

**SOKKIA**

# **iM-50 Series**

**intelligence Measurement Station**

## **High Quality, High Return!**

- **Construction and Survey Application Software**
- **Fast & Accurate & Powerful Measuring Distance Feature**
- **500m Long Range Reflectoress Measurement**
- **Rugged & Waterproof Design**
- **Reliable Large Volume Internal Memory**



**Made in Japan**

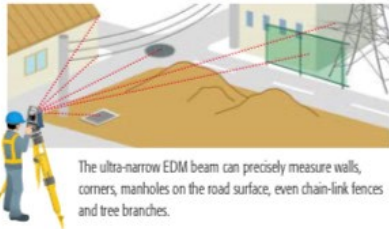
# iM-50 Series

intelligence Measurement Station

## SPECIFICATIONS

### Fast and Powerful Reflectorless EDM

- Fast and accurate pinpointing with phase shift technology.
- Fast distance measurement of 0.9s regardless of object.
- Minimum reflectorless measuring distance - just 30cm.
- Improved collimation with super-bright pointer.
- Smaller EDM beam spot size for minimal distance measuring error.
- Dependable measuring even at shallow incidence angles.
- Ensures accurate reflective sheet distance measurement.



The ultra-narrow EDM beam can precisely measure walls, corners, manholes on the road surface, even chain-link fences and tree branches.

### Japan Quality Products



We perform the tough environmental tests to ensure long-term operation even under the rough site environments.

iM Series total stations are thoroughly inspected with dust-proof and water-proof test chambers.

In addition, the various tests against vibration, drop, temperature, and humidity were successfully passed to achieve the best environmental spec. Also, the measuring distance accuracy test on base line and the instrument leveling and angle accuracy test and adjustment by collimator system ensure your satisfaction on iM Series product quality.

### Standard Package Components

- Main unit • Battery (BDC46C)
- Battery charger (CDC68A)
- Power Cable • Lens cap • Lens hood
- Tool pouch • Precision Screwdriver
- Lens brush • Hexagonal wrench x2
- Cleaning cloth • Quick Manual
- Laser caution sign-board
- Carrying case • Carrying strap



**TOPCON CORPORATION**

75-1 Hasunuma-cho, Itabashi-ku, Tokyo 174-8580, Japan  
Phone: (+81)3-3558-2993 Fax: (+81)3-3960-4214  
www.topcon.co.jp

