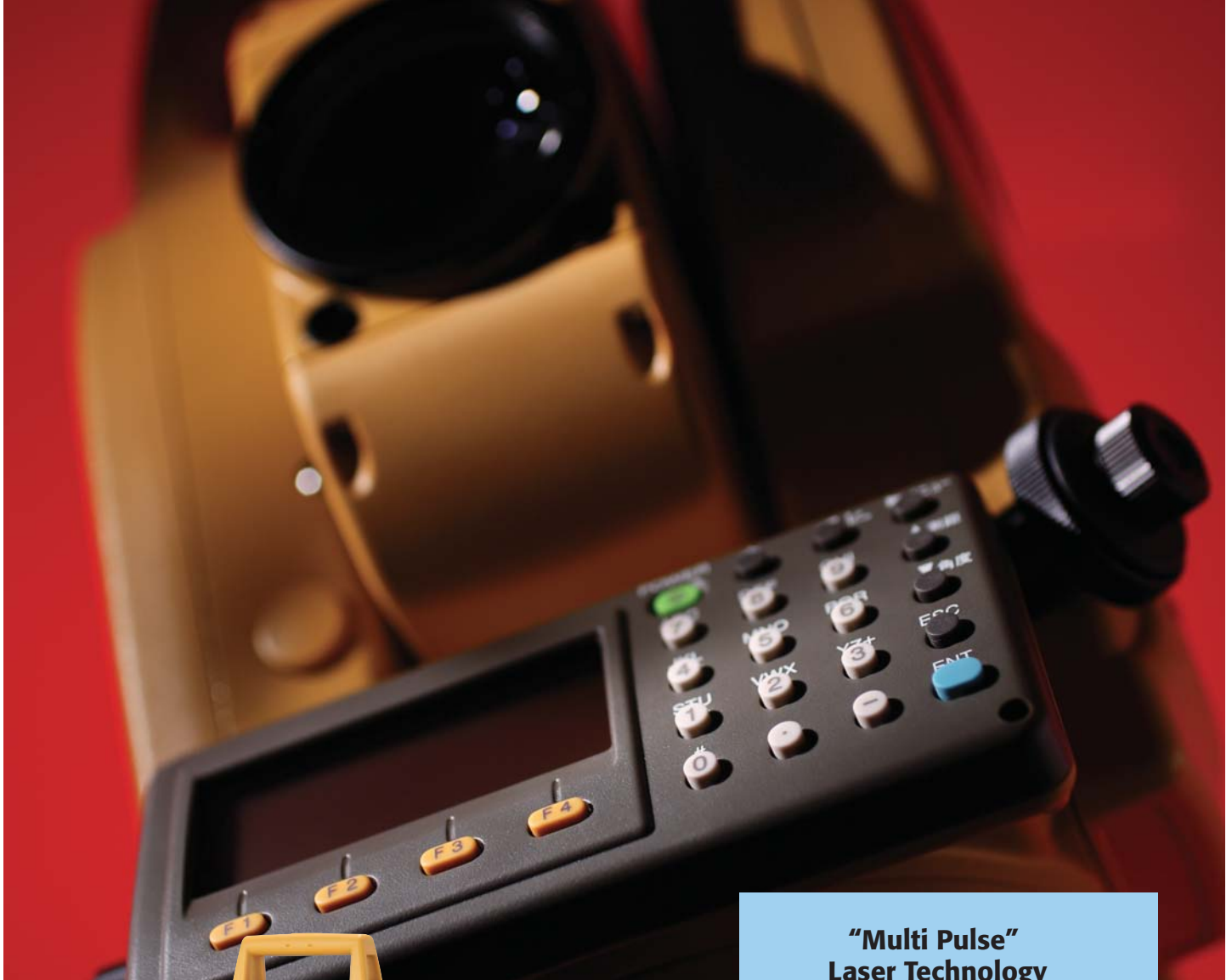


# GPT-3100N series

REFLECTORLESS TOTAL STATION



## "Multi Pulse" Laser Technology



- *Reflectorless distance measurement up to 350M*
- *Low power consumption*
- *Small diameter pin-point measurement*
- *Point guide*
- *Laser pointer*
- *Water and dust protection IP66*
- *Versatile applications including Road*

## New Reflectorless distance measurement technology "Multi Pulse"

Topcon's unique optical technology "Multi Pulse" enhanced the productivity

## Reflectorless distance measurement up to 350M



GPT-3100N achieved Reflectorless distance measurement up to 350M, 140% improvement against previous model (250M)

## Significant saving of power consumption

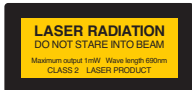


Multi Pulse optical system contributed to power consumption cut down from 4.7W to 3.6W ( $\pm 20\%$  down), but extended operating time to 5 hours (+120%)

**It's time.**

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Specifications subject to change without notice

