

# SPECIFICATIONS



SURVEY PRODUCTS: GPT-3000 series



| Model Name   | GPT-3002              | GPT-3003  | GPT-3005 | GPT-3007            |
|--|-----------------------|---|----------|---------------------|
| <b>TELESCOPE</b>                                       |                       |   |          |                     |
| Length   |                       | 150mm   |          |                     |
| Objective Lens Dia.                                    |                       | 45mm (EDM 50mm)   |          |                     |
| Magnification  |                       | 30x   |          |                     |
| Image  |                       | Erect   |          |                     |
| Field of View  |                       | 1°30'   |          |                     |
| Resolving Power  |                       | 2.8"  |          |                     |
| Min. Focus Distance                                    |                       | 1.3m (4.29 ft.)   |          |                     |
| <b>DISTANCE MEASUREMENT</b>                            |                       |   |          |                     |
| Measuring Range  |                       | (Target: Kodak White)                                       |          |                     |
| Non-prism Mode   |                       | 1.5 to 250m (5 to 820 ft.)                                  |          |                     |
| In low light condition and without sun glare on target |                       |   |          |                     |
| Prism Mode   |                       |   |          |                     |
| Condition 1* (1 prism)                                 |                       | 3,000m (9,900 ft.)  |          |                     |
| Measurement Accuracy                                   |                       | (Diffusing Surface)   |          |                     |
| Non-prism Mode   |                       | ±(10mm) m.s.e.  |          |                     |
| 1.5 to 25m (5 to 82 ft.)                               |                       | ±(5mm) m.s.e.   |          |                     |
| 25m or more (82 ft. or more)                           |                       |   |          |                     |
| Prism Mode   |                       | ±(3mm+2ppm×D) m.s.e. D: Measuring distance (mm)             |          |                     |
| Measuring Time   |                       |   |          |                     |
| Fine measurement mode                                  |                       | 1mm: Approx. 1.2 sec. (Initial 3 sec.)                      |          |                     |
|  |                       | 0.2mm: Approx. 3 sec. (Initial 4 sec.)                      |          |                     |
| Coarse measurement mode                                |                       | Approx. 0.5 sec. (Initial 2.5 sec.)                         |          |                     |
| Tracking measurement mode                              |                       | Approx. 0.3 sec. (Initial 2.5 sec.)                         |          |                     |
| <b>ANGLE MEASUREMENT</b>                               |                       |   |          |                     |
| Method   |                       | Absolute Reading  |          |                     |
| Detecting System                                       | H: 2 sides V: 2 sides | H: 2 sides V: 1 side  |          | H: 1 side V: 1 side |
| Minimum Reading  | 1"/5"                 | 1"/5"   | 1"/5"    | 5"/10"              |
| Accuracy   | 2"                    | 3"  | 5"       | 7"                  |
| <b>DISPLAY</b>   |                       |   |          |                     |
| Display Unit   | 2 sides               | Graphics LCD 160 × 64 Dots with backlight                   | 2 sides  | 2 sides             |
| <b>OPERATING TIME</b>                                  |                       |   |          |                     |
| Including distance measurement                         |                       | 4.2 hours   |          |                     |
| Angle measurement only                                 |                       | 45 hours  |          |                     |
| <b>DIMENSION</b>                                       |                       |   |          |                     |
| WEIGHT   |                       |   |          |                     |
| Instrument (with battery)                              |                       | 5.1kg (11.2 lbs.)   |          |                     |
| Plastic Carrying Case                                  |                       | 3.2kg (7.1 lbs.)  |          |                     |
| <b>OTHERS</b>  |                       |   |          |                     |
| Protection against water and dust                      |                       | IP66 (with BT-52QA) (Based on the standard IEC60529)        |          |                     |
| Ambient Temperature Range                              |                       | -20°C to +50°C (-4°F to +122°F)                             |          |                     |
| Point Guide  |                       | Yes   |          |                     |
| Laser Plummet  |                       | Yes   |          |                     |
| Instrument Height                                      |                       | 176mm (6.93in.)   |          |                     |
| Laser Class  |                       | Class1 (for distance measurement) Class2 (Laser Pointer on) |          |                     |

\*Condition 1: Sight haze with visibility about 20km (12.5 miles) moderate sunlight with light heat shimmer.

For more info on these or any other  
Topcon product log onto:  
[www.topcon.com](http://www.topcon.com)



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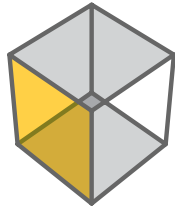


TOPCON CORPORATION

Your Local TOPCON dealer is:



# GPT-3000 Series Reflectorless Total Stations



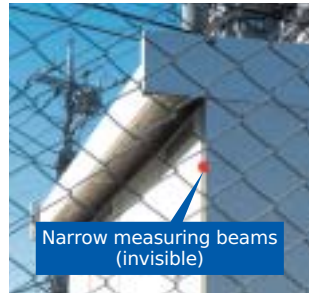
TOPCON, the World Leader in Positioning Solutions, proudly introduces the world's first long-distance, reflectorless total station using Topcon's advanced pulse laser technology.

