

TP-L5 series



Standard Components

- Pipe Laser TP-L5 1pc.
- Remote controller RC-200 1pc.
- Battery BT-53Q (rechargeable battery) 1pc.
- AC/DC Converter AD-13 1pc.
- Battery adapter BA-2 1pc.
- Self-centering Feet
 ø150mm 4pcs.
 ø200mm 4pcs.
 ø250mm 4pcs.
 ø300mm 4pcs.
- Single point foot model 2 1pc.
- Target 1set
- AAA Manganese battery¹⁾ 4pcs.
- Power cable for 12VDC PC-17 4pcs.
- Carrying case 1pc.
- Instruction manual 1vol

¹⁾ Batteries included in the package are to confirm the initial operation. Please replace the batteries provided with new batteries (alkaline) as soon as possible.

Optional Accessories



Trivet Stand Kit Components

- Trivet stand model 3
- Trivet handle model 2 (with Carrying Case)



• Drop Manhole kit model 6



• Trivet stand kit 3



• Tripod adapter model 3



• Extension leg (ø200mm)



• Dry battery holder DB-53



• AC/DC converter AD-13

- Target (Large)
- Scope model 2
- Power cable for 12VDC PC-17
- Over the top target



TP-L5GV/G/BG



TP-L5AV/B



SPECIFICATIONS					
	TP-L5GV	TP-L5G	TP-L5BG	TP-L5AV	TP-L5B
Laser					
Light source	Visible laser diode				
Wave length	520nm (Green)		635nm (Red)		
Laser power output	4.5mW				
Laser class	Class 3R				
Laser beam diameter	φ 12mm				
Grade Setting					
Grade setting range	-15 to 40% (-150 to +400 ‰)				
Minimum setting of grade	0.001% (0.01‰)				
Grade setting method	Absolute encoder				
Line control range	17° (approx.)				
Auto Alignment					
Alignment distance	5 ~ 150m			5 ~ 150m	
Self leveling					
Slope direction range	±10%				
Axis direction range	±4°(approx.)				
Horizontal accuracy	±10"				
Operating time					
with Dry batteries	55 hours (approx.) (with 4 x size D Alkaline batteries)		80 hours (approx.) (with 4 x size D Alkaline batteries)		
with Rechargeable batteries	40 hours (approx.)		55 hours (approx.)		
Operating temperature	-20°C to +50°C				
Water resistance	IPX8 (IEC 60529:2001)				
Dimensions	φ 125 x 374mm				
Weight	3.8kg (including BT-53Q)				

Up/Lower Laser beam		Remote Controller, RC-200	
	TP-L5GV/AV		
Light source	Visible laser diode	Operating distance	200m (from front side of TP-L5) 25m (from upper side of TP-L5)
Wave length	655nm	Control functions	Automatic alignment mode (TP-L5GV/L5G/L5AV), Line control, Laser beam mode, Laser beam ON/OFF, Line centering
Output Power	0.9mW (Max.)	Power source	Four AAA size dry batteries
Compensating range	Grade setting direction approx. ±4° Rotating direction approx. ±2°	Operating time	about 8 months (with Alkaline dry batteries) about 4 months (with Manganese dry batteries)
Vertical accuracy (Rolling direction)	Upper beam ±1.5' Lower beam ±3.5'		



