

# Nikon NPL-522 Total Station

## DISTANCE MEASUREMENT

Reflectorless mode (white target) <sup>1</sup>	1.6 m to 210 m (5.3 ft to 680 ft)
Range with Nikon specified prisms	
Good conditions	
(no haze, visibility of over 40 km (25 miles))	
With reflector sheet 5 cm x 5 cm (12.5 in x 12.5 in)	1.6 m to 300 m (5.3 ft to 980 ft)
With mini prism 2.5 cm (1 in)	1.6 m to 3,000 m (5.3 ft to 9800 ft)
With single prism 6.25 cm (2.5 in)	1.6 m to 5,000 m (5.3 ft to 16,400 ft)
Normal conditions	
(ordinary haze, visibility approx. 20 km (12.5 miles))	
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With single prism 6.25 cm (2.5 in)	1.6 m to 5,000 m (5.3 ft to 16,400 ft)

## Accuracy (Prism/Precise mode)

Normal operating temperature	±(3 + 2 ppm x D) mm
-20 °C to -10 °C, +40 °C to +50 °C	±(3 + 3 ppm x D) mm
(-4 °F to +14 °F, +104 °F to +122 °F)	

## Accuracy (Reflectorless/Precise mode)

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-20 °C to -10 °C, +40 °C to +50 °C	±(3 + 3 ppm x D) mm
(-4 °F to +14 °F, +104 °F to +122 °F)	

## Measuring interval<sup>2</sup>

Prism mode	
Precise mode	1.3 sec. (initial 2.0 sec.)
Normal mode	0.5 sec. (initial 1.6 sec.)
Reflectorless mode	
Precise mode	1.6 sec. (initial 2.6 sec.)
Normal mode	0.8 sec. (initial 2.0 sec.)

## Least count

Precise mode	0.1 mm (0.0005 ft)/1 mm (0.002 ft) selectable
Normal mode	1 mm (0.002 ft)/10 mm (0.02 ft) selectable
Prism offset	-999 mm to 999 mm

## ANGLE MEASUREMENT

DIN 18723 accuracy (horizontal and vertical)	3"/1 mgon
Reading system	Photoelectric detection by incremental encoder
Horizontal angle	Diametrical
Vertical angle	Diametrical
Minimum increment	Degree: 1/5/10" Gon: 0.2/1/2 mgon MIL6400: 0.005/0.02/0.05 mil

## TELESCOPE

Tube length	153 mm (6.02 in)
Image	Erect
Magnification	26x (16x/32x with optional eyepieces)
Effective diameter of objective	40 mm (1.57 in)
EDM	50 mm (1.97 in)

Field of view	1°30'
Resolving power	3"
Minimum focusing distance	1.6 m (5.3 ft)
Reticle Illumination	Provided (3 steps)

## TILT SENSOR

Type	Dual-axis
Method	Liquid-electric detection
Compensation range	±3'
Setting accuracy	1"

## POWER

On-board Ni-MH battery BC-80	
Operating time	approx. 6 hours (continuous distance/angle measurement) approx. 12 hours (distance/angle measurement every 30 seconds) approx. 25 hours (angle measurement only)
Charging time	
Full charge	3 hours

## GENERAL SPECIFICATIONS

Lumi-Guide	
Working range	100 m (330 ft)
Positioning accuracy	within approx. 6 cm at 100 m (2.4 in at 330 ft)
Level vials	
Plate level vial	30"/2 mm
Circular level vial	10'/2 mm
Optical plummet	
Magnification	3x
Focusing range	0.5 m (1.6 ft) to ∞
Display	Graphic LCD (128 x 64 dot); both sides
Point memory	10,000 records
Dimensions (W x D x H)	166 mm x 156 mm x 365 mm (6.5 in x 6.1 in x 14.4 in)
Weight (approx.)	
Main unit (without battery)	4.9 kg (10.8 lb)
BC-80 clip-on battery	0.6 kg (1.3 lb)
Carrying case	4.0 kg (8.8 lb)

## ENVIRONMENTAL

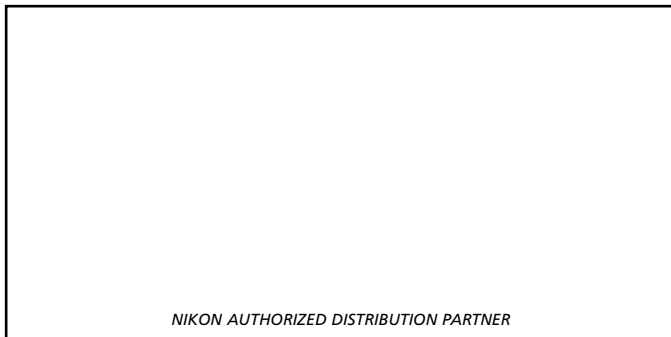
Operating temperature range	-20 °C to 50 °C (-4 °F to +122 °F)
Atmospheric correction	
Temperature range	-40 °C to 60 °C (-40 °F to +140 °F)
Barometric pressure	400 mmHg to 999 mmHg 533 hPa to 1,332 hPa/15.8 in.Hg to 39.3 in.Hg
Water protection	IPX4

## CERTIFICATION

Class B Part 15 FCC certification, CE Mark approval.

- <sup>1</sup> White objects with high reflectivity. Measuring distance may vary depending on targets and measuring conditions.
- <sup>2</sup> Measuring time may vary depending on measuring distance and conditions.

*Simple • Dependable • Accurate*



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