## Long Range prismless operation (up to 250m)

### Easy-to-use, reliable and safe

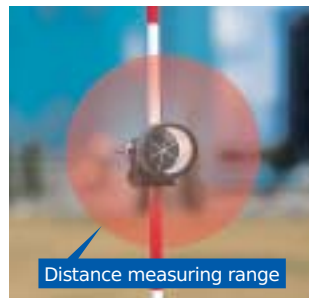
Topcon's unique pulse laser technology allows the GPT-3000 series to measure up to 250m in reflectorless mode in complete safety and confidence. The Class 1 laser is so safe, you can even use it in heavy traffic areas. (Visible Laser Pointer: Laser Class 2)

Laser Class 1: Is not harmful to human health. It never exceeds the maximum permissible dose of light exposure under any condition.



Narrow measuring beams (invisible)

Non-prism mode

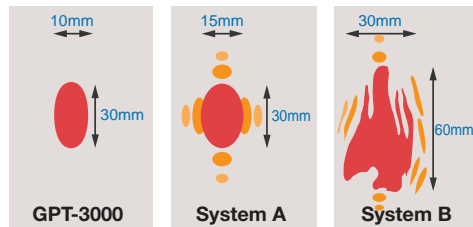


Distance measuring range

Prism mode

### Dual Laser optics

Topcon's GPT-3000 uses a dual laser optics system, one narrow beam for non-prism functions, and a broader beam when using a prism. This stabilizes the beam over long distances providing accurate measurement. Even in adverse atmospheric conditions such as heat shimmer.



GPT-3000

System A

System B

### Putting the competition "on-the-spot" (at 50m)

Most reflectorless instruments use a laser for distance measurement, and each manufacturers product vary in their spot quality over distance. Topcon's GPT-3000 uses the industries most advanced, highly focused infrared beam for a very stable, sharp spot, that is less resistant to "spreading" over distance.

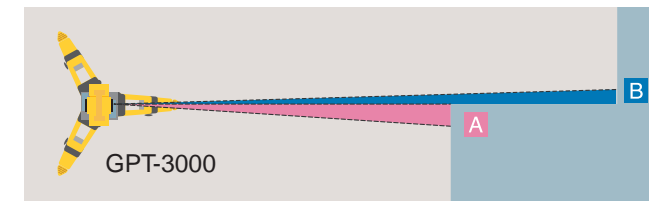
### Pick your point and measure. Accurately.

Along with its Pulse Laser diode for distance measurement, the GPT-3000 uses Topcon's state-of-the-art visible diode technology as a laser pointer. It puts a bright, flashing spot of light exactly at the point to be measured. No more guessing what your measuring or what you've measured. What you point at is what you'll measure.



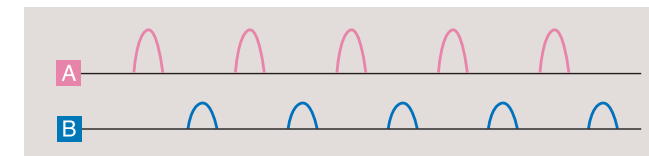
### Pulse laser - precise measurements

The most important part of the measurement beam is its unique "pulse" technology. A pulse beam emits timed flashes of laser light. These flashes (or pulses) allow the laser to discern objects that may be close to the path of the point you are shooting. Now reliably shooting building corners, or an object through a chain link fence, is as easy as point and measure.

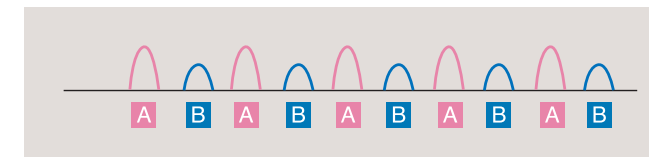


### Why Pulse Laser?

When we collimate to point A, the pulse laser will output to point A and Point B at same time.



1. Pulse Laser (Time of Flight) measurement outputs signal A and signal B separately.



2. Although measured value of A and B is mixed in one cycle, the shape of signal is difference.



3. In this way GPT-3000 can distinguish between signal A and B.

## standard components



- GPT-3000 series.....1 each
- Battery BT-52QA .....2 each
- Battery charger BC-27BR (120V) or BC-27CR (230V).....1 each
- Tool kit with case .....1 set
- Plastic carrying case .....1 each
- Silicon cloth.....1 each
- Plastic rain cover.....1 each
- Plumb bob set .....1 each
- Lens cap.....1 each
- Instruction manual.....1 each
- Sun shade .....1 each

General Construction, surveying, Earthmoving, Mapping.  
No matter what type of work you do, topcon has a tool that will help you get the job done right. the first time.



HiPer  
GPS+  
receiver



GTS-720  
Total  
Station



System 5  
3D Control Box



DL-100 Series  
Electronic Digital  
Levels



FC-1000  
Data Collector



GB-1000  
GPS+  
receiver



RL-H2Sa  
Dual Slope  
Laser