SPECIFICATIONS

Model		GM-101	GM-102	GM-103	GM-105
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		0.5"/1" (0.0001 / 0.0002gon, 0.002 / 0.005mil)	1"/5" (0.0002 / 0.001gon, 0.005 / 0.02mil)		
Accuracy (ISO 17123-3:2001)		1"	2"	3"	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 800m (2,620ft.) / Under good conditions[*4] : 1,000m (3,280ft.)			
	Reflective sheet[*5*6]	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 prism	1.3 to 500m (4.3 to 1,640ft.)			
	One prism	1.3 to 5,000m (4.3 to 16,400ft) / Under good conditions[*4] : 6,000m (19,680ft.)			
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[*8]			
	Reflective sheet[*5*6]	(2 + 2ppm x D) mm			
	Prism[*7]	(1.5 + 2ppm x D) mm			
Measuring time[*4*9]	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, contrast adjustment / Alphanumeric keyboard / 28 keys with backlight			
Control panel location		On both faces			
Trigger key		Yes (right side)			
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)[*10]	Bluetooth Class 1.5, Operating range: up to 10m [*11]			
General					
Guide light[*12]		Green LED (524nm) and Red LED (626nm), Operating range: 1.3 to 150m (4.3 to 490ft.)			
Laser-pointer[*12]		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			
Instrument height		192.5mm from tribrach mounting surface			
Weight with battery & tribrach		Approx. 5.3kg (11.7lb)			
Power supply					
Battery		Li-ion rechargeable battery BDC72			
Operating time (20ºC)[*13]		BDC72: Approx. 28hours[*14]			
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 21CFR Part1040.10 AND1040.11 *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 Good conditions: No haze, visibility about 40km (25miles), overcast, no scintillation. *5 When the measuring beam's incidence angle is within 30º in relation to the reflective sheet target. *6 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.) *7 Face the prism toward the instrument during the measurement with the distance at 10 m or less. *8 Measuring range:0.3 to 200m *9 Fastest time under good conditions, no compensation, EDM ALC at appropriate setting, slope distance. *10 Usage approval of Bluetooth wireless technology varies according to country. Please consult your local office or representative in advance. *11 No obstacles, few vehicles or sources of radio emissions/interference in the near vicinity of the instrument, no rain. *12 The laser-pointer and the guide light do not work simultaneously. *13 Figures will change depensing on the operating environment including temperatures and observation conditions. *14 In use of ECO mode. Fine single measurement every 30sec.

Standard Package Components

▪ Main unit ▪ Battery (BDC72) ▪ Battery charger (CDC77) ▪ Power Cable ▪ Lens cap ▪ Lens hood ▪ Tool pouch ▪ Precision Screwdriver ▪ Lens brush ▪ Hexagonal wrench (1.3 mm/2.5 mm)×2 ▪ Cleaning cloth ▪ Quick Manual ▪ CD-ROM (Operation manual) ▪ Laser caution sign-board ▪ Carrying case ▪ Carrying strap

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Evolving Entry-Level Total Station

- Construction and Survey Application Software On Board
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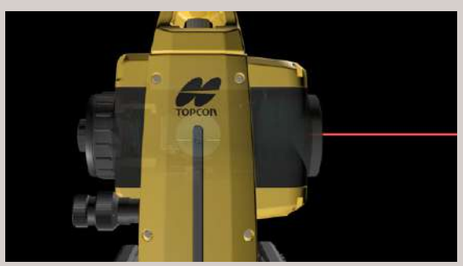
- Reliable Large Volume Internal Memory
- Long-Hour Battery Operation
- Strong Environmental Specification against Tough Sites

Construction and Survey Application Software On Board
Reliable All-Round Total Station

GM

Improve Topography and Stake Out with features to achieve faster and more efficient workflows



Newly Designed High-End Class EDM

Especially effective in surveying control points that require high-accuracy, and in cross sectional surveying in large areas with reflectorless measurement mode.

All Features are at Top Class

	Accuracy	Measuring Range
Prism-Mode	1.5mm+2ppm	6,000m*
Reflectorless	2.0mm+2ppm	1,000m*

* Good atmospheric condition

Distance Measurement Accuracy (Prism Mode)

GM — Accuracy **1.5mm+2ppm**

Previous Model — **2.0mm+2ppm**

Measuring Range(Reflectorless Mode)

GM — **Distance 1,000m**

Previous Model — **500m**

Reliable Large Volume Memory

Internal memory has 50,000 points to record.
USB memory can be used up to 32GB.

Superior Basic Feature will Expand Your Application

Strong Environmental Spec

The IP66 rating ensures durability for most any rough job site temperatures and conditions.

Long-life Battery

One battery (BDC70) lasts up to 28 hours, or about four days of normal operation time.

Bright Illumination Key for Nighttime Work

Key buttons are illuminated to minimze mistakes.

Topcon Provides Japan Quality Products

Topcon performs tough environmental tests to ensure long-term operation even under rough site environment.
GM Series total stations are thoroughly inspected with dust-proof and water-proof test chambers. In addition, 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 the GM Series product quality.