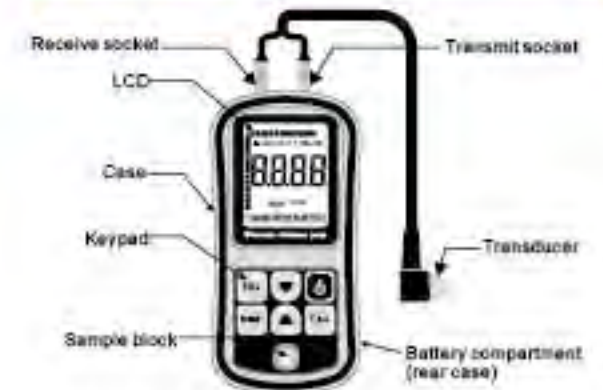
LCD diagram



- Low battery indicator
- Coupling indicator
- m/s Sound velocity unit
- mm Thickness unit
- VEL Sound velocity indicator
- THICKNESS Thickness indicator
- Store / recall indicator
- Stored unit indicator
- Calibration indicator

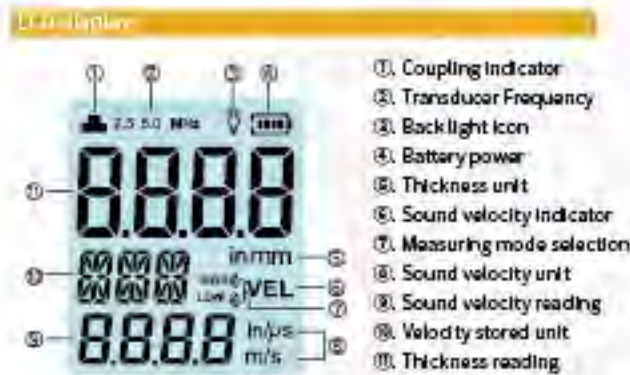


Part description



Specification	
Measuring range	1.00 to 300.0mm(steel)
Accuracy	±(1%H+0.1mm)H denotes the measured thickness
Working frequency	5MHz
Resolution	0.01mm(1.00 to 99.99mm) 0.1mm(100 to 300mm)
Minimum limit for tube measuring (steel)	Φ15*2.0mm(6mm transducer) Φ20*3.0mm(10mm transducer)
Sound velocity range	1000 to 9999m/s Thickness≤25mm, accuracy of velocity: ±1.25m/s/±100% Thickness>25mm, accuracy of velocity: ±5%
Operating environment	Operation temperature: 0 to 40°C Relative Humidity: <90% Do not apply in violent vibration / erosive material Avoid impact and humidity
Power supply	1.5V AAA * 3 PCS
Weight	223g
Size	72*29*146mm

- Function**
1. Auto calibration to assure the accuracy
 2. Sound velocity measurement: with a given thickness to
 3. Measure the sound velocity to improve accuracy
 4. Preset 12 sound velocities for different material
 5. Coupling status indication
 6. 12 thickness measurement data store and recall
 7. Thickness alarm setup
 8. Backlight display
 9. Low battery indication
 10. Auto power off
 11. Metric / Imperial selection
 12. Measuring mode selection



- ⑫ On/off/backlight key
- ⑬ Key for mode setup and retrieval of data saved.
- ⑭ Key for sound speed adjustment
- ⑮ Key for confirmation and calibration
- ⑯ Key for sound speed selection, adjustment, depth value adjustment and alarming value adjustment.
- ⑰ Key for sound speed selection, adjustment, thickness value adjustment and alarming value adjustment.



- Feature**
1. LCD display measurement value and status.
 2. Using HI- sensibility sensor for precise measurement.
 3. 0 point, 2 point and basic, three different calibration methods to make it easy to process the system quick calibration.
 4. Measure mode: Single, continually and difference.
 5. Data record, recall and delete function.
 6. Data analysis: Average, Maximum, Minimum, standard deviation, and measure times.
 7. Beep sounds indication.
 8. Metric / Imperial unit selection.
 9. Low Battery Indication.
 10. Auto power off.
 11. LCD backlight.
 12. Simple, compact structure and portable design.

- Operation**
1. LCD display
 2. Sensor
 - 3.a: Scroll through Menu; b: Scroll store data; c: Set calibration
 - 4.a: Scroll through Menu; b: Scroll store data; c: Data delete function d: Set calibration
 5. Power on/ set zero
 6. Battery door (At the back of the body)



- LCD Display**
1. Backlight icon, the backlight will be activated for 7 seconds upon operations when measure.
 2. Measurement value.
 3. Battery power symbol, shows current battery voltage as following grades:
 - ①: battery is sufficient
 - ②: battery is comparative sufficient
 - ③: battery is nearly deficient
 - ④: battery is nearly exhausted, need to have a replacement
 - ⑤: battery is exhausted completely.
 4. Ferrous measuring.
 5. Indicates the unit have the data in memory.
 6. Measurement mode, Data analysis indication.
 7. Number of recorded data
 8. Recorded data value.
 9. Imperial system unit (1mil= 0.0254mm = 25.4μm)
 10. Metric system unit (1mm = 1000μm)



Specification

Measurement ranges	0 ~1.80mm/0 ~71.0mil
Resolution	0.01 mm/1mil
Measurement error	±(3%H+0.03)mm
Min. diameter of substrate	50mm
Min. thickness of substrate	0.5mm
Power supply	2*1.5V AAA batteries
Operating temperature range	10 ~35°C
Operating humidity range	10~80%RH
Overall dimensions	61.98*30.57*104.99mm
Weight	63.98g(excluding of batteries)

Measurement range

Range	Resolution	Accuracy
0~1800μm	0.1um/1μm	±(3%H+1)

Remark: H=Nominal transformation ratio
Condition of Objective material: Suitable for measure non-magnetic coating on magnetic conductor base material. The minimum curvature radius. Convex: 2mm Convex: 2 Concave=11 Concave: 11mm Minimum Sample diameter: 12mm Minimum Substrate thickness: 0.5mm



Function

1. LCD displays measurement result and conditions directly
2. Measures acceleration (m/s² peak), velocity (mm/s ms), and displacement (mm p-p)
3. Selective vibration characteristic
4. Uses hi- sense of vibration sensor, measuring accurately
5. Equipped with two probes (S and L) to adapt the different measurement requirements
6. Provides a magnetic probe to fit the condition uneasy hold on by hand
7. Low battery indication
8. Auto turn off function
9. LCD back light function
10. Maximum value hold function
11. Temperature unit °C/°F selection

Specification

Technical parameter	Technical Index
LCD display	3 1 / 2 display
Power supply	3*1.5V AAA alkaline battery
Operation current	Around 10mA
Battery life	Continuously 20 hour
Auto off	80 seconds
LCD backlight function	15 seconds
Operation temperature	0 to 40°C
Operation humidity	10 to 95%RH
Low battery indication	3.0V±0.2V
Product size	72x35x145mm
Weight	216.5g (without battery)

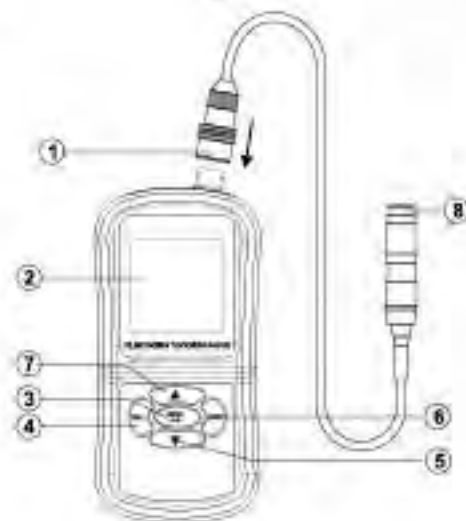
Measurement range

Range	Resolution	Accuracy
0 to 1500µm	0.1µm/1µm	±(3%H+1µm)

Remark: H= Nominal transformation ratio
 Condition of Objective material: Suitable for measure thickness of non magnetic coating on non-magnetic conductor base material.
 The minimum curvature radius. Convex=3mm
 Base sample diameter: 12mm Base substrate thickness: 0.5mm

Diagram of the unit

1. Connector (With direction indicator)
2. LCD display
3. Power on/ Set zero
4. Data delete key
5. Menu pagedown and basic calibration key
6. Unit convert between Metric and Imperial
7. Menu pageup and basic calibration key.
8. Sensor



Specification

Technical parameter	Technical Index
LCD display	3 1 / 2 display
Power supply	3*1.5V AAA alkaline battery
Operation current	Around 25mA
Battery life	Continuously 20 hour
Auto off	1 min
LCD backlight function	7 second
Operation temperature	0 to 40°C
Operation humidity	10 to 95%RH
Low battery indication	2.8V±0.2V
Product size	72x35x145mm
Weight	246.1g (without battery)

