

# SOKKIA

## DT50 series Digital Theodolite

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

The world longest operating time  
**250 hours\***  
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\*<sup>2</sup> 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

## Digital Theodolite

## SPECIFICATIONS

Model	DT550	DT550L	DT950G	DT950GL	
Telescope	Length	149 mm	152 mm	149 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 <sup>*1</sup>	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)		—	
	Magnification	3X			
Optical plummet	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) <sup>*2</sup>			
	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	—	
	Theodolite and laser	—	about 55 hours	—	
Power Supply (Option)	Power source	BDC71 (Optional accessory)			
	Theodolite only	about 300 hours		about 350 hours	
	Laser only	—	about 100 hours	—	
Working duration at 20°C (Option)	Theodolite and laser	—	about 70 hours	—	
	Theodolite and laser	—	about 70 hours	about 70 hours	
Tribrach	Type	Detachable		Fixing	
	Signal source	—	Red laser diode (633 nm)	—	
Laser-pointer	Maximum output	—	0.6 mW	—	
	Laser Class	—	Class 2	—	
	Laser beam range	—	50 m (in daylight)	—	
	Laser beam range	—	50 m (in daylight)	—	
Others	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)	
	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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