Model	iM-52		iM-55	
Telescope	30x / 2.5"			
Magnification / Resolving power	30x / 2.5"			
Others	Length : 171mm (6.7in.), Objective aperture : 45mm (1.8in.) (48mm (1.9in.) for EDM), Image: Erect, Field of view: 1°30' (26m/1,000m), Minimum focus: 1.3m (4.3ft.) Reticle illumination: 5 brightness levels			
<b>Angle measurement</b>				
Minimum Display (selectable)	1"/5" (0.0002 / 0.001gon, 0.005 / 0.02mil)			
Accuracy (ISO 17123-3:2001)	2"		5"	
Dual-axis compensator	Dual-axis liquid tilt sensor, working range: ±6'			
Collimation compensation	On/Off (selectable)			
<b>Distance measurement</b>				
Laser output <sup>*1</sup>	Reflectorless mode : Class 3R / Prism/sheet mode : Class 1			
Measuring range (under average conditions <sup>**</sup> )	Reflectorless <sup>**3</sup>	0.3 to 500m (1,640ft.)		
	Reflective sheet <sup>**4,5</sup>	RS90N-K: 1.3 to 500m (4.3 to 1,640ft.), RS50N-K: 1.3 to 300m (4.3 to 980ft.), RS10N-K: 1.3 to 100m (4.3 to 320ft.)		
	Mini prisms	CP01: 1.3 to 2,500m (4.3 to 8,200ft.), OR1PA: 1.3 to 500m (4.3 to 1,640ft.)		
	One prism	1.3 to 4,000m (4.3 to 13,120ft.)		
Minimum Display	Fine / Rapid : 0.0001m (0.001ft. / 1/16 in.) / 0.001m (0.005ft. / 1/8 in.) (selectable) Tracking / Road : 0.001m (0.005ft. / 1/8 in.) / 0.01m (0.02ft. / 1/2 in.) (selectable)			
Accuracy <sup>**2</sup> (ISO 17123-4:2001) (D=measuring distance in mm)	Reflectorless <sup>**3</sup>	(2 + 2ppm x D) mm <sup>**6</sup>		
	Reflective sheet <sup>**4,5</sup>	(2 + 2ppm x D) mm		
	Prism <sup>**7</sup>	(1.5 + 2ppm x D) mm		
Measuring time <sup>**8</sup>	Fine	0.9s (initial 1.5s)		
	Rapid	0.6s (initial 1.3s)		
	Tracking	0.4s (initial 1.3s)		
<b>OS, Interface and Data management</b>				
Operating system	Linux			
Display / Keyboard	Graphic LCD, 192 x 80 dots, backlight : on/off (Selectable) / Alphanumeric keyboard / 28 keys with backlight			
Control panel location	On both faces		On single face	
Data storage	Internal memory	Approx. 50,000 points		
	Plug-in memory device	USB flash memory (max. 32GB)		
Interface	Serial RS-232C, USB2.0 (Type A for USB flash memory)			
	Bluetooth modem (option) <sup>**9</sup>	Bluetooth Class 1.5, Operating range: up to 10m <sup>**10</sup>		
<b>General</b>				
Laser-pointer	Coaxial red laser using EDM beam			
Levels	Graphic	6' (Inner Circle)		
	Circular level (on tribrach)	10' / 2mm		
Plummet	Optical	Magnification: 3x, Minimum focus: 0.5m (19.7in.) from tribrach bottom		
	Laser (option)	Red laser diode (635nm±10nm), Beam accuracy: ≤1.0mm@1.3m, Class 2 laser product		
Dust and water protection / Operating temperature	IP66 (IEC 60529:2001) / -20 to +60°C (-4 to +140°F)			
Size with handle	183(W)x 181(D)x 348(H)mm (On both faces)		183(W)x 174(D)x 348(H)mm (On single face)	
Instrument height	192.5mm from tribrach mounting surface			
Weight with battery & tribrach	Approx. 5.1kg (11.3lb)			
<b>Power supply</b>				
Battery	Li-ion rechargeable battery BDC46C			
Operating time (20°C) <sup>**11</sup>	Approx. 14hours <sup>**12</sup>			
<b>Application program</b>				
On board	<ul style="list-style-type: none"> <li>• REM Measurement • 3D Coordinate Measurement</li> <li>• Resection • Stake Out • Topography Observation</li> <li>• Offset Measurement • Missing Line Measurement • Intersection</li> <li>• Surface Area Calculation • Route Surveying • Point to Line</li> </ul>			

\*1 IEC60825-1:Ed.3.0:2014/ FDA CDRH 21 CFR Part 1040.10 and 11 \*2 Average conditions: Slight haze, visibility about 20km (12 miles), sunny periods, weak scintillation. \*3 With Kodak Gray Card White Side (90% reflective). When brightness on measured surface is 30,000 lx. or less. Reflectorless range/accuracy may vary according to measuring objects, observation situations and environmental conditions. \*4 When the measuring beam's incidence angle is within 30° in relation to the reflective sheet target. \*5 Measuring range in temperatures of 50 to 60°C (122 to 140°F): RS90N-K: 1.3 to 300m (4.3 to 980ft.), RS50N-K: 1.3 to 180m (4.3 to 590ft.), RS10N-K: 1.3 to 60m (4.3 to 190ft.) \*6 Measuring range: 0.3 to 200m \*7 Face the prism toward the instrument during the measurement with the distance at 10 m or less. \*8 Good conditions: No haze, visibility about 40km (25miles), overcast, no scintillation. \*9 Usage approval of Bluetooth wireless technology varies according to country. Please consult your local office or representative in advance. \*10 No obstacles, few vehicles or sources of radio emissions/interference in the near vicinity of the instrument, no rain. \*11 Figures will change depending on the operating environment including temperatures and observation conditions. \*12 In use of ECO mode. Fine single measurement every 30sec.

- Specifications may vary by region and are subject to change without notice.

- Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Topcon is under license.

- Other trademarks and trade names are those of their respective owners.

**Your local Authorized Dealer is:**