Measurement range

Range	Resolution	Accuracy
0 to 1000µm	0.1µm/1µm	±(3%H+1µm)

Remark: H= Nominal transformation ratio
 Suitable for measure about non magnetic coating on magnetic conductor base material.
 The minimum curvature radius.
 Convex=2mm Concave=11mm
 Base sample diameter: 12mm
 Base substrate thickness: 0.5mm

Function

1. Providing visual readings and status of measurement on LCD
2. Applying high sensitivity sensor for precise measurement
3. With zero-point, two-points, and basic calibration methods to amend the system error quickly;
4. With single, continuous and compensation measuring methods;
5. Capable of saving, reviewing and deleting the data
6. Able to delete the unreliable data in a measuring process as well as the data all saved in unit
7. To save the maximum value, minimum value, average value, standard compensation value and measuring times
8. Buzzer alert
9. Unit switch between the metric and Britain system;
10. Low battery indication
11. Automatically turning off
12. LCD backlight

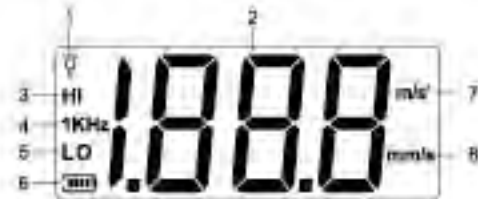


Features

1. Simple to use, the structure is compact, portable for carrying along with measurement.
 2. Visually display measurement value and state.
 3. Acceleration, velocity and displacement measurement.
 4. Different vibration frequency selection.
- High sensitivity probe for accurate measurement Provides long and short probe head, each one is suitable for different situation measurement.
5. Equipped with AC signal output interface.
 6. Low power indication.
 7. Auto power-off.
 8. LCD backlight.

Diagram of the unit

1. Backlight indication, the backlight will be activated for 7 seconds upon the button operations.
2. Measurement data
3. High frequency
4. 1KHz frequency
5. Low frequency
6. Battery mark shows battery power. Has following 5 levels:
 - :battery is sufficient
 - ▣ :battery is comparative sufficient
 - ▢ :battery is nearly deficient
 - ▤ :battery is nearly exhausted, need replace a new one.
 - :battery is exhausted completely.
7. When taking measurement of acceleration, the LCD displays the acceleration unit: m/s²
8. When take measurement of velocity, the LCD displays the velocity unit: mm/s; When taking measurement of displacement, the LCD displays the displacement unit: mm.



Technical parameter	Technical specification
Vibration pickup	Piezoelectric ceramic accelerometer (shear-type)
Measurement range of acceleration	0.1~199.9m/s ² peak
Measurement range of velocity	0.1~199.9mm/s rms
Measurement range of displacement	0.001~1.999mm p-p Velocity and displacement range is limited by acceleration 199.9m/s ²
Measurement accuracy	±5%±2digits
Measurement frequency range of acceleration	10Hz~1KHz (LO) 1KHz~15KHz (HI)
Measurement frequency range of velocity	10Hz~1KHz (LO)
Measurement frequency range of displacement	10Hz~1KHz (LO)
Displays update cycle	1 second
LCD display	3 1/2 digits display
Single output	AC output 2 V peak (display full scale) Load impedance 10KΩ or more earphones can be connected
Power supply	9V Alkaline battery
Static current	≤20μA
Operating current	≤25mA
Battery life	20 hours continuous use
Auto power-off	Turns off automatically in 60 seconds
LCD backlight	7 seconds
Operating temperature range	0~40°C
Operating humidity range	30~90%RH
Low battery indication	6.9V±0.2V
Dimensions	67x30x183mm 67x30x183mm 182g (including battery)



Features

1. LCD display measurement result and conditions directly
2. Measures acceleration (m/s² peak), velocity (mm/s rms), and displacement (mm p-p)
3. Selective vibration characteristic
4. Uses hi-sense of vibration sensor, measuring accurately
5. Equipped two probes (S and L) to adapt the different measurement requirement
6. Provides a magnetic probe to fit the condition uneasy hold on by hand
7. Low battery indication
8. Auto turn off function
9. LCD back light function
10. Maximum value hold function
11. Temperature unit C°/F° selection

Technical parameter	Technical specification
Vibration pickup	Piezoelectric ceramic accelerometer (shear-type)
Measurement range of acceleration	0.1~199.9m/s ² peak
Measurement range of velocity	0.1~199.9mm/s rms
Measurement range of displacement	0.001~1.999mm p-p Velocity and displacement range is limited by acceleration 199.9m/s ²
Measurement accuracy	±5%±2digits
Measurement frequency range of acceleration	10Hz~1KHz (LO) 1KHz~15KHz (HI)
Measurement frequency range of velocity	10Hz~1KHz (LO)
Measurement frequency range of displacement	10Hz~1KHz (LO)
Displays update cycle	1 second
LCD display	3 1/2 digits display
Single output	AC output 2 V peak (display full scale) Load impedance 10KΩ or more earphones can be connected
Power supply	9V Alkaline battery
Static current	≤15μA
Operating current	≤25mA
Battery life	20 hours continuous use
Auto power-off	Turns off automatically in 60 seconds
LCD backlight	7 seconds
Operating temperature range	0~40°C
Operating humidity range	30~90%RH
Low battery indication	6.9V±0.2V
Dimensions	72*35*145mm 67x30x183mm 229g (including battery)
Temperature range	-10°C~80°C
Temperature accuracy	±2°C



Pictures



Models	GM505	GM510	GM511	GM520
page	P81	P82	P83	P84
Measuring range	±10kPa	±10kPa	±10kPa	±10kPa
Precision	±0.25% FSO (25°C)	±0.3% FSO (25°C)	±0.3% FSO (25°C)	±0.3% FSO (25°C)
Repeatability	x	±0.2%	±0.2%	±0.2%
Linear/lag	x	±0.29%FSO	±0.29%FSO	±0.29%FSO
Reaction time	0.5S	0.5S	0.5S	0.5S
Operating humidity	0~50°C	0~50°C	0~50°C	0~50°C
Storage temperature	-10~60°C	-10~60°C	-10~60°C	-10~60°C
Beyond positive pressure range	Err.1	Err.1	Err.1	Err.1
Beyond negative pressure range	Err.2	Err.2	Err.2	Err.2
USB interface	√	√	√	√
MAX/MIN/AVG	√	√	√	√
Difference/record mode	√	√	√	√
Unit measure switch	√	√	√	√
Temperature compensation	√	x	√	√
Keeping data	√	√	√	√
Backlight	√	√	√	√
Automatic shutdown	√	√	√	√



Specification

Measuring range	±2.49kPa;
Accuracy	±0.25%FSO(25°C)
Response	Typical 0.5 s
Low battery indication	Yes
Up overload indication	Err1
Down overload indication	Err2
Operating temperature	0~50°C
Storage temperature	-10~60°C
Power supply	1.5V AAA battery*4
USB communication	Yes
Operation current	Normal operation current ≤45mA With Backlight turn on current ≤55mA Stand-by current: ≤20uA

Function

- 1.Large LCD
- 2.Data hold
- 3.With differential mode and record mode
- 4.USB port
- 5.Reset and data adjustment
- 6.Low battery indication and automatic power off

Display

- 1.Data hold function
- 2.Record mode
- 3.USB communication
- 4.Low battery indication
- 5.DIF mode
- 6.Minimum/ maximum value
- 7.Main display
- 8.Pressure unit
- 9.Record time


Specification

Measuring range	±10kPa;
Accuracy	±0.3%FSO(25°C)
Response	Typical 0.5 s
Low battery indication	Yes
Up overload indication	Err1
Down overload indication	Err2
Operating temperature	0~50°C
Storage temperature	-10~60°C
Power supply	1.5V AAA battery*4
USB communication	Yes
Repeatability	±0.2%(Maximum + / - 0.5%FSO)

Unit	Range	Resolution	Maximum pressure
bar	0.100	0.001	0.500
mbar	100.0	0.1	500.0
kPa	10.00	0.01	50
kgf/cm ²	0.101	0.001	0.509
mmHg	75.0	0.1	375.0
cmH ₂ O	101.9	0.1	509.5
Oz/in ²	23.20	0.01	116.00
psi	1.450	0.001	7.251
InHg	2.95	0.01	14.76
InH ₂ O	40.1	0.1	200.5
ftH ₂ O	3.34	0.01	16.70

