

DISTANCE MEASUREMENT

Range with specified prisms (Good conditions¹)

With reflector sheet 5 cm x 5 cm (2 in x 2 in)	2"	1.5 m to 270 m (4.9 ft to 886 ft)
	5"	1.5 m to 300 m (4.9 ft to 984 ft)
With single prism 6.25 cm (2.5 in)	2"	1.5m to 3,000 m (4.9 ft to 9,843 ft)
	5"	1.5 m to 5,000 m (4.9 ft to 16,404 ft)

Reflectorless mode²

2"	Good ¹	Normal ⁴	Difficult ⁵
KGC ³ (18%)	350 m (1,148 ft)	250 m (820 ft)	200 m (656 ft)
KGC (90%)	500 m (1,640 ft)	400 m (1,312 ft)	250 m (820 ft)
5"	Good	Normal	Difficult
KGC (18%)	250 m (820 ft)	200 m (656 ft)	150 m (492 ft)
KGC (90%)	400 m (1,312 ft)	300 m (984 ft)	250 m (820 ft)

Shortest possible range 1.5m (4.9 ft)

Accuracy (Precise mode)⁶

	Prism	Reflectorless
2"	±(2+2 ppm x D) mm	±(3+2 ppm x D) mm
5"	±(3+2 ppm x D) mm	±(3+2 ppm x D) mm

Measuring interval⁷

Prism mode	Precise mode	Normal mode
2"	1.6 sec	0.8 sec.
5"	1.5 sec	0.8 sec.
Reflectorless mode		
2"	2.1 sec.	1.2 sec.
5" ⁸	1.8 sec.	1.0 sec.

Least count 1 mm (0.002 ft) 10 mm (0.02 ft)

ANGLE MEASUREMENT

DIN 18723 accuracy (horizontal and vertical) 2"/0.6 mgon
 5"/1.5 mgon

Reading system Absolute encoder

Circle diameter62 mm (2.4 in)

Horizontal/Vertical angle Diametrical

Minimum increment (Degree, Gon, MIL6400) Degree: 1/5/10"
 Gon: 0.2/1/2 mgon
 MIL6400: 0.005/0.02/0.05 mil

TELESCOPE

Tube length 125 mm (4.9 in)

Image Erect

Magnification 30x (18x/36x with optional eyepieces)

2" Effective diameter of objective 40 mm (1.6 in)

2" EDM diameter 45 mm (1.8 in)

5" Effective diameter of objective 45 mm (1.8 in)

5" EDM diameter 50 mm (2.0 in)

Field of view 1°20'

Resolving power 3"

Minimum focusing distance 1.5 m (4.9 ft)

Laser Pointer Coaxial Red Light

TILT SENSOR

Type Dual-axis

Method Liquid-electric detection

Compensation range ±3.5'

¹ Good conditions (good visibility, overcast, twilight, underground, low ambient light).
² Measuring distance may vary depending on targets and measuring conditions.
³ Kodak Gray Card, Catalog number E1527795.
⁴ Normal conditions (normal visibility, object in the shadow, moderate ambient light).
⁵ Difficult conditions (haze, object in direct sunlight, high ambient light).
⁶ ±(3+3 ppm x D) mm -20 °C to -10 °C, +40 °C to +50 °C [-4 °F to +14 °F, +104 °F to +122 °F]
⁷ Measuring time may vary depending on measuring distance and conditions. For the initial measurement, it may take a few more seconds.
⁸ Measured to KGC 90% at 20 m (65 ft)
⁹ Battery life specification at 25 °C (77 °F). Operation time may be shorter in low temperatures or if the battery is not new.

COMMUNICATIONS

Communication ports 1 x serial (RS-232C), 2 x USB (host and client)
 Wireless communications integrated Bluetooth

POWER

Internal Li-ion battery (x2)
 Output voltage 3.8 V DC
 Operating time⁹

2"	approx. 12 hours (continuous distance/angle measurement)
	approx. 26 hours (distance/angle measurement every 30 seconds)
	approx. 28 hours (continuous angle measurement)
5"	approx. 7.5 hours (continuous distance/angle measurement)
	approx. 16 hours (distance/angle measurement every 30 seconds)
	approx. 20 hours (continuous angle measurement)

Charging time

Full charge 4 hours

GENERAL SPECIFICATIONS

Level vials
 Sensitivity of Circular level vial 10'/2 mm

Optical plummet
 Image Erect
 Magnification 3x
 Field of view 5°
 Focusing range 0.5 m (1.6 ft) to ∞

Display face 1 QVGA, 16 bit color, TFT LCD, backlit (320x240 pixel)
 Display face 2 Backlit, graphic LCD (128x64 pixel)

Laser plummet (optional) 4 levels
 Point memory 128 MB RAM, 128MB Flash memory
 Dimensions (W x D x H) 149 mm x 145 mm x 306 mm
 (5.8 in x 5.7 in x 12.0 in)

Weight (approx.)

2" Main unit (without battery) 3.9 kg (8.6 lbs)
 5" Main unit (without battery) 3.8 kg (8.4 lbs)
 Battery 0.1 kg (0.2 lb)
 Carrying case 2.3 kg (5.1 lb)

ENVIRONMENTAL

Operating temperature range -20 °C to +50 °C (-4 °F to +122 °F)
 Storage temperature range -25 °C to +60 °C (-13 °F to +140 °F)
 Atmospheric correction
 Temperature range -40 °C to +60 °C (-40 °F to +140 °F)
 Barometric pressure 400 mmHg to 999 mmHg/533 hPa to
 1,332 hPa/15.8 inHg to 39.3 inHg

Dust and water protection IP66

CERTIFICATION

Class B Part 15 FCC certification, CE Mark approval. C-Tick.
 Laser safety IEC 60825-1 am2:2007
 2" Reflectorless / Laser Pointer: Class 3R laser
 5" Reflectorless : Class 1 laser
 5" Laser Pointer: Class 2 laser
 Prism mode: Class 1 laser
 Laser Plummet (optional): Class 2 laser
 Bluetooth type approvals are country specific.



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