

SOKKIA

DT50 series

Digital Theodolite

Brand new design with laser pointer for efficient alignment setting work!

The world longest operating time

250 hours!^{*1}

with just one battery



Lightweight, compact angular measurement with high-precision laser guidance and up to 30 workdays of power

- Long-lasting Li-ion or AA battery life with up to 30 workdays^{*2} of power
- Convenient high-precision laser guidance
- Brand new product design utilizing Sokkia premium quality total station components
- Embedded tilt sensor in 5" model
- Ultra-rugged IP66 dust and heavy rain protection

^{*1} As of May, 2020 checked with Topcon as theodolite

^{*2} In case of measuring angle with DT950C/DT950GL for 8 hours per day

DT50 series

SPECIFICATIONS

Digital Theodolite

Model		DT550	DT550L	DT950G	DT950GL
Telescope	Length	149 mm	152 mm	149 mm	152 mm
	Aperture	45 mm			
	Magnification	30X			
	Image	Erect			
	Field of view	1°30' (26 m/1,000 m)			
	Resolving power	2.5"			
	Minimum focus	0.9 m	1.0 m	0.9 m	1.0 m
	Stadia ratio	100			
	Stadia constant	0			
Angle measurement	Method	Rotary absolute encoder			
	Detecting	Horizontal: 1 sides			
		Vertical: 1 sides			
	Minimum display	1" (0.0002 gon/0.01 mil)/ 5" (0.001 gon/0.1 mil) (selectable)		10" (0.002 gon/0.05 mil)/ 20" (0.005 gon/0.1 mil) (selectable)	
Accuracy ^{*1}	5"		9"		
Display	Unit	2 sides		1 sides	
	Type	Automatic vertical compensator		—	
Tilt angle compensation	Range of compensation	±3' (±0.0555 gon)		—	
	Compensation constant	Can be changed (compensation is done at the same time with vertical angle 0 point)		—	
Optical plummet	Magnification	3X			
	Minimum focus	0.5 m			
Sensitivity of levels	Circular level	10' / 2 mm			
	Plate level	30" / 2 mm			
Temperature	Operating temperature range	-20 to 50°C (-4 to 122°F) ^{*2}			
	Storage temperature range	-30 to 60°C (-22 to 140°F) (no condensation)			
Environmental durability	Dust and water protection	IP66 (IEC 60529: 2001)			
Power Supply (Standard)	Power source	4 AA alkaline batteries			
Working duration at 20°C (Standard)	Theodolite only	about 230 hours		about 250 hours	
	Laser only	—	about 80 hours	—	about 80 hours
	Theodolite and laser	—	about 55 hours	—	about 55 hours
Power Supply (Option)	Power source	BDC71 (Optional accessory)			
Working duration at 20°C (Option)	Theodolite only	about 300 hours		about 350 hours	
	Laser only	—	about 100 hours	—	about 100 hours
	Theodolite and laser	—	about 70 hours	—	about 70 hours
Tribrach	Type	Detachable		Fixing	
	Signal source	—	Red laser diode (633 nm)	—	Red laser diode (633 nm)
Laser-pointer	Maximum output	—	0.6 mW	—	0.6 mW
	Laser Class	—	Class 2	—	Class 2
	Laser beam range	—	50 m (in daylight)	—	50 m (in daylight)
	Size (with handle)	173 (D) X 181 (W) X 318 (H) mm (Display on both sides)		173 (D) X 174 (W) X 318 (H) mm (Display on one side)	
Others	Weight	4.1 kg (9.04 lb) (with batteries and battery holder)		4.0 kg (8.82 lb) (with batteries and battery holder)	

*1: ISO 17123-3: 2001 *2: No direct sunlight for using high temperatures of 50°C (122 °F).

Standard components

- Main unit • DB-80 Battery holder • Lens cap • Tool pouch • Precision screwdriver • Lens brush • Hexagonal wrench (1.3 mm/2 mm/2.5 mm) • Adjusting pin • Wiping cloth
- Quick start manual • Carrying case • Carrying strap

Optional accessories

- Plumb bob • Model 13 Diagonal eyepiece • BDC71 Battery • CDC77 Charger



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