Function

- 1.Large LCD
- 2.Data hold
- 3.With differential mode and record mode
- 4.USB port
- 5.Reset and data adjustment
- 6.Low battery indication and automatic power off

Display

- 1.Data hold function
- 2.Record mode
- 3.USB communication
- 4.Low battery indication
- 5.DIF mode
- 6.Minimum/ maximum value
- 7.Main display
- 8.Pressure unit
- 9.Record time


Components

- 1.Pressure input
- 2.LCD
- 3.DIF mode key
- 4.Unit shift key
- 5.Backlight key
- 6.HOLD key
- 7.Record key
- 8.Power key



Specification

Measuring range	±10kPa;
Accuracy	±0.3%FSO(25°C)
Response	Typical 0.5 s
Low battery Indication	Yes
Up overload Indication	Err1
Down overload Indication	Err2
Operating temperature	0~50°C
Storage temperature	-10~60°C
Power supply	1.5V AAA battery*4
USB communication	Yes
Repeatability	±0.2%(Maximum + / -0.5%FSO)

Unit	Range	Resolution	Maximum pressure
bar	0.100	0.001	0.500
mbar	100.0	0.1	500.0
kPa	10.00	0.01	50
kgf/cm ²	0.101	0.001	0.509
mmHg	75.0	0.1	375.0
cmH ₂ O	101.9	0.1	509.5
Oz/in ²	23.20	0.01	116.00
psi	1.450	0.001	7.251
InHg	2.95	0.01	14.76
InH ₂ O	40.1	0.1	200.5
ftH ₂ O	3.34	0.01	16.70

Function

1. Large LCD
2. Data hold
3. With differential mode and record mode
4. USB port
5. Reset and data adjustment
6. Low battery indication and automatic power off
7. Temperature compensation

Display

1. Data hold function
2. Record mode
3. USB communication
4. Low battery indication
5. DIF mode
6. Minimum/ maximum value
7. Main display
8. Pressure unit
9. Record time


Specification

Measuring range	±35kPa;
Accuracy	±0.3%FSO(25°C)
Response	Typical 0.5 s
Low battery Indication	Yes
Up overload Indication	Err1
Down overload Indication	Err2
Operating temperature	0~50°C
Storage temperature	-10~60°C
Power supply	1.5V AAA battery*4
USB communication	Yes
Repeatability	±0.2%(Maximum + / -0.5%FSO)

Unit	Range	Resolution	Maximum pressure
bar	0.350	0.001	1.500
mbar	350.0	0.1	1500.0
kPa	35.00	0.01	150
kgf/cm ²	0.356	0.001	1.529
mmHg	262.5	0.1	1125.0
cmH ₂ O	356.6	0.1	1528.5
Oz/in ²	81.20	0.01	348.00
psi	5.076	0.001	21.755
InHg	10.33	0.01	44.76
InH ₂ O	140.3	0.1	601.5
ftH ₂ O	11.69	0.01	50.10

Function

1. Large LCD
2. Data hold
3. With differential mode and record mode
4. USB port
5. Reset and data adjustment
6. Low battery indication and automatic power off
7. Temperature compensation

Display

1. Data hold function
2. Record mode
3. USB communication
4. Low battery indication
5. DIF mode
6. Minimum/ maximum value
7. Main display
8. Pressure unit
9. Record time



Pictures



Models	GM605	GM610	GM610
page	P88	P89	P90
Measuring range	2~24%/30%/37%/41%/6.8%/6.6%/6.0%/12.2%	2~40%/50%/60%/70%	2~40%/50%/60%/70%
Resolution	0.10%	0.5%	0.5%
Temperature measurement	0~40°C	-10~60°C	-10~60°C
Humidity measurement rang	20%RH~90%RH	20%RH~90%RH	20%RH~90%RH
Moisture response speed	< 1s	< 1s	< 1s
Measurement error	±2%	±1%+0.5	±1%+0.5
Power supply	2*1.5AAA batteries	2*1.5AAA batteries	2*1.5AAA batteries
Product size	135.6*55*29.4mm	135.6*55*29.4mm	135.6*55*29.4mm
Product weight	107.7g(no batteries)	107.7g(no batteries)	107.7g(no batteries)
Four kinds of tree type and other material type selection	√	x	x
Reading lock	√	√	√
Environment temperature automatic compensation	x	√	√
4 species correction way	x	√	√
Max/Min query	√	Max	Max
Auto power off	√	√	√

Pictures



Models	GM630	GM640
page	P91	P92
Moisture measurement range	0.5%~79.5%	5%~30%
Temperature measurement range	0°C~50°C	-10°C~60°C
Moisture measurement precision	±1.5%	±(1%RH+0.5)
Wood density range	0.27~1.05g/cm ³	
detecting depth	0~50mm	
Moisture resolution		0.5%
Temperature measurement error		±2.5°C
Temperature operating environment		0°C~40°C
Humidity operating environment		0%RH~85%RH
Power supply	9V batteries	3*1.5V AAA batteries
Product size	63.6*31*125.8mm	host:72*35*154mm probe:415*36*36mm
Product weight	146g(no batteries)	146g(no batteries)
Moisture limit value is set	√	x
Wood density choice	√	x
Keeping data	√	x
°C/°F Selection	√	x
LCD backing shows	√	x
Low electricity prompt	√	x
Choice of grain varieties	x	√
Grain moisture tester	x	√
Temperature measurement	x	√
Grain moisture standard setting	x	√
Grain moisture levels	x	√
Auto power off	√	√



Function

1. Selection among 4 types of wood and other material
2. Reading lock
3. Review of maximum moisture reading
4. Review of minimum moisture reading
5. Battery volume alert
6. Large non-parallax LCD with legible display
7. Automatic/manual power off

Display

- a. Maximum reading
- b. Minimum reading
- c. Battery volume
- d. Moisture content in woods
- e. Wood type selection
- f. Reading hold



Keys

1. Built-in-one protective cover
2. Built-in-one probe
3. LCD
4. Woods type and other material selection key
5. Power on/off and reading hold key
6. Maximum/minimum reading selection key



Specification

	Measuring range	Wood type	Resolution
Water content	0%-24%	Wood type1	0.10%
	0%-30%	Wood type2	
	0%-37%	Wood type3	
	0%-41%	Wood type4	
	0%-6.8%	Other material A	
	0%-6.6%	Other material B	
	0%-6.0%	Other material C	
	0%-12.2%	Other material D	
Precision	±2% Wood type1		
Operating temperature	0°C-40°C		
Operating humidity	20%RH-90%RH		
Automatic power off time	About 10 minute		
Length of probe	9.8mm		
Battery	2*1.5V AAA Battery		
Size	135.6*55*29.4mm		
Weight	107.7g(excluding battery)		

Wood type

Type	Refer value	Type	Refer value
Rhodesia teak	1	Cork wood	3
Ormosia	1	Sandalwood	3
Brazil walnut	1	Elm	3
Walnut	2	Koombar	3
Clones wood	2	Hemlock	3
White poplar	2	Borneol wood	3
Teak	2	Oak	3
Fir	3	Masson pine	4
Douglas fir	3	Chile pine	4
Lauan	3	Spurce	4
White ash	3	Larch	4
White fir	3	Apltong	4
Maple	3	Birch	4
Ash wood	3	Basswood	4

Other material

A	Karstenite
B	Cement mortar
C	Lime mortar
D	Brick

Specification

	Range	Max error	Resolution
Moisture	Spc1:2~40%	±1%+0.5	0.5%
	Spc2:2~50%		
	Spc3:2~60%		
	Spc4:2~70%		
Temperature	-10°C~60°C	±1°C	0.1°C
Humidity	20%RH~95%RH	±5.0%RH	0.1%RH
Operating environment	Temperature:0°C~40°C; Humidity:20%RH~95%RH		
Size	135.6*55*29.4mm		
Weight	107.7g(excluding battery)		
Fork	9.8mm		

Wood type(GM610/GM620)

Spc	Level	Spc	Level
Rhodes west teak	1	African whitewood	3
Ormosla hosiei	1	Rose wood	3
Brazil walnut tree	1	Elm tree	3
Walnut tree	2	Gmelina chinensis benth	3
Aplong	2	Hemlock	3
White poplar	2	Dipterocarpus	3
Teak	2	Oak	3
Barya pine	3	Chinese red pine	4
Douglas fir / D-fir	3	Coqulto	4
Lauan	3	Abies holophylla maxlm	4
Manchurian ash	3	Larch	4
European silver	3	Aplong	4
Maple	3	Birch	4
White ash	3	Basswood	4

Function

1. Adjustable for 4 tree species.
2. Reading lockable.
3. Auto temperature compensation for environment varying.
4. Maximum moisture reading review.
5. Backlight on/off switch.
6. Applying CPU technology for accurate measuring.
7. 2 pcs of AAA battery for power supply with battery icon for indication of power.
8. Large LCD.
9. Automatic turn-off if there is no further operation within 120 seconds while manual turn-off can be performed.
10. Able to measure the environmental humidity and temperature.
11. Compact and fine design with solid and light plastic material, Portable and easy operation.



