

# SOKKIA

MADE TO FIT YOUR WORLD.

## Digital Theodolites

DT50 Series





### All the Theodolite you'll need

- High-accuracy measurements (5", 7" and 9" models)
- Ultra-rugged IP66 dust and heavy rain protection
- Compact and lightweight
- Long-lasting Li-ion or AA battery life
- Easy-to-use LCD backlit display(s)
- Precise laser pointer guidance
- Embedded tilt sensor for 5" and 7" models

### Make your next job a snap

With the DT50 Series, you'll be up and working fast, thanks to its simple interface and large, easy-to-see backlit LCD. There's an optical plummet that makes set up over a control point easy, and a tilt sensor that provides  $\pm 3$ -minute angle correction. The DT50 Series features two magnification choices of 26x and 30x, a super-short 3 ft. minimum focus distance for those tight areas, and angle accuracies of 5, 7, and 9 arc seconds.

### Laser pointer

Add a whole new dimension of accuracy and confidence to your alignment jobs with our unique DT50L Series featuring a red Class II laser beam. Use it anywhere on your site and see clearly in direct sunlight up to 165 ft. Now you can quickly and accurately place anchor bolts at regular intervals on a line, set an angle, and use the beam to verify your tape measure is properly aligned for the next stake or "sight in" footers, frames, and tilt-up walls.

### The ultimate in continuous operation

The DT50/DT50L Series provides up to 30 workdays of operation in Angle Measurement Mode on 4 AA or optional Li-ion batteries, better than any other model. When it is time to change batteries, it's as easy as snapping out the old ones and snapping in the new ones.

### Durability, accuracy, and value

The DT50 Series represents the highest accuracy and value in digital theodolite technology. Our 80 plus years of experience manufacturing the world's most precise optical survey instruments shines through in the precision, durability, and advanced technology found in each DT50.



### Water and dustproof

- IP66 rating
- Treated telescope to prevent moisture and eliminate lens fogging
- Rainproof
- Dustproof



### Laser accurate (L Series Only)

- Beam is emitted directly from the lens
- Bright red laser
- Pin-point accuracy



### Simple Operation

- Large, high-contrast, backlit LCD's
- Simple five-button interface panel
- Horizontal and vertical angles
- Slope by percent on angle



### Long-lasting power options

- Up to 30 workdays of operation
- Topcon BDC Li-ion battery
- Or traditional AA batteries



# Digital Theodolites

## DT50 Series

### Kit Components

- Instrument
- Plumb bob (optional)
- Tool kit
- Lint free lens cloth
- Hard shell carry case



### Specifications

MODEL	Digital Theodolites DT50	Laser Digital Theodolites DT50L
<b>Telescope</b>		
Length	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
Stadia ratio	100	
Stadia constant	0	
<b>Angle Measurement</b>		
Method	Rotary absolute encoder	
Detecting	Horizontal: 1 side Vertical: 1 side	
Minimum Reading	5" Model: 1" (0.0002 gon/0.01 mil)/5" (0.001 gon/0.1 mil) (selectable) 7" Model: 5" (0.002 gon/0.05 mil)/10" (0.005 gon/0.1 mil) (selectable) 9" Model: 10" (0.002 gon/0.05 mil)/20" (0.005 gon/0.1 mil) (selectable)	
Accuracy*1	5", 7", 9"	
<b>Display</b>		
Unit	2 sides for 5" and 7" model 1 side for 9" model	
<b>Tilt Angle Compensation (5" and 7" models)</b>		
Type	Automatic vertical compensator	
Range of compensation	±3' (±0.0555 gon)	
Compensation constant	Can be changed (compensation is done at the same time with vertical angle 0 point)	
<b>Optical Plummet</b>		
Magnification	3x	
Minimum focus	0.5 m	
<b>Sensitivity of Levels</b>		
Circular level	10' / 2 mm	
Plate level	30" / 2 mm	
<b>Power Supply</b>		
Mode	4 AA dry cells or BDC71 (Optional accessory)	
<b>Operating Time (4 AA Alkaline Batteries)</b>		
Theodolite only	~ 250 hours	
Laser only	-	~ 80 hours
Compensation constant	-	~ 55 hours
<b>Operating Time (BDC71)</b>		
Signal source	Red laser diode (633 nm)	
Maximum output	0.6 mW	
Laser class	Class 2	
Laser beam range	50 m (in daylight)	
<b>Hardware</b>		
Ingress protection	Dust and water resistance IP66 (JIS C 0920 : 2003)	
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)	
Size (with handle) W x D x H	5" and 7" Models: 173 x 181 x 318 mm 9" Models: 173 x 174 x 318 mm	
Weight (with batteries and battery holder)	5" and 7" Models: 4.1 kg (9.04 lb) 9" Models: 4.0 kg (8.82 lb)	

\*1: ISO 17123-3: 2001

\*2: No Direct sunlight at temperatures of 50°C (122°F)

# SOKKIA

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Specifications subject to change without notice  
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