

FOCUS® 6 Total Station

DISTANCE MEASUREMENT

Range with specified prisms (Good conditions)¹

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" 1.5 m 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)

Range Reflectorless Mode²

	Good ¹	Normal ⁴	Difficult ⁵
2"			
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%)	280 m (920 ft)	250 m (820 ft)	200 m (656 ft)
KGC (90%)	500 m (1,640 ft)	500 m (1,640 ft)	300 m (984 ft)

Shortest possible range 1.5m (4.9 ft)

Accuracy⁶ (Precise mode) ISO 17123-4

Prism ±(2+2 ppm × D) mm

Reflectorless ±(3+2 ppm × 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 ⁸	Precise mode	Normal mode
2"	2.1 sec	1.2 sec
5"	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 diameter 62 mm (2.4 in)

Horizontal/Vertical angle 2": Diametrical/Diametrical

5": Diametrical/Single

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 power3"

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'

COMMUNICATIONS

Communication ports 1 x serial (RS-232C)

Wireless communications integrated Bluetooth

POWER

Internal Li-ion battery (x2)

Output voltage 3.8 V DC

Operating time⁹

2" approx. 19 hours

(continuous distance/angle measurement)

approx. 57 hours

(distance/angle measurement every 30 seconds)

approx. 62 hours

(continuous angle measurement)

5" approx. 10 hours

(continuous distance/angle measurement)

approx. 26 hours

(distance/angle measurement every 30 seconds)

approx. 31 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 view5°

Focusing range 0.5 m (1.6 ft) to ∞

Display face 1 backlit, graphic LCD

(128x64 pixel)

Display face 2 (2" only) backlit, graphic LCD

(128x64 pixel)

Laser plummet (optional) 4 levels

Point memory 10,000 records

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) 3.8 kg (8.4 lb)

5" Main unit (without battery) 3.7 kg (8.1 lb)

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)

FOCUS 6W -30 °C to +50 °C

(-22 °F to +122 °F)

Storage temperature range -25 °C to +60 °C

(-13 °F to +140 °F)

FOCUS 6W -30 °C to +60 °C

(-22 °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 IEC60825-1 Ed. 2.0 : 2007

2" Reflectorless / Laser Pointer: Class 3R laser

2" Prism mode: Class 1 laser

5" Reflectorless / Prism mode: Class 1 laser

5" Laser Pointer: Class 2 laser

Laser Plummet (optional): Class 2 laser

Bluetooth type approvals are country specific.

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).

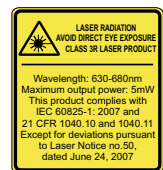
6 ±(3+3 ppm × D) mm -20 °C to -10 °C, +40 °C to +50 °C

(-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.



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