Specification

	Range	Max error	Resolution
Moisture	Spc1:2~40%	±1%+0.5	0.5%
	Spc2:2~50%		
	Spc3:2~60%		
	Spc4:2~70%		
Temperature	-10°C~60°C	±1°C	0.1°C
Humidity	20%RH~95%RH	±5.0%RH	0.1%RH
Operating environment	Temperature:0°C~40°C; Humidity:20%RH~95%RH		
Size	144*55*29.4mm (meter only) 278*36*36mm (Meter with fork)		
Weight	107.7g(excluding battery)		
Fork	147mm		

Function

1. Adjustable for 4 tree species.
2. Reading lockable.
3. Auto temperature compensation for environment varying.
4. Maximum moisture reading review.
5. Backlight on/off switch.
6. Applying CPU technology for accurate measuring.
7. 2 pcs of AAA battery for power supply with battery icon for indication of power.
8. Large LCD.
9. Automatic turn-off if there is no further operation within 120 seconds while manual turn-off can be performed.
10. Able to measure the environmental humidity and temperature.
11. Compact and fine design with solid and light plastic material, Portable and easy operation.



Panel

1. Built-in cap
2. Built-in fork
3. LCD
4. Switch between tree species/
Selection of parameters
5. ON/OFF key/Data hold
6. Backlight/Parameter setting key
7. Detachable cap
8. Detachable fork

Specification

Moisture measurement range	0.5%-79.5%
Temperature measurement range	0°C-50°C/32°F-122°F
Measurement error/moisture value	±1.5%
Temperature value	±2°C/±3.6°F
Wood density range	0.27g/cm ³ -1.05g/cm ³
Detection depth	0mm-50mm
Dimension	63.6*31*125.8mm
Weight	146g

Function

1. Wood moisture measurement
2. Moisture limit value setting
3. Wood density selection
4. Temperature measurement and temperature unit conversion
5. Backlight control function
6. Data hold function
7. Battery level indication
8. Auto power-off function

Wood density table

Density g/cm ³	Wood Variety
0.27-0.38	Poplar, cathay poplar, fir, sago palm, basswood, red wood, white pine, thalictum, Monterey pine, hard Chinese parasol.
0.38-0.45	Douglas fir, yellow cedar, pine wood, aspen, cotton wood, cypress, hemlock, spruce, rose wood, okoume, Okoumev, red pine, fir wood, African cordia, dyera, hemlock, dyera.
0.45-0.55	Douglas fir, yellow cedar, pine wood, fir wood, aspen, cotton wood, cypress, alder, African mahogany, Philippines mahogany, hard wood, stained wood, ramln, karurt, hoop pine, hemlock, kahikatea, Ivy tree bark.
0.55-0.65	Birch, elm, red oak, black walnut, beech, rubber wood, Iroko, keruling, cashew.
0.65-0.75	Pecan, merbau, white oak, olive, lauan, Apocynaceae, Bangkl ral, beech, ash wood, teakwood.
0.75-0.85	Wenge, bubinga, Philippines mahogany, Australia mahogany, jatoba, garapa, beech, punah, palaquim spp, copa llera religiosa, ebony, African buginga, regular buginga.
0.85-0.95	Hainan yellow pear wood, aspidosperma spp, beefwood, cumaru, dracaena goldiana.
0.95-1.05	Ebony, dipteryx spp, lapacho, logwood, red sandalwood, Xylla spp, Indian pterocarpus spp, Southeast Asian pterocarpus spp, dalbergia spp.



Function

1. Select grain variety.
2. Test moisture content of the grain.
3. Measure temperature of the grain.
4. Set standard for moisture content of the grain and give warning on over-standard moisture of grain.
5. Backlight control.
6. Switch between Celsius degree and Fahrenheit degree.
7. Battery low power warning.
8. Auto power-off.
9. Data hold.

Display

- A. Battery capacity
- B. Data hold
- C. Temperature reading
- D. Temperature unit
- E. Moisture content setting
- F. Moisture content over-standard
- G. Moisture content reading
- H. Moisture content percentage
- I. Code of grain variety



Specification

	Measuring Range	Maximum Error	Resolution Ratio
Moisture content	5%-30%	±(1%Rh+0.5)	0.5%
Temperature	-10°C-60°C	±2.5°C(±5°F)	0.1°C/0.1°F
Operating environment	0°C-40°C	Temperature	Humidity
		Host	Probe
Weight	190.6g		208.3g
Dimension	72x35x145MM		415x36x36MM
Power supply	3×1.5VAAA battery		

Component instruction

1. Test probe
2. Connector (directional)
3. Screen
4. Power
5. Moisture content standard setting
6. Backlight/-/temperature unit switch
7. Data-hold/+
8. Variety select



Pictures



Models	GM8905	GM8906
page	P95	P98
LCD display	5-digit large screen LCD display, with word height of 18mm	5-digit large screen LCD display, with word height of 18mm
Unit	rpm	rpm
Range	2.5-99999rpm	0.5-19999rpm
Resolution ratio	0.1rpm(2.5~999.9rpm) 1rpm(1000~99999rpm)	0.1rpm(0.5~999.9rpm) 1rpm(1000~19999rpm)
Basic precision	CLASS II 2-5mW	CLASS II 2-5mW
Sampling ratio	Once/second	Once/second
Measurement distance	50-500mm	50-500mm
Time base	Quartz crystal	Quartz crystal
Automatic shutdown	The instrument will shut down after 60 seconds without any pressing.	The instrument will shut down after 60 seconds without any pressing.
Operation environment	0~50℃;32~122℉;10%~90%RH	0~50℃;32~122℉;10%~90%RH
Storage environment	-10~80℃;-14~176℉;10%~75%RH	-10~80℃;-14~176℉;10%~75%RH
Power supply	2x1.5V AAA battery	2x1.5V AAA battery
Dimension	55.7*29.9*127mm	55.7*29.9*127mm
Weight	106g	106g
MAX/MIN/AVG	√	√
Keeping data	√	√
Operating instructions	√	√
Low power prompt	√	√
Backlit display	√	√



Specification

LCD display Unit	5-digit large screen LCD display, with word height of 18mm
Range	rpm
Resolution	2.5-99999rpm
Ratio Basic	0.1rpm(2.5-999.9rpm) 1rpm(1000-99999rpm)
precision Laser power	±(0.1%+5d)rpm;(2.5-999.9rpm) ±(1%+5d)rpm;(1000-99999rpm)
Sampling ratio	CLASS II 2-5mW
Measurement	Once/second
distance Time base	50-500mm
Automatic	Quartz crystal
Shutdown Operation	The instrument will shut down after 60 seconds without any pressing.
environment Storage environment	0~50°C;32~122°F;10%~90%RH
Power supply	-10~80°C;-14~176°F;10%~75%RH
Power supply	2x1.5V AAA battery
Dimension	55.7*29.9*127mm
Weight	106g

Function

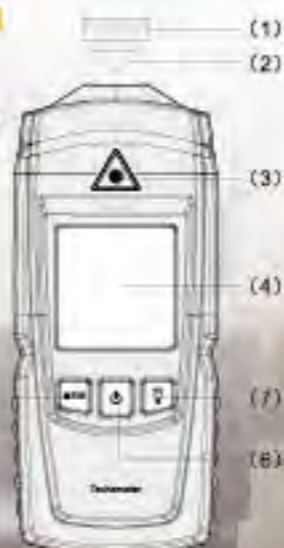
1. Hold the maximum value, minimum value, average value and the last measured value.
2. Fully display operation instruction and unit symbol, which is concise and explicit.
3. Wide measuring range and high resolution.
4. Battery low power indication, LCD backlight display, and auto shutdown.
5. Adopt the latest microprocessor technology and laser technology, which enables the instrument to be more intelligent and reliable.
6. Oversized screen LCD display, with clear indication.
7. Solid and delicate structure. The entire machine adopts durable and optimized electronic elements, and the shell adopts light and solid ABS plastic, with beautiful appearance and convenient use.

