

# SOKKIA

## DT240 DT540/DT740/DT940 DT540L/DT740L/DT940L Digital Theodolite

### The Richest Lineup Ensuring Maximum Job Efficiency at Unparalleled Performance Levels

#### ■ Common Features for All Models

- 2.5" – unsurpassed telescope resolving power\*
- IP66 – industry's highest dust/water protection
- Absolute encoders
- Lightweight
- Standard LR6/AA batteries
- Up to 170 hours of operating time

\*Except for DT940(L).

#### ■ Exclusive Features for the Laser Models

- 200m (660ft.) – long-range laser pointer
- 0.4mm@10m – ultra-small beam spot

#### ■ Superior Performance and Durability

The Sokkia DT series theodolites feature superior optics, mechanics, advanced absolute encoder systems, and proven automatic compensators. In addition to these essential technologies for angle measurement instruments, the Sokkia DT series boasts the industry's highest IP66 dust and water protection capability to withstand the harshest worksite environments.



#### ■ Power-Saving Technology to Save Battery Costs

Four LR6/AA alkaline batteries provide extra-long operating time from 100 to 170 hours, saving costs for replacement batteries. The DT instruments operate for two to five weeks without changing batteries\*.

\* When used for seven hours a day, five days a week, excluding the use of laser pointers.

#### ■ Laser Pointer to Increase Construction Work Efficiency (Laser models)

The DT laser models feature built-in coaxial laser pointers that maximize construction work efficiency. The applications include:

- Layout/Setting-Out
- Horizontal/Vertical Alignment
- Leveling
- Grading
- Squaring



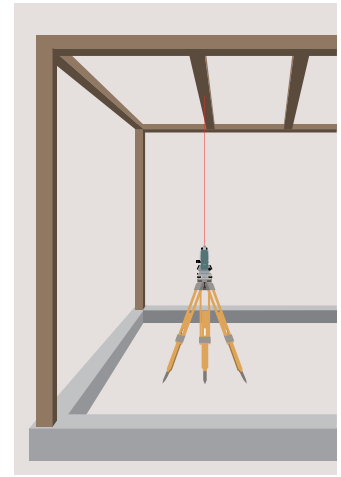
## ■ Long-Range Laser with Ultra-Small Beam Spot (Laser models)

The laser beam reaches 200m (660ft.) under indoor or underground conditions. Even under daylight conditions, the beam spot can be recognized at up to 50m (164ft.) away from the instrument. Red laser beam emitted from the objective lens is focused simultaneously with the telescope, meaning that the beam spot size becomes the minimum where you focus.

### ● Beam Spot Size (when focused)

	Distance	5m (16ft.)	10m (33ft.)	20m (66ft.)	30m (98ft.)	50m (164ft.)
DT540L/740L	Beam Diameter (mm)	0.1x0.2	0.2x0.4	0.5x0.7	0.7x1.1	1.2x1.9
DT940L	Beam Diameter (mm)	0.1x0.2	0.3x0.4	0.6x0.8	0.8x1.2	1.4x2.0

The laser beam sizes are theoretical values. The visible laser beam size will vary with ambient brightness.



## ■ SPECIFICATIONS

Model	Digital Theodolite				Laser Digital Theodolite		
	DT240	DT540	DT740	DT940	DT540L	DT740L	DT940L
<b>Laser pointer</b>							
Type					Coaxial laser pointer with beam focusing capability		
Laser specifications					Class 2, Wavelength: 633nm, Maximum output: 0.6mW		
Laser range	Daylight					50m (164ft.)	
	Indoor (700 lux)					200m (656ft.)	
<b>Telescope</b>							
Length	149mm (5.9in.)				152mm (6.0in.)		
Objective aperture	45mm (1.8in.)			40mm (1.6in.)	45mm (1.8in.)		40mm (1.6in.)
Magnification	30x			26x	30x		26x
Resolving power	2.5"			3"	2.5"		3"
Image / Field of view	Erect / 1°30' (26m/1,000m)						
Minimum focus	0.9m (3.0ft.)				1m (3.3ft.)		
Stadia	Multiplication constant: 100, Additive constant: 0						
Reticle illumination	Y	Y	Y	-	Y	Y	-
<b>Angle measurement</b>							
Method	Absolute rotary encoder scanning						
Detecting	Horizontal	Diametrical		Single	Diametrical		Single
	Vertical	Diametrical		Single			
Display resolutions	1" / 5" 0.2 / 1mgon		5" / 10" 1 / 2mgon	10" / 20" 2 / 5mgon	1" / 5" 0.2 / 1mgon	5" / 10" 1 / 2mgon	10" / 20" 2 / 5mgon
Accuracy	2"		5"	7"	5"		9"
Circle diameter	71mm (2.8in.)						
Automatic compensation range	±3'(±55mgon)			-	±3'(±55mgon)		-
<b>General</b>							
Control panel layout	On both faces			On single face	On both faces		On single face
Display	LCD, 7 digits x 2 lines, backlight						
Interface	RS-232C			-	RS-232C		-
Optical plummet	Magnification: 3x, Field of view: 3°, Minimum focus: 0.5m (1.64ft.)						
Sensitivity	Plate level	30"/2mm	40"/2mm	60"/2mm	40"/2mm		60"/2mm
	Circular level	10"/2mm					
Tribrach	Detachable			Fixed	Detachable		Fixed
Operating temperature	-20 to +50°C (-4 to +122°F)						
Dust and Water Protection	IP66 (IEC 60529:2001)						
Size (w/handle)	W188 x D149 x H313mm (W7.4 x D5.9 x H12.3in.)			W188 x D149 x H305mm (W7.4 x D5.9 x H12.0in.)	W188 x D152 x H313mm (W7.4 x D6.0 x H12.3in.)		W188 x D152 x H305mm (W7.4 x D6.0 x H12.0in.)
Weight (w/batteries)	4.1kg (9.0 lb.)			3.5kg (7.7 lb.)	4.2kg (9.3 lb.)		3.6kg (7.9 lb.)
<b>Power supply</b>							
Battery	LR6/AA batteries x 4						
Operating time	Theodolite only	Approx.100 hrs	Approx.140 hrs	Approx.150 hrs	Approx.170 hrs	Approx.140 hrs	Approx.150 hrs
w/alkaline batteries	Laser only					Approx.80 hrs	
at 20°C (68°F)	Theodolite and laser					Approx.45 hrs	

### ■ Standard accessories

- LR6/AA batteries (x4) • Lens cap • Plumb bob • Tool kit • Operator's manual • Carrying case and shoulder strap

[www.sokkia.co.jp](http://www.sokkia.co.jp)

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