

SPECTRA PRECISION®

FOCUS® 6 TOTAL STATION

SPECSHEET

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 mode ²			
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 ⁶ (Precise mode)	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 interval ⁷			
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 2"
	Single 5"
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 objective40 mm (1.6 in)
2" EDM diameter45 mm (1.8 in)
5" Effective diameter of objective45 mm (1.8 in)
5" EDM diameter50 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.

Specifications subject to change without notice.

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 time ⁹	
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 view	5°
Focusing range	0.5 m (1.6 ft) to ∞
Display	Single side, 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)	3.6 kg (8.0 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 pressure400 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
 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.



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