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## Specifications

|   | GPT-3102N   | GPT-3103N            | GPT-3105N    | GPT-3107N          |
|---|---|----------------------|--------------|--------------------|
| <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 (4.9 ft)   |                      |              |                    |
| <b>DISTANCE MEASUREMENT</b>   |   |                      |              |                    |
| Prism Mode  |   |                      |              |                    |
| Measuring Range   |   |                      |              |                    |
| Mini prism  | 1,000m*   |                      |              |                    |
| 1 prism   | 3,000m*/4,000m**  |                      |              |                    |
| 3 prisms  | 4,000m*/5,300m**  |                      |              |                    |
| 9 prisms  | 5,000m*/6,500m**  |                      |              |                    |
| * Condition 1: Slight haze with visibility about 20km (12.5 miles) moderate sunlight with light heat shimmer. |   |                      |              |                    |
| ** Condition 2: No haze with visibility about 40km(25 miles), overcast with no heat shimmer.                  |   |                      |              |                    |
| Measurement Accuracy <sup>1</sup>   | Fine: $\pm(2\text{mm}+2\text{ppm}\times\text{D})\text{m.s.e.}$ Coarse: $\pm(7\text{mm}+2\text{ppm}\times\text{D})\text{m.s.e.}$ |                      |              |                    |
| Measuring Time  |   |                      |              |                    |
| Fine mode 1mm: Approx.1.1 sec. (Initial 2.5 sec.)   |   |                      |              |                    |
| 0.2mm: Approx. 1.5 sec. (Initial 3 sec.)  |   |                      |              |                    |
| Coarse mode 1mm/10mm: Approx. 0.8 sec. (Initial 2 sec.)   |   |                      |              |                    |
| Non-Prism Mode (Diffusing Surface)  |   |                      |              |                    |
| Measuring Range   |   |                      |              |                    |
| 1.5m to 350m  |   |                      |              |                    |
| Measuring Accuracy  |   |                      |              |                    |
| $\pm(3\text{mm}+2\text{ppm}\times\text{D})\text{m.s.e.}$  |   |                      |              |                    |
| Coarse: $\pm(10\text{mm})\text{m.s.e.}$   |   |                      |              |                    |
| Measuring Time  |   |                      |              |                    |
| Fine mode 1mm: Approx. 1.7 sec. (Initial 3 sec.)  |   |                      |              |                    |
| 0.2mm: Approx. 2.6 sec. (Initial 3.5 sec.)  |   |                      |              |                    |
| Coarse mode 1mm/10mm: Approx. 1.0 sec. (Initial 2.0 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" (0.2/1mgon)   |                      |              | 5"/10" (1/2mgon)   |
| Accuracy <sup>2</sup>   | 2" (0.6mgon)  | 3" (1mgon)           | 5" (1.5mgon) | 7" (2mgon)         |
| Diameter of Circle  | 71mm  |                      |              |                    |
| <b>DISPLAY</b>  |   |                      |              |                    |
| Display Unit  |   |                      |              |                    |
| Graphics LCD 160 × 64 Dots with backlight   |   |                      |              |                    |
| 2 sides   |   |                      |              |                    |
| 1 side  |   |                      |              |                    |
| Keyboard  |   |                      |              |                    |
| Alpha-Numeric key   |   |                      |              |                    |
| <b>TILT CORRECTION (AUTOMATIC INDEX)</b>  |   |                      |              |                    |
| Tilt Sensor   |   |                      |              |                    |
| Dual axis   |   |                      |              |                    |
| Single axis   |   |                      |              |                    |
| Method  |   |                      |              |                    |
| Liquid type   |   |                      |              |                    |
| Compensating Range  |   |                      |              |                    |
| $\pm 3'$  |   |                      |              |                    |
| Correction Unit   |   |                      |              |                    |
| 1" (0.1mgon)  |   |                      |              |                    |
| <b>OTHERS</b>   |   |                      |              |                    |
| The Number of Measuring Points  |   |                      |              |                    |
| Approx. 24,000 points   |   |                      |              |                    |
| Instrument Height   |   |                      |              |                    |
| 176mm (6.93 in.)  |   |                      |              |                    |
| Laser Class   |   |                      |              |                    |
| Class 1 (for distance measurement) Class 2 (Laser Pointer on)   |   |                      |              |                    |
| <b>LEVEL SENSITIVITY</b>  |   |                      |              |                    |
| Circular Level  |   |                      |              |                    |
| 10'/2mm   |   |                      |              |                    |
| Plate Level   |   |                      |              |                    |
| 30"/2mm   |   |                      |              |                    |
| 40"/2mm   |   |                      |              |                    |
| <b>DIMENSION</b>  |   |                      |              |                    |
| 336(H)×184(W)×172(L)mm/13.2(H)×7.2(W)×6.8(L)in.   |   |                      |              |                    |
| <b>WEIGHT</b>   |   |                      |              |                    |
| Instrument (with battery)   |   |                      |              |                    |
| 5.3kg (11.6 lbs.)   |   |                      |              |                    |
| Plastic Carrying Case   |   |                      |              |                    |
| 3.4kg (7.3 lbs.) (Weight of the carrying case may be slightly different due to specific market.)              |   |                      |              |                    |
| <b>DURABILITY</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)   |   |                      |              |                    |
| <b>BATTERY BT-52QA</b>  |   |                      |              |                    |
| Maximum operating time (when fully recharged) at +20°C (+68°F)  |   |                      |              |                    |
| Angle measurement only/Including distance measurement   |   |                      |              |                    |
| 45 hours/5 hours  |   |                      |              |                    |

\*1 D: Measuring Distance \*2 Standard deviation based on DIN18723

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