LCD display

1. Reflection point
2. Light path
3. Triangle laser warning mark
4. Display
5. Memory
6. Power
7. Backlight


Keys

1. Reflection point
2. Light path
3. Triangle laser warning mark
4. Display
5. Memory
6. Power
7. Backlight


Specification

Measure range	0.5-19999
Resolution rate	0.1(0.5-999.9), 1(1000-19999)
Accuracy rate	0.05%+1
Sample Interval	0.8s(60RPM or above)
Power	Two 1.5V AAA batteries
Size	55.0*33.0*157.8mm

LCD display

- a. Low battery indicator
- b. Backlight indicator
- c. Measurement signal
- d. Max value
- e. Min value
- f. Last value
- g. Average value
- h. Rotation speed
- i. Rotation speed unit


Function

1. Maximum value, minimum value, average value, last measured value holding.
2. Clear operation instructions and full display of unit symbol
3. A wide range of measurement, high resolution.
4. Low battery indicator, LCD backlight display, automatic shutdown.
5. With combination of latest microprocessor technology and laser technology, the instrument is more intelligent and more reliable.
6. Large LCD screen display, clear reading.
7. Solid and ingenious structure. The whole machine adopts durable and optimized electronic components, and light but hard ABS plastic for the shell, which is good-shaped and user-friendly.



Pictures



Models	GM8800A	GM8800B	GM8801	GM8802
page	P99	P100	P101	P102
Detection gas	x	x	HCHO	CO ₂
Alarm indication	√	√	x	x
Measuring range	x	x	0~3mg/m ³	0~2000mg/m ³
Probe reset	√	√	x	x
Basic error	x	x	±0.03mg/m ³ or±5%	±50ppm or±3%
Time response	2S	2S	< 30s	< 30s
Detect control	√	√	x	x
Low electricity prompt	x	x	√	x
Charging function	x	x	√	x
Buzzer alarm limit	x	x	√	√
Max/Min	x	x	√	√
Warm up time	60S 25°C 60%RH	60S 25°C 60%RH	x	x
Keeping data	x	x	x	x
Backlight	x	x	x	x
High/low emergency alarm concentration Settings	x	x	x	x
Using environment	0~52°C	0~52°C		
°C/°F Choice	x	x	x	x
measurement data	x	x	x	x
Auto Power Shut Off	x	x	x	x

Pictures



Models	GM8803	GM8804	GM8805	GM8806
page	P103	P104	P105	P106
Detection gas	PM2.5/PM10	PM2.5/PM10 HCHO	CO	NH ₃
Alarm indication	x	x	x	x
Measuring range	0~5000µm/m ³	PM2.5/PM10 0~5000µm/m ³ HCHO 0~1mg/m ³	0~1000ppm	0~100ppm
Probe reset	x		x	x
Basic error	x	x	x	1ppm
Time response	<10s	<10s	x	<120s
Detect control	x	x	x	x
Low electricity prompt	√	√	x	x
Charging function	√	√	x	√
Buzzer alarm limit	√	√	x	√
Max/Min	√	√	√	√
Warm up time	x	x	x	x
Keeping data	x	x	√	x
Backlight	x	x	√	√
High/low emergency alarm concentration Settings	x	x	x	√
°C/°F Choice	x	x	x	√
measurement data	x	x	x	√
Auto Power Shut Off	x	x	x	√

⚠ Warning: prohibit charging or disassembling batteries in an explosive

Specification	
Sensitivity	50ppm Methane
Sensor Type	Low Power Semiconductor
Warm-up Time	60 seconds
Response Time	2 seconds
Operation Cycle	Continual Operation
Sensor Size	16 Inches
Power Supply	3 C-type batteries
Warm-up time	8hours(varying with operating status)
Low battery Indication	3±0.2V
Operating environment temperature	0~50°C
Power	3*1.5V LR14 batteries
Working current	about 150mA
Product size	76*51.4*220mm

- Function**
1. High sensitivity
 2. Quick find the resource of leakage
 3. Indicating the leakage via alarming bulb
 4. High precision sensor able to detect slight gas leakage
 5. Quick response
 6. Monophony earphone socket
 7. 16-inch long goose neck

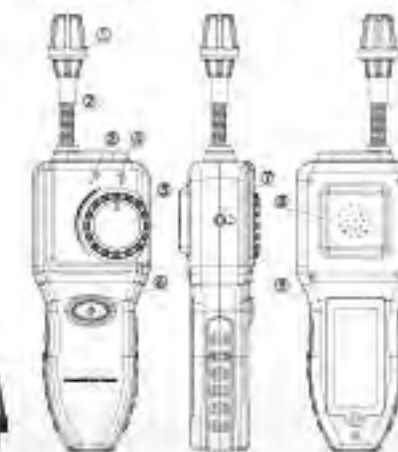
- Device and Indication device**
- (1) Sensor tip and built-in sensor
 - (2) Goose neck
 - (3) Alarm indication
 - (4) Power indication
 - (5) Power on toggle switch
 - (6) Earphone socket
 - (7) Beep sound rate adjustment
 - (8) Sensor clip
 - (9) Handle
 - (10) Battery door



⚠ Warning: prohibit charging or disassembling batteries in an explosive

Specification	
Sensitivity	50ppm Methane
Sensor Type	Low Power Semiconductor
Warm-up Time	60 seconds
Response Time	2 seconds
Operation Cycle	Continual Operation
Sensor Size	16 Inches
Power Supply	3 C-type batteries
Warm-up time	8hours(varying with operating status)
Low battery Indication	4±0.2V
Operating environment temperature	0~50°C
Power	4* 1.5vAA alkaline battery
Working current	about 150mA
Product size	76*51.4*220mm
Alarm Limit	LeI 10% Of Methane ⁽¹⁾
Operation environment	0~50°C ⁽²⁾

- Device and Indication device**
1. Probe cap and built-in sensor.
 2. Gooseneck
 3. Power indicator (after startup)
 4. Alarm lamp indicates.
 5. Rate (sensitivity) is adjusted.
 6. Open/shut down key.
 7. Headset interface
 8. End the horn hole
 9. Pet-name ruby battery door



[1]. LEL stands of low limit for explosion, the lowest content of acombustible gas in air that results in explosion, can be refered toas %LEL.
 [2]. For precise reading the product can only be operated in the local environment as following.
 temperature: 0~50(°C32~120°F)
 Relative Humidity: 10~90% RH (non-condensing)

- Function**
1. High sensitivity; Quick response.
 2. The air leakage can be indicated by alarm light.
 3. High precision sensors can test small leakage sources.
 4. Single channel headphone jack.
 5. 16 inch long gooseneck.
 6. Easy to find the leakage source quickly.
 7. Probe reset/detachable control.

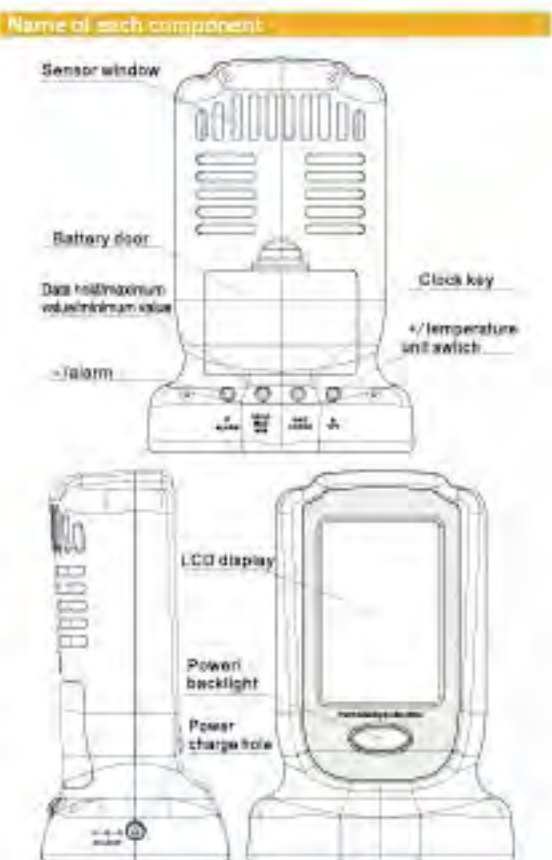


Specification			
Detected gas	Formaldehyde (HCHO) in the Air		
Measuring range	0-3mg/m ³	Minimum reading	0.01mg/m ³
Warm-up Time	0.01mg/m ³	Basic error	±0.03±5%
Response time	<30s		
Sensor type	Electrochemical HCHO sensor		
Working environment	0-50°C, 32-122°F; 10-90%RH		
Storage environment	-10-80°C, -14-176°F; 10-75%RH		
Sensor type	Electrochemical HCHO sensor		
Dimension	91.5x64.8x135mm		
Weight	152g		