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TP-L5 series



TP-L5series

PIPE LASER

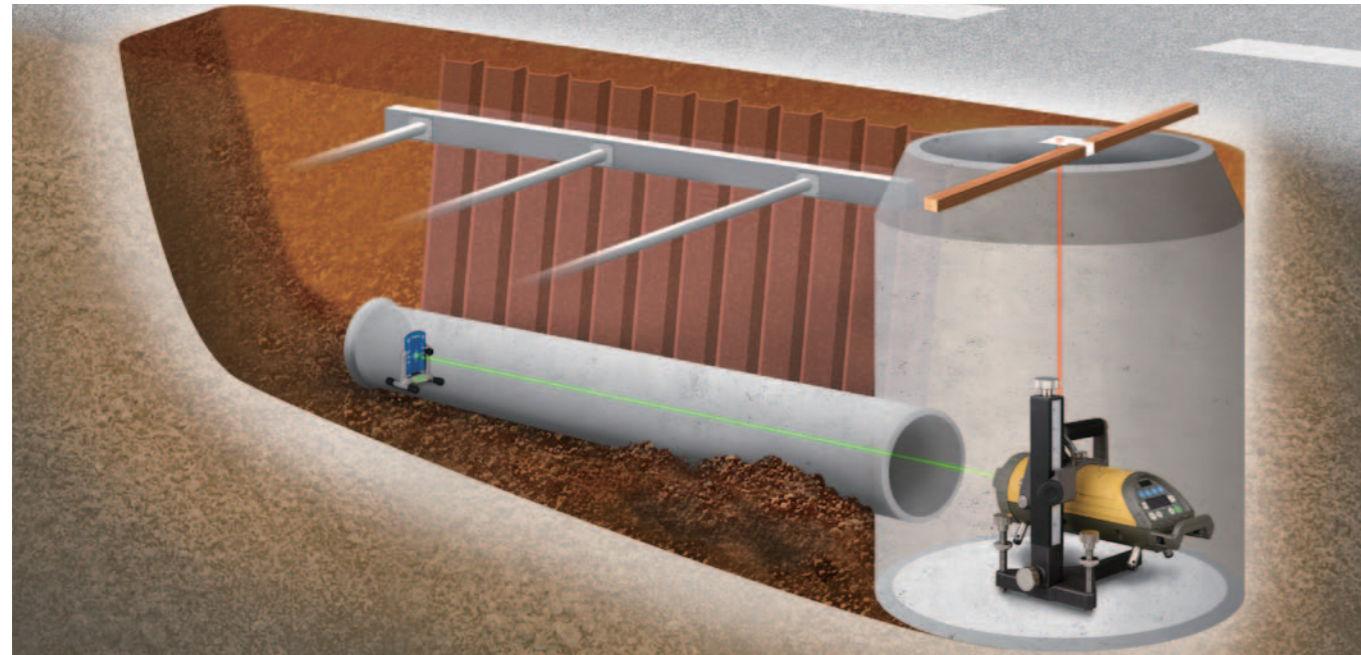


New Green Laser with superior visibility and 4 times longer life

- Equipped with Up/Down beam. No Plumb bob needed.
- Auto alignment function to align to the center of target
- IPX8 water protection for any harsh site condition
- Compact carrying case for convenient portability
- 20% longer operating time

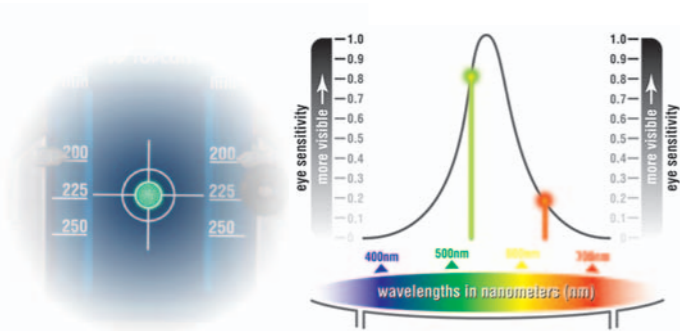
Ultra visible Green Laser equipped !

Automatic alignment function for easy and secure alignment setting

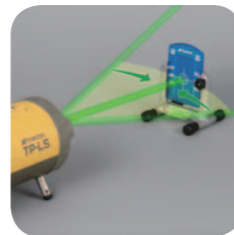


Greatly improves efficiency of sewerage pipe laying works
TP-L5 enables easily determining position, direction and grade of sewerage pipe, eliminating needs to install batter board and string line.

Green Laser with high brightness, visibility and longer life
Topcon has incorporated green laser on pipe laser instruments to Utilize its high brightness and visibility for the human eye. TP-L5 employs a new green laser unit which provides superior Visibility and having 4 times longer life.



	Green Laser	Up/Lower Laser	Centerline LED	Auto Alignment
TP-L5GV	○	○		○
TP-L5G	○		○	○
TP-L5BG	○		○	
TP-L5AV		○		○
TP-L5B			○	



Automatic Alignment system (TP-L5GV/L5G/L5AV)

Enables to automatically make an accurate alignment to the center of target plate located at the other end of the pipe, with one touch of button. This eliminates inconvenient adjustment operation in the limited space and results accurate alignment.



3 way Laser Beam (TP-L5GV/L5AV)

In addition to the main laser beam for grading, Up/Down plumb beams can be emitted. This enables accurate instrument set up over /under the center mark without using inconvenient plumb bob.



