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

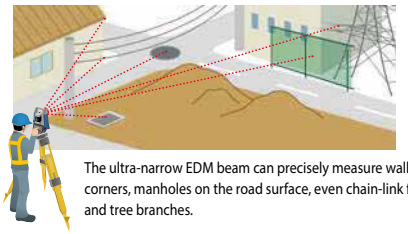
# iM-50 Series

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 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×2
- Cleaning cloth
- Quick Manual
- Laser caution sign-board
- Carrying case
- Carrying strap

| Model | | iM-52 | iM-55 |
|---|---|---|---|
| Telescope | | | |
| 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 | |
| Angle measurement | | | |
| 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) | |
| Distance measurement | | | |
| Laser output*1 | | Reflectorless mode : Class 3R / Prism/sheet mode : Class 1 | |
| Measuring range (under average conditions*2) | Reflectorless*3 | 0.3 to 500m (1,640ft.) | |
| | Reflective sheet*4*5 | 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*2 (ISO 17123-4:2001) (D=measuring distance in mm) | Reflectorless*3 | (2 + 2ppm x D) mm*6 | |
| | Reflective sheet*4*5 | (2 + 2ppm x D) mm | |
| | Prism*7 | (1.5 + 2ppm x D) mm | |
| Measuring time*8 | Fine | 0.9s (initial 1.5s) | |
| | Rapid | 0.6s (initial 1.3s) | |
| | Tracking | 0.4s (initial 1.3s) | |
| OS, Interface and Data management | | | |
| 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)*9 | Bluetooth Class 1.5, Operating range: up to 10m*10 | |
| General | | | |
| 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 +60ºC (-4 to +140ºF) | |
| 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) | |
| Power supply | | | |
| Battery | | Li-ion rechargeable battery BDC46C | |
| Operating time (20ºC)*11 | | Approx. 14hours*12 | |
| Application program | | | |
| On board | | • REM Measurement • 3D Coordinate Measurement • Resection • Stake Out • Topography Observation • Offset Measurement • Missing Line Measurement • Intersection • Surface Area Calculation • Route Surveying • Point to Line | |

*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 30º 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 depensing on the operating environment including temperatures and observation conditions. *12 In use of ECO mode. Fine single measurement every 30sec.

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