Read the formaldehyde concentration

When the screen displays 30s countdown after startup, it can display the formaldehyde concentration as well as temperature and humidity of current environment. Keys other than the backlight key are invalid for operation before completion of 30 seconds countdown. The measured formaldehyde concentration will be displayed by four emoticons on the LCD display:

- ☺ ≤ 0.05mg/m³
- ☹ > 0.05mg/m³, ≤ 0.10mg/m³
- ☹☹ > 0.10mg/m³, ≤ 0.20mg/m³
- ☹☹☹ > 0.20mg/m³



LCD display



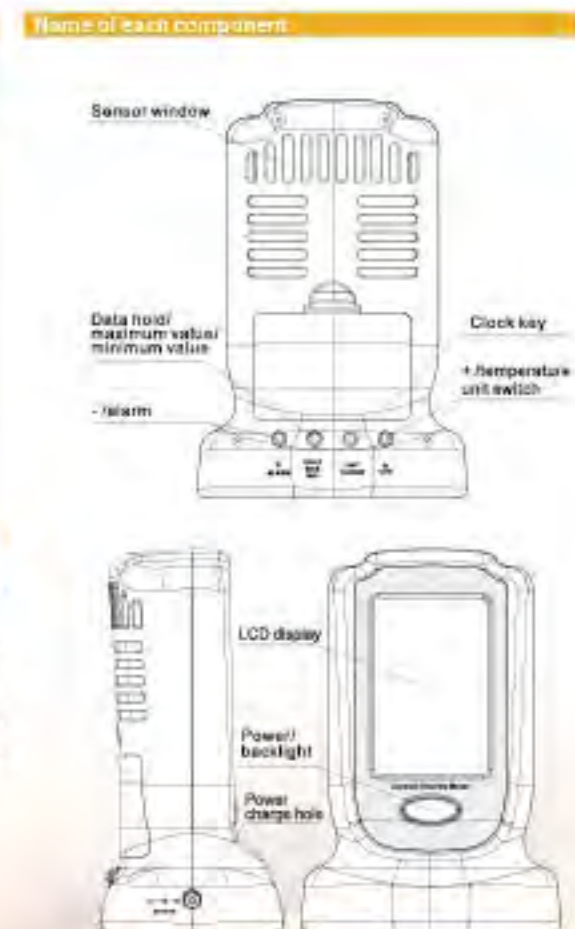
Specification			
Detected gas	Carbon dioxide (CO ₂) in the Air		
Measuring range	0-9999ppm	Minimum reading	1ppm
Resolution ratio	1ppm	Accuracy	±(40ppm+3%)
Response time	<120s		
Sensor type	NDIR CO ₂ gas sensor		
Working environment	0-50°C, 32-122°F; 10-90%RH		
Storage environment	0-50°C, 32-122°F; 10-85%RH		
Power supply	5V power adapter (no battery equipped)		
Dimension	91.5*64.8*135mm		
Weight	156.5g		

Read the formaldehyde concentration

1. Startup and shutdown Press the power key to start it up and long press the power key to shut it down.

2. Read carbon dioxide concentration After starting up, the indicator '---' will appear in the middle of the screen until carbon dioxide sensor starts to signal, which takes about (90 ~ 120) seconds. The measured carbon dioxide concentration will be displayed by six emoticons on the LCD display:

- ☺ ≤ 450ppm
- ☹ > 450ppm, ≤ 900ppm
- ☹☹ > 900ppm, ≤ 1200ppm
- ☹☹☹ > 1200ppm, ≤ 1800ppm
- ☹☹☹☹ > 1800ppm, ≤ 2500ppm
- ☹☹☹☹☹ > 2500ppm



Specification

Detected gas	Particulate concentrations in the air (PM2.5, PM10)		
Measuring range	(0~5000) ug/m ³	Minimum reading	1 ug/m ³
Resolution ratio	1 ug/m ³	Minimum resolution particle size	0.3um
Response time	≤10S		
Measurement principle	Laser diffusion principle		
Working environment	0~50°C,32~122°F;10~90%RH		
Storage environment	-10~80°C,-14~176°F;10~75%RH		
Power supply	3* 1.2V AA rechargeable NIMH or 5V 1A power adapter		
Dimension	91.5*64.8*135mm		
Weight	152g(excluding of batteries)		

Features

1. Dynamic and real-time detection of PM2.5 and PM10 concentration in the air.
2. Environmental temperature and humidity measurement and temperature unit conversion.
3. Switching between three different display modes.
4. Display of the maximum and minimum values.
5. Data hold function.
6. Sound and light alarm settings.
7. LCD backlight display of air quality level.

Safety Warnings

- ▶0 ug/m³ ~ 75 ug/m³: Air quality level is GOOD (green, good).
- ▶75ug/m³ ~ 150ug/m³: Air quality level is FAIL (yellow, slightly polluted, unhealthy).
- ▶≥150 ug/m³: Air quality level is BAD (red, heavily polluted, very unhealthy).

Specification

Detected gas	Particle concentration in the air (PM2.5, PM10)		
Particle concentration measurement range	(0~5000) ug/m ³	Minimum reading of particle concentration	1 ug/m ³
Effective range of formaldehyde concentration	{0~1} mg/m ³	Minimum reading of formaldehyde concentration	0.01 mg/m ³
Particle concentration resolution	1 ug/m ³	Minimum resolution particle size	0.3um
Formaldehyde concentration resolution	0.01 mg/m ³	Maximum error of formaldehyde concentration	< ±5%FS
Response time	≤10S		
Measurement principle	Particulate concentration: Laser diffusion principle HCHO concentration: Electrochemical principle		
Working environment	0~50°C,32~122°F;10~90%RH		
Storage environment	-10~80°C,-14~176°F;10~75%RH		
Power supply	3* 1.2V AA rechargeable NIMH or 5V 1A power adapter		
Dimension	91.5*64.8*135mm		
Weight	152g(excluding of batteries)		

Features

1. Dynamic and real-time detection of PM2.5 and PM10 concentration in the air.
2. Environmental temperature and humidity measurement and temperature unit conversion.
3. Switching between three different display modes.
4. Display of the maximum and minimum values.
5. Data hold function.
6. Sound and light alarm settings.
7. LCD backlight display of air quality level.

Safety Warnings

- ▶0 ug/m³ ~ 75 ug/m³: Air quality level is GOOD (green, good).
- ▶75ug/m³ ~ 150ug/m³: Air quality level is FAIL (yellow, slightly polluted, unhealthy).
- ▶≥150 ug/m³: Air quality level is BAD (red, heavily polluted, very unhealthy).

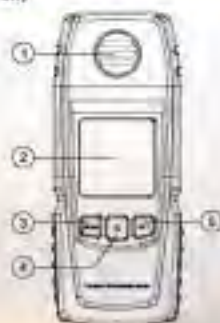


Specification	
Detected gas	CO In air
Measuring range	0~1000ppm
Frequency ratio	1ppm
Minimum reading	1ppm
Basic error	±5%(F.S), ±10ppm
Response time	60 seconds
Sensor type	Electrochemistry CO sensor
Working environment	0~50°C, 32~122°F; 10~90%RH
Storage environment	-10~60°C, -14~176°F; 10~75%RH
Power supply	2x1.5V AAA battery
Dimension	55.7x29.9x135.5mm
Weight	104g

- Features**
1. Large-screen digital and character display, instant value and maximum value display.
 2. Safety indication: regular light flashing and voice indication. When carbon monoxide concentration increases, buzzing voice frequency would also be increased.
 3. Excellent audible alarm.
 4. Low maintenance cost.
 5. Support carbon monoxide detection.
 6. Solid shell and robust electric characters.
 7. Carbon monoxide concentration of 0-1000ppm can be displayed on the large LCD screen.
 7. Bright back-light lightening; it can clearly indicate carbon monoxide detector under dark environment.
 8. Automatically shut off if it is not operated for 10 minutes, to extend battery service life.
 9. Convenient to replace battery.
 10. Special sensor for stable electronic chemistry carbon monoxide.
 11. Sensor of over three-year service life and battery of 100-hour alkaline service life (typical value).