3 way for Power Management

Rechargeable Ni-MH battery pack with run-charge with AC power and Optional dry battery holder provide flexible power management to avoid interruption of the work.



RC-200 Remote Controller

The controller comes with the TP-L5 as standard accessory, which can be used for remotely adjusting alignment beam at the other end of the pipe, and/or to avoid touching and moving TP-L5 in case it should stay at the same position.

TP-L5 series

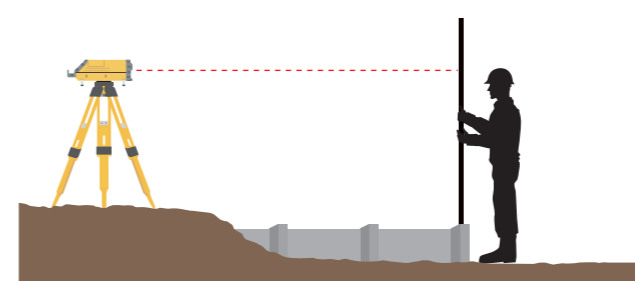
The Highest Durability and Quality !
Tested through severe environmental tests simulating harsh site conditions.

Water Resistance
Tested by being submerged 24 hours at 5m under water, which far exceeds IPX8 conditions. It can endure even being submerged by a sudden heavy rain.

Impact Resistance
Tested by dropping from 50cm height to a concrete floor within carrying case. The instrument is well protected even for unexpected drop down at bad footing place.

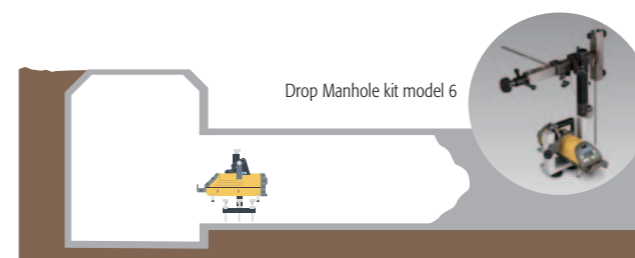
Green Laser
Using a semiconductor green laser with 4 times extended operation life.

Highly accurate slope settings
Hired an absolute angle encoder system equivalent to the one on total station to set accurate slope angles with high repeatability.



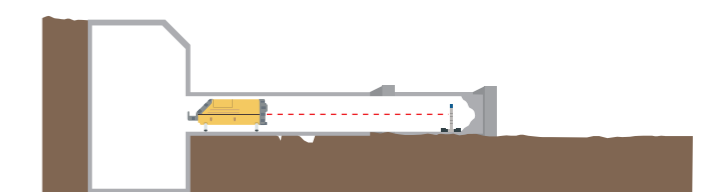
Over the top

Mount TP-L5 on top a tripod using Tripod Adapter(*1)
To set up in correct direction, the L-Type Scope (*1) can be used for sighting staff or stake at the other end of pipes.



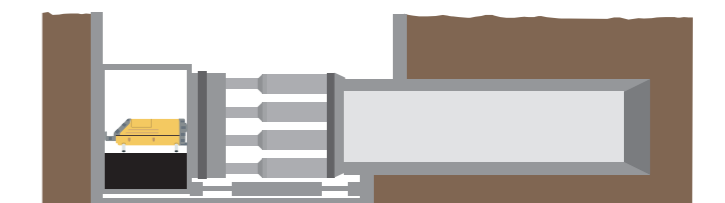
for Pipes with Medium or Large diameters

Using the optional Trivet Stand, TP-L5 can be located at the center of Medium to Large pipes. For pipes with even larger diameter, the optional Drop Manhole Kit type-6 is also available.



for Pipes with small diameter

The TP-L5 can be directly inserted inside of pipe with 150mm internal diameter. Depends on the diameter of the pipe, change 4 legs for 200, 250 or 300mm diameter. TP-L5 can be installed at the center of the pipe. (Optional Extension legs for adding 200mm length are also available)



For Pipe Jacking method/Shield method

TP-L5 can be used also for the Pipe Jacking method. Setting up the TP-L5 in the vertical shaft for machine departure and fix a target plate at the cutting head, displacement of driving direction and grade can be checked and fed back to control of the machine.

*1: optional accessory