Name and function of each component:

1. Air hole (pay attention to not block)
2. LCD display
3. Inspection
4. Power switch
5. Setting



LCD display

1. Detection in process
2. Maximum value
3. Average value
4. Data hold
5. Backlight
6. Battery electric quantity
7. Gas concentration reading
8. Gas concentration unit
9. Temperature reading
10. Temperature unit

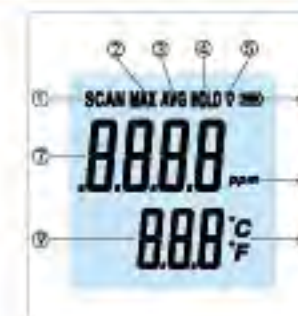


Specification	
Detected gas	Nh3 content in the air
Range	0~100ppm
Resolution	1ppm
Minimum reading	1ppm
Maximum error	≤50ppm: ±5ppm; (50~100)ppm: ±10%
Response time	≤120s
Sensor type	Electrochemical ammonia sensor
Alarm	Sound alarm
Operating environment	0°C~40°C (32°F~104°F); 10%RH~90%RH (Without condensation)
Measurement principle	Particulate concentration: Laser diffusion principle HCHO concentration: Electrochemical principle
Powered by	2x1.5V AAA batteries
Size	55.7*29.9*135.5mm
Weight	104g
Dimension	91.5*64.8*135mm
Weight	152g(excluding of batteries)

- Features**
1. Ammonia content detecting
 2. Detecting mode selection among current value, maximum value and average value.
 3. Alarm of over high/low ammonia content
 4. High/low limits capable of private setup
 5. LED backlight
 6. Selectable of automatic turn-off or non-automatic turn-off
 7. Switching between temperature units and environment temperature
 8. Reading hold function
 9. Zero point calibration

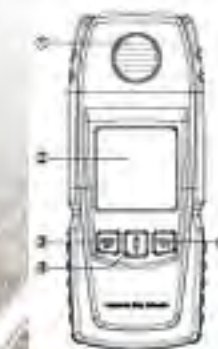
LCD display

- ① Current value icon
- ② Maximum value icon
- ③ Average value icon
- ④ Data hold
- ⑤ Backlight icon
- ⑥ Battery volume icon
- ⑦ Gas content icon
- ⑧ Gas content unit
- ⑨ Temperature icon
- ⑩ Temperature unit



Components

- ① Opening
- ② LCD
- ③ Mode switch and setup key
- ④ Power on/off & backlight key
- ⑤ Data hold & temperature unit switch





Pictures

Models	GM3123	GM3125
page	P109	P110
Display	Max. 999 counts LCD display(1000 counts only at 1T is displayed)Bar graph/ max. 36 point	Max. 999 counts LCD display (1000 counts only at 1T is displayed)
Over range indication	OL mark appears on insulation resistance range. LO mark appears on voltage's range.	OL mark appears on insulation resistance range. LO mark appears on voltage's range.
Auto- ranging	Range shifts to upper range: 1000 count Range shifts to lower range: 95 counts (merely on the insulation resistance range)	Range shifts to upper range: 1000 count Range shifts to lower range: 95 counts (merely on the insulation resistance range)
Sample rate	0.5~ 10 times/sec	0.5~ 10 times/sec
Operable altitude	Less than 2000m (Indoor use)	Less than 2000m (Indoor use)
Operation circumstance	Temperature 0~40C, humidity <= 85%	Temperature 0~40C, humidity <= 85%
Storage circumstance	Temperature -20~ 60C, humidity <= 90%	Temperature -20~ 60C, humidity <= 90%
Overload protection	Insulation resistance : AC 1200V/ 10s Voltage : AC 720V/ 10 s	Insulation resistance : AC 1200V/ 10s Voltage : AC 720V/ 10 s
Voltage resistance	AC8320 (50/60Hz)/ 5 second (between electrical circuit and enclosure)	AC8320 (50/60Hz)/ 5 second (between electrical circuit and enclosure)
Insulation resistance	1000M of more/ DC 1000V (between electrical circuit and enclosure)	1000M of more/ DC 1000V (between electrical circuit and enclosure)
Power supply	DC12V (8x1.5V LR14 battery)	DC12V (8x1.5V LR14 battery)
Battery's life	Approx. 15 hours	Approx. 15 hours
Dimension	153x 96x 220mm	153x 96x 220mm
Weight	1032g (without batteries and test wires)	1032g (without batteries and test wires)

Pictures



Models	GM60	GM61	GM62
page	P111	P112	P113
Transmitter Weight	119.2g	132.2g	119.2g
Receiver Weight	68.8g	59.2g	68.8g
Transmitter Dimension	64*31*119mm	48.6*26*177mm	64*31*119mm
Receiver Dimension	48.6*26*177mm	6F22 9V battery	6F22 9V battery
Transmitter Power	1.5V AAA*3batteries	3.7V AAA*3batteries	1.5V AAA*3batteries
Receiver Power	6F22 9V battery	6F22 9V battery	6F22 9V battery
Signal Tracing Transmit Distance	>1km	>1km	>1km
Display	LED	2.0-inch TFT LCD	LED
Operating Temperature	-10 ~40℃ (14 ~ 104 ℉)	-10 ~40℃ (14 ~ 104 ℉)	-10 ~40℃ (14 ~ 104 ℉)
Operating Humidity	10-95%	10-95%	10-95%
Storage Temperature	-20 ~ 60℃ (-4~140 ℉)	-20 ~ 60℃ (-4~140 ℉)	-20 ~ 60℃ (-4~140 ℉)
Long distance wiring tracing	√	√	√
Internet cable order verifying	√	×	√
Wiring voltage existence inspection	√	×	√
Wiring voltage positive	√	×	√
negative characteristic measuring	√	×	√
Wiring shorts inspection	√	√	√
Low battery indication	√	√	√
Headphone Jack output	√	√	√
Flashlight	√	√	√
Image display	×	√	×
low battery alarming	×	√	×
automatic PAL/NTSC Identifying	×	√	×
auto power-off	×	√	×

Specification	
Display	Max. 999 counts LCD display(1000 counts only at 1T is displayed)Bar graph/ max. 36 point.
Over range indication	OL mark appears on Insulation resistance range. LO mark appears on voltage's range.
Auto- ranging	Range shifts to upper range: 1000 count Range shifts to lower range: 95 counts (merely on the Insulation resistance range)
Sample rate	0.5~ 10 times/sec
Operable altitude	Less than 2000m (Indoor use)
Operation circumstance	Temperature 0~40C, humidity <= 85%
Storage circumstance	Temperature -20~ 60C, humidity <= 90%
Overload protection	Insulation resistance: AC 1200V/ 10s Voltage: AC 720V/ 10 s
Voltage resistance	AC8320 (50/60Hz)/ 5 second (between electrical circuit and enclosure)
Insulation resistance	1000M of more/ DC 1000V (between electrical circuit and enclosure)
Power supply	DC12V (8x1.5V LR14 battery)
Battery's life	Approx. 15 hours
Dimension	153x 96x 220mm
Weight	1032g (without batteries and test wires)

Specification				
Rated voltage	250V	500V	1000V	2500V
Test range	0.0~99.9MΩ 100~499MΩ	0.0~99.9 MΩ 100~999 MΩ	0.0~99.9 MΩ 100~999 MΩ 1.00~1.99GΩ	0.0~99.9 MΩ 100~999 MΩ 1.00~9.99GΩ 10.0~99.9GΩ
Open circuit voltage	DC 250V +30%, -0%	DC 500V +30% -0%	DC 1000V +20% -0%	DC 2500V +20% -0%
Rated current	0.5MΩ loading 0.5mA~0.55mA	0.5MΩ loading 1mA~1.2mA	2.5MΩ loading 1mA~1.2mA	2.5MΩ loading 1mA~1.2mA
Short-circuit current	Approx. 1.3mA			
Accuracy	±5%rdg±3%dgt			

Feature	
Auto- discharge function to make, the operation safe.	
LCD Back-light.	
Digital readout display.	
Live circuit warning symbols with audio sounds.	
Auto- power off function (In 10 minutes without operation)	
Timer measurement function.	
Low battery indication	
Suitable for 12V DC adapter (12V/1A)	

Voltage test 30~600V (Resolution 1V)		
	DV	AV
Measuring range	±30~±600V	30~600V (50/60Hz)
Resolution	1V	1V
Accuracy	±2%rdg±3dgt	±2%rdg±3dgt



Specification	
Display	Max. 999 counts LCD display(1000 counts only at 1T is displayed)Bar graph/ max. 36 point.
Over range indication	OL mark appears on Insulation resistance range. LO mark appears on voltage's range.
Auto- ranging	Range shifts to upper range: 1000 count Range shifts to lower range: 95 counts (merely on the Insulation resistance range)
Sample rate	0.5~ 10 times/sec
Operable altitude	Less than 2000m (Indoor use)
Operation circumstance	Temperature 0~40C, humidity <= 85%
Storage circumstance	Temperature -20~ 60C, humidity <= 90%
Overload protection	Insulation resistance: AC 1200V/ 10s Voltage: AC 720V/ 10 s
Voltage resistance	AC8320 (50/60Hz)/ 5 second (between electrical circuit and enclosure)
Insulation resistance	1000M of more/ DC 1000V (between electrical circuit and enclosure)
Power supply	DC12V (8x1.5V LR14 battery)
Battery's life	Approx. 15 hours
Dimension	153x 96x 220mm
Weight	1032g (without batteries and test wires)

Specification				
Rated voltage	500V	1000V	2500V	5000V
Test range	0.0~99.9MΩ 100~999MΩ	0.0~99.9 MΩ 100~999 MΩ 1.00~1.99GΩ	0.0~99.9 MΩ 100~999 MΩ 1.00~9.99GΩ 10.0~99.9GΩ	0.0~99.9 MΩ 100~999 MΩ 1.00~9.99GΩ 10.0~99.9GΩ 100~1000GΩ
Open circuit voltage	DC 500V +30%, -0%	DC 1000V +20% -0%	DC 2500V +20% -0%	DC 5000V +20% -0%
Rated current	0.5MΩ loading 1mA~1.2mA	0.5MΩ loading 1mA~1.2mA	2.5MΩ loading 1mA~1.2mA	2.5MΩ loading 1mA~1.2mA
Short-circuit current	Approx. 1.3mA			
Accuracy	±5%rdg±3dgt (0~99.9GΩ) ±20%rdg±3dgt (above 100GΩ)			

Feature	
1. Auto- discharge function to make, the operation safe.	
2. LCD Back-light.	
3. Digital readout display.	
4. Live circuit warning symbols with audio sounds.	
5. Auto- power off function (In 10 minutes without operation)	
6. Timer measurement function.	
7. Low battery indication	
8. PI measurement (Polarization Index measurement)	
9. Suitable for 12V DC adapter (12V/1A)	

Voltage test 30~600V (Resolution 1V)		
	DV	AV
Measuring range	±30~±600V	30~600V (50/60Hz)
Resolution	1V	1V
Accuracy	±2%rdg±3dgt	±2%rdg±3dgt



Specification

	Transmitter	Receiver
Dimension	64*31*119mm	48.6*26*177mm
Power	1.5V AAA*3batteries	6F22 9V battery
Weight	119.2g	68.8g
Signal Tracing Transmit Distance	>1km	
Display	LED	
Operating Temperature	-10 ~40°C (14 ~ 104°F)	
Operating Humidity	10-95%	
Storage Temperature	-20 ~ 60°C (-4~140°F)	

Feature

1. Long distance wiring tracing.
2. Internet cable order verifying .
3. Wiring voltage existence inspection.
4. Wiring voltage positive or negative characteristic measuring.
5. Wiring shorts inspection.
6. Low battery indication.
7. Tracing sensitiveness and volume adjusting.
8. Headphone Jack output.
9. Flashlight.

Point Of The Components

- | | |
|-----------------------------------------|------------------------------|
| a. RJ45 interface | b. RJ11 interface |
| c. Function Indication light | d. Housing |
| e. Signal tracing sensor | f. Flashlight |
| g. Operation Indication light | h. Headphone Jack |
| i. Volume control wheel | j. Scan cable tracing button |
| k. Flashlight switch | |
| l. Cable order verifying lights section | |
| m. RJ45 cable order verifying socket | |
| n. Audio output | o. Battery door |

Buttons

- (1) Power: power button
- (2) V: Voltage testing button
- (3) Ω: Cable shorts, opens inspection
- (4) TEST FAST: Fast cable order verifying button
- (5) TEST SLOW: Slow cable order verifying button
- (6) SCAN FAST: Fast tracing frequency button
- (7) SCAN NOR.: Normal tracing frequency button
- (8) SCAN SLOW: Slow tracing frequency button



Specification

specification	Transmitter	Receiver
Weight	132.2g	59.2g
Size	64x31x119mm	48.6x26x177mm
battery	3.7V AAAx3lithium battery	6F22 9V battery
Signal Tracing Transmit Distance	>1km	
Display	2.0-Inch TFT LCD	
Operating Temperature	-10 ~40°C (14 ~ 104°F)	
Operating Humidity	10-95%	
Storage Temperature	-20 ~ 60°C (-4~140°F)	

Point of

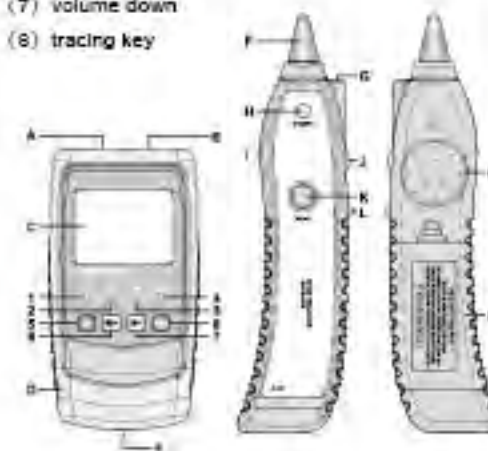
- | | |
|-------------------------|-----------------------------|
| A. socket RJ45 | B. socket RJ11 |
| C. TFT LCD | D. protective cover |
| E. charging hole | F. scanning signal sensor |
| G. flashlight | H. operating indication LED |
| I. earphone hole | J. volume dial |
| K. tracing scanning key | L. flashlight on/off |
| M. audio output | N. battery door |

Feature

- (1) image display
- (2) audio output
- (3) wire tracing
- (4) charge and charging indication
- (5) low battery alarming
- (6) automatically turn off
- (7) flashlight function
- (8) earphone output
- (9) wire tracing sound level adjustable
- (10) 2.0 inches TFT LCD
- (11) automatic PAL/NTSC identifying
- (12) 12V 500m emergency power output, with short circuit protection
- (13) This device will turn off automatically within 8 minutes if there is no further operation of the key
- (14) 1KM wire tracing distance: over 1 Km
- (15) 3 built-in batteries of 3.7V 350mah
- (16) 15V 1A power adaptor of 15V 1A

Buttons

- (1) power indication LED
- (2) battery charge indication LED
- (3) foreign power LED indication
- (4) tracing scanning indication LED
- (5) on/off key
- (6) volume up
- (7) volume down
- (8) tracing key



Specification:

	Transmitter	Receiver
Dimension	64*31*119mm	48.6*26*177mm
Power	1.5V AAA*3batteries	6F22 9V battery
Sample rate	1.5V AAA*3batteries	6F22 9V battery
Signal Tracing Transmit Distance	>1km	
Display	LED	
Operating Temperature	-10~40°C (14~104°F)	
Operating Humidity	10~95%	
Storage Temperature	-20~60°C (-4~140°F)	

Features:

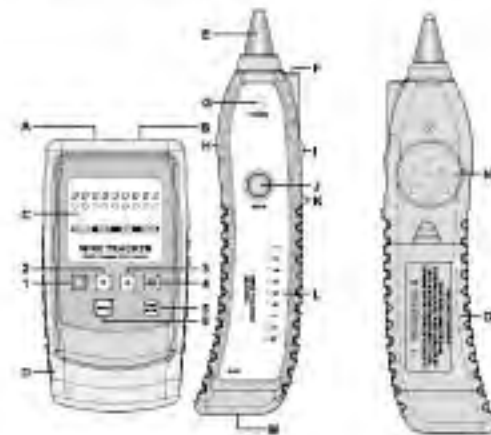
1. Line scanning from a long distance
2. Testing of network line order
3. Detection of line voltage
4. Polarity judgment of line voltage
5. Short circuit check
6. Volume adjustment during line scanning
7. Output function of headphone jack.
8. Flashlight function.

Name of parts:

- | | |
|-----------------------|-------------------------------------|
| A. RJ45 connector | I. Volume adjustment turntable |
| B. RJ11 connector | J. SCAN button |
| C. Function Indicator | K. Flashlight switch |
| D. Protection case | L. Display zone of signal searching |
| E. Sensor head of | M. RJ45 testing socket |
| flashlight | N. Sound output |
| F. Flashlight | O. Battery door |
| G. Working Indicator | |
| H. Headphone jack | |

Names of buttons:

- (1) POWER: Power button
- (2) V: Line voltage test button
- (3) Ω: Short circuit test button
- (4) TEST FAST: Fast test button
- (5) TEST SLOW: Slow test button
- (6) SCAN: Scan button



Long/short probe tip



Test film



Thermocouple



Calibration block



Coupling agent



Foam ball



USB wire



RS232 Connecting wire



Probe I / II



Red probe



Test wire



Alligator clip



Leather pouch



Bag



Small PP box



Big PP box



Aluminium box